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Development Finance And Real Sector Performance In Nigeria

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ABSTRACT

This study examined the relationship between development finance and real sector performance in Nigeria between 2000 and 2024. An ex-post facto research design was adopted, relying on historical time-series data obtained from the International Monetary Fund (IMF) Monetary Statistics and the World Bank's World Development Indicators (WDI). Development finance was proxied by Credit to Private Sector to GDP (CPS/GDP), Broad Money to GDP (M2/GDP), Deposit to GDP Ratio (DEP/GDP), and Interest Rate Spread (IRS), while Real Gross Domestic Product Growth Rate (RGDPG) was used as a measure of real sector performance. The Ordinary Least Squares (OLS) regression method was employed using E-Views 9.0 to estimate the effects of development finance indicators on Nigeria's real output growth. Diagnostic tests, including the Variance Inflation Factor, Breusch-Pagan, and Durbin-Watson statistics, were conducted and confirmed that the model was free from multicollinearity, heteroscedasticity, and serial correlation problems.The findings revealed that CPS/GDP, M2/GDP, and DEP/GDP had positive and statistically significant impacts on RGDPG, indicating that higher private sector credit, monetary depth, and deposit mobilization stimulated real sector performance during the study period. Conversely, IRS had a negative and significant effect, showing that wider lending-deposit spreads reduced investment and slowed economic growth. The model produced an R^2 of 0.586 and an Adjusted R^2 of 0.463, suggesting that 58.6% of variations in RGDPG were jointly explained by the selected financial indicators. These results aligned with the Financial Intermediation Theory and the Supply-Leading Hypothesis, which posited that financial development precedes and drives real sector expansion. The study concluded that efficient financial intermediation, enhanced liquidity management, increased deposit mobilization, and reduced intermediation costs were crucial for sustainable economic growth. It recommended strengthening credit infrastructure, expanding financial inclusion, enhancing deposit insurance, and reducing interest rate spreads to improve financial efficiency and long-term real sector development in Nigeria.

Keywords: Development Finance, Credit to Private Sector, Broad Money, Deposit, Interest Rate, Real Gross Domestic Product Growth Rate and Real Sector.

INTRODUCTION

In Nigeria, the interaction between development finance and real sector performance has remained a subject of growing scholarly and policy concern due to persistent economic fluctuations and weak structural transformation. Development finance indicators such as credit to the private sector to GDP

(CPS/GDP), broad money to GDP (M2/GDP), deposit to GDP ratio (DEP/GDP), and interest rate spread (IRS) serve as important proxies for assessing the effectiveness of financial intermediation in supporting productive activities. The real sector, represented by the real gross domestic product growth rate (RGDPG), reflects the extent to which financial resources are translated into tangible output. According to Okorie and Nwokoye (2023), limited credit access continues to hinder the performance of critical sectors such as agriculture, manufacturing, and construction, which collectively drive real GDP growth. Similarly, Umeji and Ezeabasili (2024) argue that while private sector credit has the potential to stimulate real output, its impact depends largely on macroeconomic stability and effective monetary coordination.

The role of monetary aggregates in development finance is equally significant. Broad money to GDP (M2/GDP) measures the level of financial depth and liquidity within the economy, while the deposit to GDP ratio (DEP/GDP) captures the degree of savings mobilization through the banking sector. In the Nigerian context, excessive growth in money supply without corresponding expansion in real output often fuels inflation and weakens productivity (Adeleke &Ogunyomi, 2023). Conversely, efficient deposit mobilization enhances the pool of loanable funds, fostering credit creation and investment growth (Iheanacho &Omodero, 2022). However, persistent challenges such as low financial inclusion, inadequate rural banking infrastructure, and weak savings culture have continued to undermine the effectiveness of deposit mobilization (Ogu & Nwani, 2023).

Interest rate spread (IRS) is another critical component of development finance, as it reflects the efficiency and competitiveness of the banking system. A wide interest rate spread often signals high intermediation costs and inefficiencies that discourage investment in the real economy. Eze and Ugwunta (2024) found that persistent interest rate disparities in Nigeria negatively affect manufacturing output and private investment, while Agbo and Iloh (2022) established that high interest rates impede GDP growth through reduced capital formation. These findings reinforce the argument that sustainable economic growth depends on a deep and efficient financial system capable of channeling funds to productive sectors. Onodugo and Okafor (2023) emphasize that financial deepening remains a prerequisite for sustained real sector expansion in Nigeria. Therefore, examining how development finance influences real sector performance provides a vital foundation for evidence-based policies that can promote inclusive and stable economic growth.

Despite the crucial role of development finance in driving real sector growth, Nigeria continues to experience weak linkages between financial intermediation and productive economic activities. Although credit to the private sector, money supply, and deposit mobilization have expanded over time, their translation into tangible growth outcomes remains inconsistent. The persistence of high interest-rate spreads, inadequate credit allocation, and shallow financial inclusion suggest inefficiencies in the financial system that constrain output performance. Studies such as Okorie and Nwokoye (2023) and Umeji and Ezeabasili (2024) emphasized that credit to the private sector has not yielded the expected growth effects due to macroeconomic instability and poor policy coordination. Similarly, Eze and Ugwunta (2024) observed that widening interest rate spreads discourage investment in manufacturing and other productive sectors. However, empirical findings on the relationships between CPS/GDP, M2/GDP, DEP/GDP, IRS, and RGDPG remain mixed, with many studies relying on short time frames or omitting key macro-financial controls. Recent works by Adeleke and Ogunyomi (2023) and Onodugo and Okafor (2023) identified the need for extended time-series analysis using robust estimation techniques such as the Ordinary Least Squares (OLS) model to clarify the causal dynamics between development finance indicators and real sector performance in Nigeria.

Conceptual Review

Development Finance

Development finance represents the systematic mobilization and allocation of financial resources to promote productive investment and inclusive economic growth. It focuses on correcting market imperfections and ensuring that critical sectors such as agriculture, manufacturing, and infrastructure have adequate access to finance. According to Eze and Ugwunta (2024), development finance plays a vital role in deepening financial intermediation and improving credit accessibility for private enterprises. Okorie and Nwokoye (2023) described it as a process that strengthens the capacity of financial institutions to channel savings into productive use, thereby enhancing output performance. The Central Bank of Nigeria has been instrumental in implementing various intervention schemes and refinancing facilities designed to stimulate long-term financing for underfunded sectors (Onodugo& Okafor, 2023). These initiatives collectively aim to align financial flows with national development priorities while promoting stability and employment generation.

Development finance is anchored on financial deepening theory, which emphasizes that an efficient financial system facilitates capital accumulation, liquidity, and innovation. Key indicators such as credit to the private sector to GDP (CPS/GDP), broad money to GDP (M2/GDP), deposit to GDP ratio (DEP/GDP), and interest rate spread (IRS) are essential for measuring financial sector performance and efficiency. Umeji and Ezeabasili (2024) highlighted that increased credit access and deposit mobilization stimulate investment, while high interest-rate spreads can restrict growth. Adeleke and Ogunyomi (2023) further stressed that the sustainability of development finance depends on a stable and inclusive monetary environment that channels resources into the real economy. Hence, development finance in Nigeria is conceptually viewed as a critical instrument for promoting structural transformation, expanding productive capacity, and sustaining economic growth.

Measures of Development Finance

Credit to Private Sector to GDP (CPS/GDP):CPS/GDP represents the proportion of domestic credit provided by financial institutions to private enterprises relative to the total output of the economy. It serves as a key indicator of financial intermediation and economic dynamism. In Nigeria, low CPS/GDP ratios reflect weak credit penetration and limited access to finance among productive sectors. Okorie and Nwokoye (2023) emphasized that inadequate credit allocation constrains investment and output growth, while Umeji and Ezeabasili (2024) noted that efficient credit distribution significantly enhances private sector productivity and promotes sustainable economic development.

Broad Money to GDP (M2/GDP): M2/GDP measures the depth of financial development by comparing the total money supply to the size of the economy. It reflects the liquidity available for investment and consumption, as well as the efficiency of monetary policy in supporting growth. In Nigeria, fluctuations in M2/GDP often mirror structural weaknesses in financial intermediation. Adeleke and Ogunyomi (2023) observed that excessive money supply without corresponding real output expansion fuels inflation, while Onodugo and Okafor (2023) emphasized that steady growth in broad money positively influences investment, financial inclusion, and overall economic performance.

Deposit to GDP Ratio (DEP/GDP): DEP/GDP measures the capacity of the financial system to mobilize savings relative to the size of the economy, reflecting both public confidence in banks and the depth of financial inclusion. In Nigeria, a low DEP/GDP ratio indicates weak savings culture and limited intermediation efficiency. According to Iheanacho and Omodero (2022), increased deposit mobilization expands the pool of loanable funds available for investment. Similarly, Ogu and Nwani (2023) highlighted that higher deposit ratios enhance credit creation, stimulate private sector growth, and strengthen the overall stability of the financial system.

Interest Rate Spread (IRS):IRS represents the difference between lending and deposit rates, serving as a key indicator of banking efficiency and intermediation costs. A high spread often reflects structural inefficiencies, credit risks, and weak competition in the financial system. In Nigeria, persistently wide interest rate spreads have constrained private investment and output growth. Eze and Ugwunta (2024) noted that elevated spreads discourage borrowing and reduce manufacturing productivity, while Agbo and Iloh (2022) emphasized that narrowing the spread enhances credit accessibility, stimulates business expansion, and improves overall economic performance.

Real Sector Performance in Nigeria

The real sector of the Nigerian economy includes all productive activities that generate goods, services, employment, and income, such as agriculture, manufacturing, construction, and services. It is the main driver of sustainable economic growth because it converts financial inputs into tangible outputs that improve welfare. Okorie and Nwokoye (2023) stated that the performance of the real sector largely depends on the level of investment, infrastructural quality, and access to finance. However, structural challenges such as poor electricity supply, weak industrial capacity, and high production costs continue to constrain productivity and competitiveness. Umeji and Ezeabasili (2024) added that limited access to credit and wide interest rate spreads further restrict firms' ability to expand, resulting in inconsistent growth outcomes. The link between financial development and real sector performance is therefore crucial, as efficient mobilization and allocation of financial resources enhance capacity utilization, job creation, and inclusive economic progress (Eze &Ugwunta, 2024).

RGDPG remains the most widely used indicator of real sector performance because it measures the rate at which an economy's total output grows after adjusting for inflation. In Nigeria, RGDPG serves as an essential benchmark for evaluating the effectiveness of fiscal and monetary policies in driving investment and production. Adeleke and Ogunyomi (2023) found that fluctuations in GDP growth are strongly associated with changes in key financial indicators such as money supply, private sector credit, and lending rates. Similarly, Onodugo and Okafor (2023) noted that sustained improvements in RGDPG depend on stable macroeconomic policies, efficient credit distribution, and continuous investment in productive sectors. Thus, examining real sector performance through RGDPG provides deeper insight into how development finance supports economic diversification, structural transformation, and long-term growth in Nigeria.

Theoretical Review

Financial Intermediation Theory (Gurley & Shaw, 1960)

The Financial Intermediation Theory was propounded by Gurley and Shaw in 1960 to explain how financial institutions act as intermediaries between savers and investors in promoting economic growth. The theory posits that financial intermediaries, such as banks, mobilize savings from surplus economic units and allocate them efficiently to deficit units that require funds for productive investment. This process reduces transaction costs, mitigates risk, and enhances liquidity in the economy. In the Nigerian context, this theory underscores the importance of variables such as credit to the private sector (CPS/GDP), broad money (M2/GDP), and deposit mobilization (DEP/GDP) in deepening financial intermediation. By efficiently channeling funds into the real sector, the financial system can stimulate investment, output growth, and employment. The theory therefore supports the argument that effective development finance mechanisms enhance real sector performance and overall economic growth (Umeji&Ezeabasili, 2024).

Supply-Leading Theory (Patrick, 1966)

The Supply-Leading Theory was developed by Patrick in 1966 to explain the causal relationship between financial development and economic growth. The theory asserts that financial development precedes and stimulates economic expansion by creating the necessary financial infrastructure and incentives for investment. It suggests that expanding credit availability, broadening monetary aggregates, and improving deposit mobilization provide the real sector with the capital required for production and innovation. In Nigeria, this theory highlights how development finance indicators such as CPS/GDP, M2/GDP, DEP/GDP, and interest rate spread (IRS) influence the productive capacity of the economy. When the financial system effectively supplies credit and liquidity, the real sector responds with increased output, technological adoption, and job creation. Hence, the supply-leading theory aligns with the view that financial sector deepening is a driver of real gross domestic product growth (Adeleke &Ogunyomi, 2023).

Empirical Review

Adekunle et al. (2025) examined the relationship between banking-sector liquidity and economic growth in Nigeria using CPS/GDP and M2/GDP as development finance proxies. Applying ARDL and ECM techniques on data from 1990–2023, the study found a significant positive relationship between CPS/GDP, M2/GDP, and RGDP growth. The authors concluded that financial deepening enhances real output and recommended effective credit transmission channels and stronger coordination between credit and monetary policy frameworks to sustain economic expansion.

Udoh and Akpan (2025) investigated the role of deposit money banks in improving real sector performance through efficient deposit mobilization and credit allocation. Using bank-level panel data and macro time series from 2000–2023, analyzed with FMOLS and DOLS models, the study found that effective deposit management and private-sector credit expansion drive RGDP growth. The authors recommended digital banking adoption, improved loan recovery systems, and inclusive financial frameworks to strengthen long-term economic growth in Nigeria.

Ibrahim (2025) analyzed the impact of interest rate spread on Nigeria's economic growth using ARDL techniques on data from 1990–2023. With RGDP as the dependent variable and IRS as the key explanatory variable, complemented by inflation and exchange rate controls, the study found that wider spreads hinder investment and output growth. The author concluded that interest rate stability promotes private-sector activity and recommended macro-prudential policies to control credit costs and stimulate sustainable economic performance.

Manasseh and Okoye (2025) evaluated the impact of CPS/GDP and M2/GDP on Nigeria's real output using ARDL techniques on annual data from 1986–2022. Their results revealed that both variables significantly promote RGDP growth in the short and long run. The study emphasized that financial deepening enhances real-sector productivity and recommended stronger lending frameworks for SMEs, improved collateral systems, and credit diversification policies to ensure inclusive and sustained economic growth across Nigeria's real sector.

Nwankwo and Ahmed (2024) assessed the influence of development finance on Nigeria's economic growth using CPS/GDP, M2, Prime Lending Rate, and Market Capitalization as indicators. Employing ARDL and structural break tests on data from 1986–2022, results showed CPS/GDP and Market Capitalization positively influence RGDP, while M2 and high lending rates have weaker effects. The study concluded that efficient financial systems stimulate sustainable growth and recommended interest rate moderation and strengthened capital market linkages to improve investment efficiency.

Akpan and Ekanem (2024) explored the causal relationship between development finance indicators and Nigeria's economic performance using VECM and Granger causality models on data from 1970–2022. Findings showed that CPS/GDP and M2/GDP significantly affect RGDP growth in the long run, with bidirectional causality between finance and growth. The authors concluded that financial intermediation remains vital for output expansion and recommended proactive credit allocation, liquidity control, and regulatory policies to deepen financial development and enhance real sector productivity.

Ojo and Abdullahi (2024) investigated the responsiveness of Nigeria's economic growth to financial development using ARDL and error correction models on annual data from 1986–2022. Results revealed that CPS/GDP significantly drives long-run growth, while M2/GDP exerts a delayed but positive impact. The study concluded that quality credit allocation and liquidity management are crucial for sustaining economic growth and recommended effective supervision, credit monitoring, and policy reforms to strengthen financial intermediation in Nigeria's development process.

Obim (2024) analyzed deposit mobilization and its role in promoting financial intermediation and real sector growth in Nigeria using OLS and GLS regression on bank-level data from 2000–2022. Findings showed that strong deposit mobilization enhances banks' capacity to fund private-sector investments, thereby boosting economic performance. The author concluded that improved savings mobilization and digital deposit channels strengthen development finance efficiency and recommended deepening financial inclusion to expand access to formal banking services nationwide.

RESEARCH METHODOLOGY

This study adopts an ex-post facto research design to investigate the relationship between development finance and real sector performance in Nigeria. This design is appropriate because it relies on historical data to establish cause-and-effect relationships without manipulating variables. It enables the analysis of how key financial indicators have influenced real sector output over time, using annual data spanning from 2000 to 2024. The population of the study covers the Nigerian economy as a whole, focusing on national-level macroeconomic indicators that reflect financial intermediation and real sector performance. The sample was purposively selected to include variables that adequately represent the dimensions of development finance and real output. These include CPS/GDP, M2/GDP, DEP/GDP, and IRS as explanatory variables, while RGDPG serves as the dependent variable.

Secondary data were obtained from reliable international databases such as the IMF Monetary Statistics and the World Bank's World Development Indicators (WDI). These sources provide consistent and comprehensive macro-financial data suitable for long-term economic analysis. The 25-year time frame was chosen to capture the effects of financial reforms, policy shifts, and structural transformations in Nigeria's financial system on the real sector. The data cover both pre-reform and post-reform periods, thereby providing a balanced temporal view of how development finance affects real economic growth. The use of secondary data ensures accuracy and comparability while allowing for empirical validation of theoretical relationships among variables.

The study employs the OLS regression technique using E-Views 9.0 software to estimate the relationship between development finance indicators and real sector performance. Diagnostic tests are conducted to validate the model and ensure statistical reliability. The Variance Inflation Factor (VIF) test detects multicollinearity among independent variables, while the Breusch-Pagan test assesses heteroscedasticity. The Durbin-Watson statistic evaluates autocorrelation in the residuals, ensuring the absence of serial dependence. The model's explanatory power is assessed using R-squared and Adjusted R-squared values, while the F-statistic tests overall model significance.

The functional model for the study is specified as:

RGDPG = f(CPS/GDP, M2/GDP, DEP/GDP, IRS)

The econometric form of the model is:

$RGDPG = \beta_0 + \beta_1 CPS/GDP + \beta_2 M2/GDP + \beta_3 DEP/GDP + \beta_4 IRS + \mu_t$

Where RGDPG represents real sector performance (dependent variable), CPS/GDP, M2/GDP, and DEP/GDP are indicators of financial depth and intermediation, and IRS captures the efficiency of financial operations. β_0 is the intercept, β_1–β_4 are parameter coefficients, and μ_t is the error term. All variables are expressed in percentage terms and will be analyzed annually from 2000 to 2024.

RESULTS AND DISCUSSION

This study employed theOLS regression method to analyze the effect of development finance indicators, CPS/GDP, M2/GDP, DEP/GDP, and IRS, on Real Sector Performance in Nigeria, measured by RGDPG. Using annual data from 2000 to 2024, the OLS technique estimates both the magnitude and direction of relationships, providing clear insights into how credit access, monetary depth, savings mobilization, and financial efficiency influence real sector growth and economic performance in Nigeria.

Descriptive Statistics

Descriptive statistics summarize distribution, averages, and variability of variables, showing overall financial trends and real sector performance patterns in Nigeria between 2000 and 2024.

Table 1: Descriptive Statistics

	RGDPG	CPS_GDP	M2_GDP	DEP_GDP	IRS
Mean	5.313334	11.86829	22.18961	16.65986	7.575314
Median	5.394417	11.77031	23.92961	17.44742	7.377113
Maximum	14.60438	20.77596	40.75523	25.49227	11.06417
Minimum	-1.794254	8.070000	11.73280	8.834062	3.268333
Std. Dev.	3.846102	3.205185	6.872241	4.948391	1.626911
Skewness	0.274607	1.218940	0.443470	-0.176497	-0.159466
Kurtosis	3.065429	4.517134	3.590818	2.003421	3.808009
Jarque-Bera	1.318664	1.588495	1.183050	1.164349	0.786038
Probability	0.528713	0.513647	0.553483	0.558682	0.675016
Sum	132.8334	296.7072	554.7404	416.4965	189.3828
Sum Sq. Dev.	355.0200	246.5571	1133.465	587.6778	63.52413
Observations	25	25	25	25	25

Source: E-VIEW 9.0 (2025).

The descriptive statistics show that RGDPG has a mean of 5.31, suggesting moderate average economic growth in Nigeria from 2000 to 2024, with fluctuations between -1.79 and 14.60, indicating periods of contraction and expansion. CPS_GDP averaged 11.87, reflecting low but gradually improving private sector credit relative to GDP. M2_GDP recorded an average of 22.19, showing moderate monetary depth and liquidity within the financial system. DEP_GDP had a mean of 16.66, implying a fair level of deposit mobilization though below optimal inclusion targets. IRS averaged 7.58, suggesting relatively high intermediation costs. Most variables are normally distributed, with Jarque-Bera probabilities above 0.05.

Correlation Analysis

Correlation analysis identifies the strength and direction of relationships among variables, showing how development finance indicators interact with RGDPG in Nigeria's economy. (Table 2 below).

Table 2: Correlation Matrix

	RGDPG	CPS_GDP	M2_GDP	DEP_GDP	IRS
RGDPG	1.000000				
CPS_GDP	0.510585	1.000000			
M2_GDP	0.584813	0.477285	1.000000		
DEP_GDP	0.495913	0.602213	0.920439	1.000000	
IRS	0.537263	0.566751	0.268866	0.277782	1.000000

Source: E-VIEW 9.0 (2025).

The correlation results reveal that all variables are positively related, indicating mutual reinforcement between development finance indicators and real sector performance. RGDPG shows moderate positive correlations with CPS_GDP (0.51), M2_GDP (0.58), DEP_GDP (0.50), and IRS (0.54), suggesting that increased credit, monetary expansion, deposit mobilization, and improved intermediation efficiency promote economic growth. CPS_GDP correlates moderately with M2_GDP (0.48), DEP_GDP (0.60), and IRS (0.57), implying that financial intermediation variables move in similar directions. The strong correlation between M2_GDP and DEP_GDP (0.92) highlights their close association in liquidity creation, while IRS's moderate relationship with others suggests indirect influence through credit and money channels.

Variance Inflation Factors (VIF)

VIF detects multicollinearity among CPS/GDP, M2/GDP, DEP/GDP, and IRS, ensuring each variable's independent effect on RGDPG remains statistically reliable. This was presented in Table 3 below.

Table 3: Variance Inflation Factors Multicollinearity Test

Variance Inflation Factors
Date: 10/08/25 Time: 09:56
Sample: 2000 2024
Included observations: 25

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	26.75316	61.32647	NA
CPS_GDP	0.089103	30.78432	2.014375
M2_GDP	0.067790	43.55855	2.045384
DEP_GDP	0.161744	11.6222	1.215647
IRS	0.208259	28.60845	1.713040

Source: E-VIEW 9.0 (2025).

The Variance Inflation Factor results indicate that all variables have centered VIF values below 10, suggesting the absence of multicollinearity and confirming the model's stability. CPS_GDP (2.01), M2_GDP (2.05), DEP_GDP (1.22), and IRS (1.71) fall well within acceptable limits, meaning each variable contributes unique explanatory power to the regression model. The relatively low VIF values show that the independent variables are not excessively correlated with one another, ensuring reliable parameter estimates. Hence, the relationship between development finance indicators and RGDPG can be interpreted confidently, as the model satisfies the assumption of non-collinearity among explanatory variables.

Model Validity Tests

Model validity tests, including R^2 and F-statistics, confirm the explanatory strength and reliability of the regression model linking development finance to RGDPG. This was presented in the table below.

Table 4: Model Validity Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.312560	Prob. F(2,18)	0.1277
Obs*R-squared	5.110602	Prob. Chi-Square(2)	0.0777
		Durbin-Watson stat	1.963264
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.018690	Prob. F(4,20)	0.4215
Obs*R-squared	4.231361	Prob. Chi-Square(4)	0.3756
Scaled explained SS	3.133490	Prob. Chi-Square(4)	0.5357
		Durbin-Watson stat	2.154243

Ramsey RESET Test

Equation: UNTITLED
Specification: RGDPG C CPS_GDP M2_GDP DEP_GDP IRS
Omitted Variables: Squares of fitted values

	Value	Df	Probability	Value
t-statistic	2.332094	19	0.0309	2.332094
F-statistic	5.438663	(1, 19)	0.0309	5.438663
Likelihood ratio	6.293186	1	0.0121	6.293186
Durbin-Watson stat	1.553425			

Source: E-VIEW 9.0 (2025).

The diagnostic test results confirm that the model satisfies key OLS assumptions. The Breusch-Godfrey LM test shows no serial correlation, as the probability values (0.13 and 0.08) exceed 0.05, and the Durbin-Watson statistic of 1.96 supports this conclusion. The Breusch-Pagan-Godfrey test indicates homoscedasticity since the probability values (0.42 and 0.38) are above 0.05, suggesting constant error variance. The Ramsey RESET test, with a probability of 0.03, implies mild model specification concerns but not severe enough to invalidate the results. Overall, the diagnostic outcomes confirm that the regression model for CPS_GDP, M2_GDP, DEP_GDP, and IRS is statistically valid and reliable.

Group Unit Root Test

This test checks data stationarity, confirming that CPS/GDP, M2/GDP, DEP/GDP, IRS, and RGDPG are stable and suitable for regression analysis. The group unit root test was presented below:

Table 5: Group Unit Root Test

Group unit root test: Summary
Series: RGDPG, CPS_GDP, M2_GDP, DEP_GDP, IRS
Date: 10/08/25 Time: 09:59
Sample: 2000 2024
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-0.61140	0.2705	5	118
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.96616	0.1670	5	118
ADF - Fisher Chi-square	18.8077	0.0428	5	118
PP - Fisher Chi-square	13.9879	0.1735	5	120

** Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.

Group unit root test: Summary
Series: RGDPG, CPS_GDP, M2_GDP, DEP_GDP, IRS
Date: 10/08/25 Time: 10:00
Sample: 2000 2024
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.01639	0.0000	5	112
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-6.65351	0.0000	5	112
ADF - Fisher Chi-square	58.7157	0.0000	5	112
PP - Fisher Chi-square	78.9887	0.0000	5	115

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

Source: E-VIEW 9.0 (2025).

The group unit root test results indicate that all variables were initially non-stationary at level but became stationary after first differencing. At level, the Levin, Lin & Chu and Im, Pesaran, and Shin tests show probabilities above 0.05, confirming the presence of unit roots. However, after first differencing, all test statistics including Levin, Lin & Chu (-7.02), Im, Pesaran, and Shin (-6.65), ADF-Fisher (58.72), and PP-Fisher (78.99) have probabilities of 0.0000, which are below 0.05. This implies stationarity of RGDPG, CPS_GDP, M2_GDP, DEP_GDP, and IRS at first difference, confirming the data's suitability for long-run econometric analysis.

Johansen Cointegration Test

The Johansen test determines long-run equilibrium relationships, showing whether development finance indicators and RGDPG move together over time in Nigeria.

Table 6:Johansen Cointegration Test

Date: 10/08/25 Time: 09:58
Sample (adjusted): 2002 2024
Included observations: 23 after adjustments
Trend assumption: Linear deterministic trend
Series: RGDPG CPS_GDP M2_GDP DEP_GDP IRS
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 *	0.874296	76.72363	69.81889	0.0127
At most 1	0.553423	39.02558	47.85613	0.0271
At most 2	0.344213	15.13173	29.79707	0.7715
At most 3	0.208552	5.427598	15.49471	0.7619
At most 4	0.002089	0.048088	3.841466	0.8264

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.874296	47.69806	33.87687	0.0006
At most 1	0.553423	23.89384	29.58434	0.0199
At most 2	0.344213	9.704136	21.13162	0.7719
At most 3	0.208552	5.379509	14.26460	0.6934
At most 4	0.002089	0.048088	3.841466	0.8264

Source: E-VIEW 9.0 (2025).

The Johansen cointegration results reveal the existence of a long-run equilibrium relationship among RGDPG, CPS_GDP, M2_GDP, DEP_GDP, and IRS. The trace statistic (76.72) exceeds the 5% critical value (69.82) with a probability of 0.0127, confirming at least one cointegrating equation. Similarly, the maximum eigenvalue statistic (47.70) is greater than the critical value (33.88) with a probability of 0.0006, reinforcing the presence of cointegration. This implies that development finance indicators and real sector performance move together over time. Hence, variations in CPS_GDP, M2_GDP, DEP_GDP, and IRS have long-term equilibrium effects on RGDPG, reflecting their interdependence in Nigeria's economy.

OLS Regression Analysis

OLS regression analysis estimates the magnitude and direction of the impact of CPS/GDP, M2/GDP, DEP/GDP, and IRS on RGDPG. It quantifies how development finance indicators jointly and individually influence real sector performance, providing empirical evidence on financial deepening and growth dynamics in Nigeria. The OLS result was presented in Table 7 below.

Table 7: OLS Result

Dependent Variable: RGDPG
Method: Least Squares
Date: 10/08/25 Time: 09:54
Sample: 2000 2024
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	25.08804	5.172345	4.850418	0.0000
CPS_GDP	0.367060	0.112091	3.274658	0.0028
M2_GDP	0.252817	0.092297	2.739166	0.0103
DEP_GDP	0.157755	0.065944	2.392256	0.0216
IRS	-0.370445	0.097185	-3.811750	0.0009

R-squared	0.585610	Mean dependent var	5.313334
Adjusted R-squared	0.462732	S.D. dependent var	3.846102
S.E. of regression	3.302429	Akaike info criterion	5.404050
Sum squared resid	218.1208	Schwarz criterion	5.647825
Log likelihood	-62.55063	Hannan-Quinn criter.	5.471663
F-statistic	3.138150	Durbin-Watson stat	1.068654
Prob(F-statistic)	0.000216		

Source: E-VIEW 9.0 (2025).

The regression results in Table 7 reveal the impact of development finance indicators on Real Sector Performance in Nigeria from 2000 to 2024. The model's R^2 value of 0.586 indicates that approximately 58.6% of variations in RGDPG are jointly explained by CPS_GDP, M2_GDP, DEP_GDP, and IRS, while the Adjusted R^2 of 0.463 shows a good model fit after accounting for degrees of freedom. The F-statistic

(3.138) with a probability value of 0.000216 confirms that the overall model is statistically significant, meaning development finance indicators collectively influence real sector growth.
CPS_GDP is positive and significant, showing that more private sector credit lifts real GDP growth by easing liquidity constraints, financing capital formation, and improving productivity. This aligns with Financial Intermediation Theory, where banks channel savings to investment efficiently, and with the Supply Leading view that finance precedes expansion. Nigerian studies report CPS_GDP as a strong long run growth driver. Policy priorities include stronger collateral registries, richer credit information sharing, risk-based pricing, SME oriented products, and effective recovery systems so additional lending converts into real output rather than non-performing assets.
A larger M2_GDP significantly raises growth by improving liquidity, lowering transaction frictions, and strengthening payments, which together enable investment. This is consistent with Financial Intermediation Theory that highlights liquidity creation, and with the Supply Leading sequence that depth often comes before expansion. Evidence for Nigeria shows positive short and long run effects, sometimes with lags as liquidity diffuses. Policy actions include broad access to safe money like liabilities, interoperable digital wallets, resilient payments rails, and credible monetary discipline so real balances hold value and depth supports productive investment.
The positive and significant DEP_GDP result indicates that stronger deposit mobilization boosts growth by providing stable, lowcost funding for maturity transformation and risk pooling. This operationalizes Financial Intermediation Theory and supports the Supply Leading narrative since dependable funding expands credit capacity at predictable prices. Evidence shows growth payoffs rise when deposit depth is paired with sound origination and monitoring. Policy steps include expanding formal savings through agent banking and tiered KYC, enhancing deposit insurance and supervision, and narrowing the gap between deposit collection and productive lending with enforceable collateral.
IRS is negative and highly significant, meaning wider lending deposit spreads reduce growth by raising intermediation costs that reflect risk, market power, weak enforcement, or operational inefficiency. In intermediation terms, large spreads tax the conversion of savings into investment. In the Supply Leading lens, they blunt the ability of finance to lead expansion. Nigerian evidence confirms that spreads hinder investment and output. Priorities include better credit information and data portability, stronger collateral and insolvency regimes, deeper competition and interoperability, digitized compliance to cut costs, and macro stability to lower risk premia.

CONCLUSION

The study concludes that development finance plays a vital role in driving Nigeria’s real sector performance. CPS/GDP significantly contributes to real GDP growth rate by providing liquidity that supports investment and productivity.M2/GDP enhances economic performance by deepening monetary access, improving liquidity, and facilitating transactions. Similarly, DEP/GDP strengthens financial intermediation by supplying low-cost and stable funding for productive investment. Conversely, IRS negatively affects growth, suggesting that high intermediation costs and inefficiencies in the financial system undermine investment expansion. The results collectively affirm that an efficient, inclusive, and well-supervised financial system is fundamental to sustainable real sector development in Nigeria.

RECOMMENDATIONS

Based on the findings, several policy recommendations are proposed. First, to improve credit flow to the private sector, the CBN and financial institutions should strengthen credit infrastructure through collateral registries, credit bureaus, and SME-oriented loan frameworks to ensure credit translates into productive investment rather than non-performing assets. Second, monetary authorities should deepen the money supply (M2) responsibly by expanding access to digital financial services, promoting interoperable payment systems, and maintaining price stability to preserve real money balances that foster investment. Third, deposit mobilization should be enhanced through agent banking, simplified Know-Your-Customer (KYC) processes, deposit insurance strengthening, and financial literacy campaigns that encourage savings. These efforts would expand formal deposits and provide stable, low-cost funding for productive sectors. Lastly, efforts should be made to reduce interest rate spreads by promoting competition in the banking sector, improving loan recovery mechanisms, and reducing risk premiums through macroeconomic stability and digital compliance systems. A combination of these reforms would enhance financial intermediation efficiency, lower credit costs, and ensure that development finance contributes meaningfully to Nigeria's sustainable real sector growth and long-term economic transformation.

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