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RE-ENGINEERING BANKING SERVICES AND ECONOMIC DEVELOPMENT IN NIGERIA
2005 - 2024

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Abstract

This study examined the relationship between Banking Service Re-engineering and Economic Development in Nigeria. This study adopted the quantitative explanatory research design, Ten deposit money banks were selected out of all the banks listed in the Nigeria Exchange Group. Secondary data were obtained from various issues of reputable institutional sources like the Central Bank of Nigeria (CBN) Statistical Bulletins, National Bureau of Statistics (NBS), and World Bank World Development Indicators (WDI) specifically from the financial statements of the ten selected banks purposefully sampled for this study. Human Development Index (HDI) was used as proxy for economic development which is the dependent variable while Volume of Digital Transactions, (VDT), Cost to Income Ratio (CIR), Financial Inclusion (FIN) and Inflation (INF) were used as the indices for Bank service re-engineering as the independent variables. Panel data ordinary least square was used to estimate the relationship between the variables and the study found that all the explanatory variables exerted positive and significant impact on the dependent variable except inflation. Based on the findings in this study it was concluded that efficient banking services with digital resources is a profound predictor of economic development in Nigeria. The study recommended that bank policy makers should encourage digital transformation in banking services, support financial inclusion initiatives and develop policies that will promote entrepreneurship and innovation and reduce inflation to a stable minimum.

Keywords: Banking Service Re-engineering, Bank Service Efficiency, Financial Inclusion, Inflation, Human development Index, Economic Development

Introduction

The nexus between the banking sector and economic development in Nigeria has been a subject of intense consideration among scholars and policymakers and it has posed a significant factor in the context of Nigeria which is regarded as the Africa's largest economy. The study focused on examining the banking sector in Nigeria within the broader macroeconomic environment because Nigeria presents a suitable context due to its wide-ranging banking reforms, digital financial expansion and evolving financial inclusion policies. The banking sector in Nigeria is made up of deposit money banks regulated by the Central Bank of Nigeria (CBN) and over the past two decades, the sector has undergone enormous consolidation, recapitalization and digital transformation initiatives, thereby positioning it a very appropriate case for analyzing banking service re-engineering within an emerging economy framework. The banking sector is crucial to Nigeria's financial system and economy, as it acts as a key intermediary between savers and investors. By mobilizing deposits, extending credit and facilitating payments, banks enable capital formation and resource optimization which drives economic development. This is validated by several research works which concluded that well-functioning financial intermediaries boost economic performance by improving capital allocation as well as reducing information asymmetry and transaction costs.

In Nigeria, the banking sector plays a vital role due to limited alternative financing options. It influences entrepreneurship, industrial growth, employment and innovation. Schumpeter (1911) noted that financial institutions drive development by funding innovative entrepreneurs. Ujunwa & Salami (2010) observed that studies in Nigeria support that the banking sector reforms contributed to economic growth Similarly, Nwakoby et al (2014) posited that financial development indicators impacted macroeconomic stability. It is important to note that this sector has undergone significant transformations in recent years, driven by technological advancements, regulatory initiatives, and shifting customer expectations. Re-engineering banking services has become a strategic imperative for banks to remain competitive, improve operational efficiency, and contribute to the country's economic development. The Nigerian economy, with its growing population and increasing demand for financial services, presents a unique opportunity for banks to leverage innovation and drive growth. Re-engineering banking services involves the radical redesign of business processes, organizational structures and technology platforms to deliver customer-centric, efficient and cost-effective services. In Nigeria, this has led to the adoption of digital banking, process automation and innovative financial products. The Central Bank of

Nigeria (CBN) has been instrumental in promoting banking sector reforms, launching initiatives such as the National Financial Inclusion Strategy and the Nigeria Digital Banking Policy.

Service re-engineering involves restructuring organizational processes to boost efficiency, responsiveness, and competitiveness (Hammer & Champy, 1993). Nigerian banks have automated core systems, digitized services, and adopted technologies like mobile banking and AI. Technological advancements have transformed banking globally with Nigerian banks investing in digital platforms like ATMs, Internet Banking and Mobile Apps (Vives, 2019). Digital finance has improved efficiency and expanded access to financial services, particularly in rural areas (Ozili, 2018 and Demirgüç-Kunt et al., 2018).

The impact of re-engineering banking services on economic development in Nigeria is multifaceted. On one hand, it has improved access to financial services, increased financial inclusion and enhanced economic growth. On the other hand, it has also introduced new challenges such as cybersecurity risks, regulatory compliance and the need for significant investments in technology and infrastructure. Regulatory reforms such as the 2004 banking consolidation policy, have shaped Nigeria's banking sector. The Central Bank of Nigeria (CBN) has promoted digital payments and financial inclusion. In the words of Soludo (2004), consolidation was necessary to enhance global competitiveness and resilience. Subsequent reforms emphasized digital payment systems, cashless policy implementation, and financial inclusion strategies. In Nigeria, post-consolidation reforms strengthened risk management frameworks and corporate governance standards (Sanusi, 2012).

In literature, the impact of banking service re-engineering on Nigeria's economic development has recorded no consensus among scholars. While digital banking has improved convenience, its effect on growth, employment, and poverty reduction is mixed (Ibrahim & Alagidede, 2018 and Onwere & Olufemi, 2023). This study examines whether technological modernization and process redesign in Nigeria's banking system have led to measurable economic advancement. Despite extensive and costly reforms and technological advancements in the banking sector, Nigeria continues to grapple with significant developmental challenges, including high financial exclusion, The sector's transformation has not unequivocally translated into broad-based economic prosperity. Operational inefficiencies persist, with high transaction costs, service downtime and infrastructural instability undermining service delivery effectiveness. According to Nwakoby et al. (2014), structural weaknesses within Nigeria's financial sector can dampen the growth-enhancing effects of financial deepening.

Nigeria has engaged in digital banking platforms' expanded outreach yet financial exclusion remains a challenge, with a substantial proportion of Nigeria's rural population remaining outside the formal financial system, Digital access alone does not guarantee inclusion, unless supported by literacy, infrastructure, and regulatory trust (Demirgüç-Kunt et al., 2018). Structural inequality

and digital illiteracy limit the inclusiveness of financial innovation in developing economies (Ozili, 2020). Cybersecurity vulnerabilities and technological risks threaten the sustainability of re-engineered banking systems. Rapid digitalization increases exposure to cyber threats and systemic risks and weak cybersecurity frameworks can erode public trust, constraining adoption rates and weakening potential developmental impact (Vives, 2019). The macroeconomic impact of digital banking remains inconclusive, with findings suggesting that financial development's growth effects vary depending on governance quality (Ibrahim and Alagidede, 2018). Financial sector expansion does not automatically guarantee economic growth unless accompanied by institutional strength and efficient resource allocation (Levine, 2005).

There is doubt about the effectiveness of banking service re-engineering in improving economic development indicators, fostering inclusive growth, and translating efficiency improvements into macroeconomic productivity gains. This study addresses this research gap by providing a comprehensive analysis of the relationship between re-engineered banking services and economic development in Nigeria. Empirical evidence, however, reveals conditional and context-specific outcomes. Most Nigerian studies treat financial reform, digital banking, or financial inclusion separately without conceptualizing banking service re-engineering as an integrated structural transformation variable. There is limited integration of technological redesign indicators within macroeconomic growth models. These challenges are surmountable as the study specified a comprehensive econometric model that integrates digital innovation, operational efficiency, financial inclusion and macroeconomic performance to address the gap and also evaluate the developmental implications of banking service re-engineering in Nigeria. This study examines the impact of re-engineering banking services on economic development in Nigeria, exploring the opportunities and challenges presented by this transformation.

Specifically, this research investigates the impact of banking service re-engineering proxied by the volume of digital transactions, banking service efficiency proxied by cost to income ratio, financial inclusion and inflation as the control variables on economic development in Nigeria

Research Questions

1. What is the impact of the volume of digital transactions on economic development in Nigeria?

2. To what extent does cost to income ratio affect economic development in Nigeria?

3. What is the relationship between financial inclusion and economic development bin Nigeria?

4. What is the effect of inflation on economic development in Nigeria

Research Hypotheses

1. The volume of digital transactions has no significant impact on economic development in Nigeria
2. Cost to income ratio does not significantly affect economic development in Nigeria
3. There is no significant relationship between financial inclusion and economic development in Nigeria
4. Inflation is not a significant function of economic development in Nigeria

Literature Review

Conceptual Review

Banking Service Re-Engineering

Banking service re-engineering refers to the radical redesign of banking processes, systems, and structures to achieve significant improvements in efficiency, effectiveness, and customer satisfaction. Obizue et al (2025) posited that re-engineering can be assessed by the total volume of mobile banking, digital transactions, ATM and POS operations. It involves a fundamental transformation of how banks operate by leveraging technology, innovation and best practices to deliver enhanced services thereby improving operational efficiency, and increase competitiveness. It is simply defined as the redesign of banking processes and delivery mechanisms using modern technology to improve efficiency and customer experience. They further emphasized that the goal of banking service re-engineering is to improve efficiency, customer satisfaction, and competitiveness, ultimately contributing to economic growth and development.

Key Aspects of Banking Service Re-engineering

- Process Automation: Streamlining and automating manual processes to reduce errors, costs, and time.
- Digital Transformation: Adopting digital technologies to expand service channels, improve accessibility, and enhance customer experience.
- Customer-Centricity: Redesigning services to meet evolving customer needs and expectations.
- Operational Efficiency: Optimizing resources, reducing waste, and improving productivity.

- Innovation: Introducing new products, services, and delivery channels to stay competitive.

Benefits of Banking Service Re-engineering in Nigeria

Introduction of digital banking platforms (e.g., mobile banking, internet banking)

Expansion of agent banking and mobile money services

Implementation of automated teller machines (ATMs) and point-of-sale (POS) terminals

Development of innovative products (e.g., microfinance, Islamic banking)

Link between Banking Service Re-engineering and Economic Development:

Banking service re-engineering can contribute to economic development in several ways:

Increased Financial Inclusion: Re-engineered banking services can expand access to financial services, particularly for underserved populations, promoting financial inclusion and economic growth.

Improved Efficiency: Streamlined processes and digital transformation can reduce costs, increase productivity, and enhance competitiveness, driving economic growth.

Enhanced Customer Experience: Customer-centric services can increase satisfaction, loyalty, and trust, fostering a stable financial system and promoting economic development.

Increased Access to Credit: Re-engineered banking services can improve credit assessment and risk management, increasing access to credit for SMEs and individuals, and driving entrepreneurship and job creation.

Economic Stability: Efficient banking systems can contribute to macroeconomic stability, reducing the risk of financial crises and promoting sustainable economic growth.

Banking Service Efficiency

Banking service efficiency refers to the ability of banks to deliver financial services in a manner that maximizes output while minimizing costs, time, and resources. It encompasses various aspects, including operational efficiency, cost efficiency, service quality and financial inclusion and can be measured by the level of cost to income ratio, return on assets, returns on equity, profitability of the banks (Obizue et al, 2025).

Key Aspects of Banking Service Efficiency

- Operational Efficiency: Streamlined processes, reduced transaction times, and minimized errors.
- Cost Efficiency: Lower transaction costs, reduced overheads, and optimized resource allocation.
- Service Quality: Enhanced customer experience, improved accessibility, and increased satisfaction.
- Financial Inclusion: Expanded access to financial services, particularly for underserved populations.

Benefits of Banking Service Efficiency in Nigeria

Faster transaction processing times

Reduced waiting times in branches

Increased availability of digital banking platforms

Improved ATM functionality and reduced downtime

Enhanced online and mobile banking services

Expanded agent banking and mobile money services

Link between Banking Service Efficiency and Economic Development

Efficient banking services can contribute to economic development in several ways:

- Increased Financial Inclusion: Efficient banking services can expand access to financial services, particularly for underserved populations, promoting financial inclusion and economic growth.
- Improved Resource Allocation: Efficient banks can allocate resources more effectively, channeling savings into investments and promoting economic growth.
- Enhanced Customer Experience: Efficient services can increase customer satisfaction, loyalty, and trust, fostering a stable financial system and promoting economic development.

- Increased Access to Credit: Efficient banks can improve credit assessment and risk management, increasing access to credit for SMEs and individuals, and driving entrepreneurship and job creation.

- Economic Stability: Efficient banking systems can contribute to macroeconomic stability, reducing the risk of financial crises and promoting sustainable economic growth.

Financial Inclusion

Financial inclusion refers to the availability, accessibility and usage of financial services by all segments of society, particularly the underserved and marginalized populations. It aims to provide everyone with the opportunity to engage with the formal financial system, enabling them to manage their finances, save, invest, and access credit. It is the degree to which individuals and businesses have access to financial services or majorly number of accounts opened per 1000 adults.

Link between Financial Inclusion and Economic Development

Financial inclusion can drive economic development in several ways:

- Increased Access to Credit: Financial inclusion expands access to credit, enabling entrepreneurs and businesses to invest, innovate, and create jobs.

- Poverty Reduction: Financial inclusion helps individuals and households manage financial shocks, smooth consumption, and invest in education and health.

- Increased Savings: Financial inclusion promotes savings, providing a stable source of funds for investment and economic growth.

- Improved Financial Stability: Financial inclusion can reduce income inequality, promote economic resilience, and contribute to macroeconomic stability.

- Economic Empowerment: Financial inclusion enables individuals and communities to participate in the formal economy, promoting economic empowerment and social mobility.

Inflation

According to Obizue et al (2025), inflation is the rate at which prices for goods and services are rising thus reducing the purchasing power of money. The major types of inflation are; demand-pull inflation caused by high demand, cost-push inflation caused by increased production cost, built-in inflation caused by expectations of future inflation, hyperinflation caused by extreme high inflation, staginflation caused by combination of inflation and economic stagnation, disinflation caused by decrease in inflation rate and deinflation caused by general price level. Inflation could

be caused by monetary policy, excess money supply, rapid economic growth and supply chain disruptions like shortages. Generally, inflation can be managed through monetary and fiscal policies. Studies have revealed that inflation can have both positive and negative effect on economic development of nations. Even though inflation can be positive by encouraging investment, reducing debt burdens and increase government revenue, it will negatively affect a nation's economy by reducing the value of money, purchasing power, consumption, savings and investment. Majorly inflation leaves a negative effect on the rate of economic development of any nation but this actually depends on the level of inflation, economic structure and policy response in the nation.

Economic Development

Economic development refers to the sustained improvement in the economic well-being and quality of life of a country's citizens. Bartif (2013) stated that economic development is a process that transforms low income national economies into modern industrial economies. It encompasses qualitative and quantitative improvements in an economy which is evidenced by increased GDP, employment, income, and access to basic services like healthcare, education, and financial services. Structural improvements in the economy reflected in GDP growth, employment expansion, and enhanced living standards.

Theories

This study is anchored on two major theories discussed below.

Financial Intermediation Theory

This theory explains how financial institutions like banks, connect savers and borrowers by facilitating the flow of funds which enhances economic growth and development. The key aspects of this theory are information asymmetry, risk management, transaction costs and maturity transformation. The Financial Intermediation Theory posits that banks pool and manage risks by providing liquidity and diversification, matching short-term deposits with long-term loans hence reducing information gaps and transaction costs associated with lending and borrowing. It is well understood that delegated monitoring enhances efficiency and lowers default risk. Efficient re-engineered banking systems strengthen these intermediation functions by improving credit evaluation accuracy and reducing operational friction Obizue et al (2025).

Schumpeterian Theory

This theory specifically emphasizes the role of innovation and entrepreneurship in driving economic development. Schumpeter (1911) asserts that financial institutions facilitate economic development by financing innovation. This theory suggests that economic development can be

driven by encouraging entrepreneurship and innovation, supporting startups and SMEs as well as fostering competition and market efficiency. Innovation is all about developing the economy through new products, services and processes while entrepreneurship means introducing new ideas and taking risks to create value. Banking service re-engineering enhances this capacity by integrating technological systems that improve capital allocation efficiency and entrepreneurial financing.

Empirical Review

The researchers deem it necessary to review some related literature which is pivotal in validating the theoretical and conceptual nexus between banking service re-engineering and economic development in Nigeria. The empirical findings from different studies examined below will help to reinforce the conception of this subject area.

The following empirical studies were deemed relevant hence reviewed in this study;

Obizue, Gladday & Baffa (2025) employed an ex-poste facto research design to examine the relationship between financial sector development and economic growth in Nigeria. Real gross domestic product (GDP) was used to measure economic growth as the dependent variables while liquidity ratio (LR), capital adequacy ratio (CDR) and interest rate spread (IRS) were adopted as the financial development indices. The study sourced secondary data on these variables from the Central Bank of Nigeria (CBN) statistical bulletin of various issues and employed the Error Correction Model (ECM) to ascertain the direction of causality between the dependent and independent variables. The results showed that the financial sector development variables exerted positive and significant impact on economic growth in Nigeria hence the conclusion that efficient financial development is a good determinant of economic growth and any step taken by the Nigerian government towards developing her financial sector will leave a profound impact in facilitating the rate of economic growth in Nigeria. The study therefore recommended that it will take strengthening financial regulations, improving financial infrastructure and enhancing financial inclusion to keep improving Nigerian economy through financial sector development.

Obizue, Igweagbara & Ihejirika (2025) examined that correlation between capital market efficiency and real domestic product in emerging economies, focusing on the Nigerian experience.

Their study adopted the ex-poste factor research design and made use of the econometric procedure

Secondary data were collected on Market Capitalization (MC), Total Market Transactions (TMT), Broad Money (BM), Interest Rate (IR), Exchange Rate (ER) and Total Market Securities (TMS) which were used as components of capital market to regress on Gross Domestic Product (GDP) as the dependent variable representing economic growth. The ECM analytical tool revealed a mixed correlation between the dependent variable and the explanatory variables. The result further

indicated that absence of multicollinearity and no serial autocorrelation among the variables. The study therefore recommended that the Security and Exchange Commission should be more proactive in its surveillance roles by effectively monitoring and enforcing regulations in order to curb sharp practices which may undermine the integrity of the market which is capable of eroding investors' confidence and also that there should be diversification of in market operations by introducing new financial instruments and leveraging on emerging technology to support and enhance markets products and services.

Nweke & Obioma (2024) conducted a study on the effect of digital finance on financial inclusion in Nigeria from 2005 to 2022. The study used time series data from the Central Bank of Nigeria Statistical Bulletin and examined the influence of Automated Teller Machines (ATMs), Point of Sale (POS) terminals and mobile banking on the performance of deposit money banks in Nigeria. The study recorded a mixed order of integration in the unit root test result and the Auto-Regressive Distributed Lag (ARDL) analysis indicated that digital finance had a positive and significant effect on the sector during the study period. The study recommended that the policy makers and financial institutions should prioritize expanding digital infrastructure, including stable internet connectivity and electricity, particularly in rural areas. To overcome barriers to mobile banking and other digital financial services, financial institutions should introduce targeted financial literacy programs to educate users and build trust. Additionally, policymakers and financial service providers should implement incentives, such as reduced transaction fees or rewards for using digital platforms to encourage adoption and enhance financial inclusion.

Adeyemi & Olumba (2024) investigated the relationship between effective bank management and economic development in Nigeria from 2000 to 2022. This study focused on ten deposit money banks and collected data on their credit to private sector (CPS), liquidity ratio (LR) as the independent variables with inflation (INF) as the control variable. Real GDP was used as the dependent variable. The econometric analytical tool was used to estimate the series and it was indicated from the study results that RGDP was significantly impacted by CPS and LR while INF affected economic development negatively within the period of study. The study recommended among other things that banks in Nigeria should ensure efficient match of long-term assets and short-term liabilities in order to perform optimally and impact positively on the economy of Nigeria.

Ezeobi & Akpan (2022) adopted a model to measure the efficiency of banking services and economic growth in Nigeria between 2000 and 2020. Return on Equity (ROE), Return on Assets (ROA) and Earning per Share (EPS) were used as indices for banks' efficiency which was regressed on real GDP as the economic development measure. The unit root test result showed that the data were integrated at first difference and the ECM result generally showed the banks' efficiency indices impacted positively and significantly on economic development with the ECM cointegrating equation significantly and rightly signed. The study recommended that banks in

Nigeria should ensure a strategic management operations to continually contribute to economic development in Nigeria.

Ibrahim & Aliyu (2014) evaluated the relationship between banking service re-engineering and economic growth in Nigeria during the period 2000 to 2020. The economic growth indicator used in this study was real domestic product (RGDP) as the dependent variable while banking service engineering (BSE), credit to private sector (CPS), digital banking (DB) were the independent variables. The panel data analytical method was employed in this study and the result indicated that BSE, CPS and DB significantly and positively impacted on RGDP respectively. The study therefore concludes that the efficient performance of Nigerian banks has profound effect on the performance and growth rate of Nigerian economy hence it is recommended that CBN should be proactive and continue in formulating bank regulatory policies that will improve on the activities in the banking sector.

Methodology

Given the fact that the variables used in this study are non-manipulatable macroeconomics and financial predictors, this study adopted the quantitative explanatory research design, specifically an ex-post facto design. It used explanatory approach in the sense that the study seeks to establish causal relationships between banking service re-engineering and economic development in Nigeria. The ex post facto design is suitable for macroeconomic and financial time-series analysis where historical data are examined to determine patterns, relationships and long-run effects. This is in line with the assertion of Gujarati & Porter (2009) that such designs are appropriate for investigating economic phenomena using observational data without experimental manipulation.

The population of the study comprises of all deposit money banks quoted in the Nigeria exchange roup and also operating in Nigeria out of which ten banks were sampled based on their stronger financial base and compliance to statutory regulations. This study made use of annual data observations from 2005 to 2024. The cut-off from 2005 as the commencement year for the study is important as it aligns with post-consolidation banking reforms period which significantly restructured the banking sector in Nigeria. Secondary data were sourced from various issues of reputable institutional sources like the Central Bank of Nigeria (CBN) Statistical Bulletins, National Bureau of Statistics (NBS), and World Bank World Development Indicators (WDI). Obizue et al (2025) posited that secondary data are appropriate for macroeconomic and financial development investigations because they are reliable and consistent having undergone rigorous validation processes and series of audit checks before being published. Also Levine (2005) emphasized that institutional financial datasets are highly reliable for cross-country and country-specific growth analysis. Institutional datasets such as those from the World Bank and IMF undergo rigorous validation processes before publication.

Model Specification

For the purposes of this study and based on the financial intermediation theory and endogenous growth theory, a multivariate econometric model is specified thus;

Functional Model:

HDI = f(VDT, CIR, FIN, INF)

The functional model is then converted to econometric model below;

$HDI = b_0 + b_1BSR + b_2BSE + b_3FIN + b_4INF + Ut$

Where HDI = Real Gross Domestic Product

VDT = Volume of Digital Transactions

CIR = Cost to Income ratio

FIN = Financial Inclusion

INF = Inflation

Ut = Stochatic error term (unexplained variables in the model)

b_0 = Constant

b_1 - b_4 = unknown parameters to be estimated

Data Analysis and Results

Stationarity Test Result (Unit Root Test)

Table 1: Results of Stationarity Test

Variables ADF Stat Mackinnon 5% critical value P-value Order Remark

Variables	ADF Statistics	Mackinnon 5% critical value	P-value	Order	Remark
D(RGDP)	-8.043194	-2.06016	0.0001	I(1)	Stationary at first difference
D(VDT)	-5.366900	-2.84929	0.0011	I(1)	Stationary at first difference
D(CIR)	-4.311472	-2.61971	0.0001	I(1)	Stationary at first difference
D(FIN)	-4.991012	-2.62468	0.0001	I(1)	Stationary at first difference
D(INF)	-4.984420	-2.63401	0.0000	I(1)	Stationary at first difference

Source: Extracts from E-views/Authors' desk

The unit root test is first conducted to determine the stationarity properties of variables and to ensure that the results obtained in the study will not be spurious. Table 1 shows the result of the unit root test executed in the study and it confirmed that the absolute values of all the study variables (ADF statistics) are respectively higher than their corresponding Mackinnon's critical values at 5% and the probability values are less than the 5% critical level which implies that they are all stationary at first difference and consequently integrated at order I, I(1). Given this position, it is therefore confirmed that the data set can suitably be adopted for subsequent analyses. Appropriately, we proceed to test for long run relationship among the study variables using the Johansen cointegration test.

Table 2: Johansen Co-integration Test Result

Date: 11/10/25 Time: 08:20

Sample (adjusted): 2005 2024

Included observations: 23 after adjustments

Trend assumption: Linear deterministic trend

Series: RGDP VDT CIR FIN INF

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.694410	120.0144	121.0822	0.0001
At most 1 *	0.611146	101.8010	90.33419	0.0005
At most 2 *	0.642240	70.23814	55.18132	0.0010
At most 3 *	0.601034	49.00141	40.15002	0.0031

Trace test indicates 3 cointegratingeqn(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-view

The result of Johansen's Co-integration test shown in Table 2 implies that there exists a significant long run relationship among the variable set in this study. It is therefore appropriate to proceed with the Error Correction Model (ECM) as the next step.

Table 3: Error Correction Model (ECM)

Dependent Variable: D(RGDP)

Method: Least Squares

Date: 11/10/25 Time: 09:04

Sample (adjusted): 2005 2024

Included observations: 23 after adjustments

Coefficient	Std. Error	t-Statistic	Prob	
C(1)	0.499233	0.228695	1.301419	0.0141
C(2)	0.434924	0.144192	1.516071	0.0216
C(3)	0.412741	0.000136	-0.544516	0.0190
C(4)	-0.441892	0.001200	-0.524271	0.0611
ECM(-1)	-0.561711	3.014211	-0.660110	0.0000

R-squared	0.7332310	Mean dependent var	-0.361413
Adjusted R-squared	0.7171141	S.D. dependent var	11.66281
S.E. of regression	11.541752	Akaike info criterion	7.424902
Sum squared resid	3011.010	Schwarz criterion	7.751289
Log likelihood	-105.7194	Hannan-Quinn criter.	7.500373
F-statistic	1.0674420	Durbin-Watson stat	2.300170
Prob(F-statistic)	0.003612		

Source: Extracts from E-views/authors' desk

The Error Correction Model (ECM) in table 3 above shows how much the disequilibrium in the long-run relationships is adjusted or rectified each period in the event of a shock and it also shows the speed of adjustment given the long-run relationship. It can be seen from the table that all the banking service re-engineering measure have positive correlation with economic development in Nigeria at the coefficient values of 0.499233, 0.434924 and 0.412741 for VDT, CIR and FIN respectively. Also their probability values are statistically significant being respectively lower than the 5% significance level and this laid credence that they exerted profound influence in promoting economic growth in Nigeria. This can be evidenced from their significant P-values of 0.0141, 0.0216 and 0.0190 respectively. On the other hand, the control variable, Inflation (INF) exerted a negative and insignificant influence on RGDP with a negative coefficient value of -0.0441892 and probability of 0.0611 which is higher than the 0.05 significance level. The F-statistic probability

of 0.003612 stood significant at 5% benchmark and further justified the fact that all predictor variables jointly and positively correlated with RGDP in Nigeria within the period of study.

The ECM equation (speed of adjustment) displayed a negatively sign coefficient of 0.561711 and a significant probability value of 0.000 at 5% significant level. This is quite significant and demonstrated that in every cycle, around 56% of deviations from equilibrium (disequilibrium in the short run) are rectified. Durbin Watson statistic exhibited a high coefficient of 2.300170 which suggests the absent of autocorrelation in the residuals and this further authenticates that the findings from this study are reliable and can be used for analytical and decision making purposes.

Discussion of Findings

This investigated the correlation between the re-engineering of banking services and economic development in Nigeria and the results from this investigation revealed that the bank re-engineering indices displayed positive and significant relationship with real gross domestic product of Nigeria within the period understudied. This could be attributed to the fact that when the financial sector undergoes necessary reforms and digitalization which involved financial inclusion and financial technology, implementation of same took banking services farther and wider than before and improved on existing capital adequacy with impressive liquidity, the sector thereby became more deepened and efficient in discharging its intermediation role which therefore culminated into enhanced rate of growth in the economy. The reports from some previous studies provided a supporting evidence in alignment with the findings in this current study. To mention but a few, the discoveries from the studies of Abraham & Aliyu (2014), Ezeobi & Akpan (2022), Nweke & Obioma (2023), Adeyemi & Olumba (2024) and Obizue et al (2025), were all in consonance with the findings in the study. Specifically, Adeoye & mbata (2022) conducted a panel data investigation and analysis of the relationship between bank service re-engineering and economic growth in Nigeria and discovered that banking service engineering (BSE), credit to private sector (CPS), digital banking (DB) significantly and positively impacted on RGDP respectively and that an improvement in the financial sector would result in enhancement of Nigeria's economy and also that countries with efficient financial system enjoy higher rate of growth and development in their economy. Conversely, the study of Mazere & Edodi (2024) on the impact of revolutionalising the Nigeria's financial sector and economic development found that the financial sector has significant impact on economic growth in Nigeria. Their study also indicated that the operation of the deposit money banks has significantly stimulated economic growth in the long run in Nigeria. In this study, it was also discovered that inflation which was used as the control variable showed a negative and statistically insignificant impact on RGDP. The reason is not far from the fact that the relationship between inflation and economic development is complex and usually the adverse effect of inflation on nations that is evidenced by reduced value of savings, low purchasing power, uncertainty for businesses and investors, potential decrease in savings and investments, entrepreneurship and job creation resulting to increase in poverty and

income inequality. For this reason the CBN is vigorously working on reducing inflation to a stable lowest level. Adeyemi & Olumba (2024) investigated the relationship between effective bank management and economic development in Nigeria from 2000 to 2022 and the result showed that other variables had positive and significant impact on economic development except inflation which inversely correlated with economic development and concluded that governments of nations should actively watch the trend of inflation which they mean well for their citizens.

The essence of the discussion of study findings is to draw differences and similarities between this current study findings and that of previous study reports. All these justify the fact that further research works which will involves emerging situations need to be carried out in this area of study since there are may be no limit for research discoveries.

Conclusion

Based on the results in this study which indicated that re-engineering bank services impact positively and significantly on economic development in Nigeria from 2005 to 2024, the study therefore concluded that efficient banking services with digital resources is a profound predictor of economic development in Nigeria.

Recommendations

Based on the study findings, the study recommended the following;

1. The policy makers should encourage digital transformation in banking services, support financial inclusion initiatives and develop policies that will promote entrepreneurship and innovation.

2. The CBN should continue in sound policy formulation and adequate monitoring of financial technology in the banking sector and ensure efficient handling of inherent challenges.

3. Financial sector expansion does not automatically guarantee economic growth, so the government should accompany it by institutional strength and efficient resource allocation

4. Nigerian government and the CBN should actively watch the trend of inflation and ensure it is highly reduced to a stable minimum so as to a fair rate of economic growth and development

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