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DEPOSIT MONEY BANKS' PERFORMANCE AND THE MANUFACTURING SECTOR OUTPUT IN NIGERIA

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ABSTRACT: This paper analyzed the performance of Deposit Money Banks (DMBs) and the growth of the Manufacturing sector over a period of forty years (1981-2024). The paper had the objective of determining the impact of banks' credit as a proxy for DMB performance on the manufacturing sector output; estimating the impact of banks' credit through financial deepening and interest rate on Gross Domestic Product; and determining the long run relationship between banks' credit and the growth of GDP; The study employed Autoregressive Distributed Lag Model after pre-estimation tests of unit root and co-integration tests. An interactive model was used to determine the channel through which domestic credit to the private sector will be more effective. The result of the unit root showed that the variables were integrated of order one and zero, thereby making the Autoregressive Distributed Lag (ARDL) Model suitable for the study. The ARDL result showed that the coefficient on domestic credit to the private sector was statistically significant. The impacts of exchange rate, government expenditure, and lagged monetary policy rate levels (lag 1 and lag 2) on manufacturing output were statistically significant, as indicated by the results. The interactive model showed that domestic credit to the private sector is more effective when interest rates are managed moderately.

Keywords: Deposit Money Bank; Manufacturing sector output; Monetary policy, Interactive model; Domestic Credit

INTRODUCTION

Banks are vital institutions that play a vital role in guaranteeing sustainable economic development. In Nigeria, the banking sector is an important part of the financial system, accounting for about 90% of the economy's total assets. However, the banking sector has not contributed significantly to the growth and development of the Nigerian economy as expected. The poor performance of the sector has been attributed to numerous problems it has faced, such as inadequate capital and high nonperforming assets, which have led to frequent distress and the collapse of banks in the past.

The extent to which a bank extends credit to the public for productive activities accelerates the pace of a nation's economic growth and its long-term sustainability. The credit function of banks enhances investors' ability to exploit profitable ventures. According to Kargi (2011), Credit creation is the main income-generating activity of banks. However, it exposes the banks to credit risk. Credit

risk is an internal determinant of bank performance. The higher the exposure of a bank's credit risk, the higher the tendency of such banks to experience a financial crisis and vice versa.

The Federal Government of Nigeria (FGN) established Special Intervention funds for Micro, Small and Medium Enterprises (MSMEs) to stimulate economic activities in the SME sub-subsector to drive industrialization and job creation. Deposit Money Banks (DMBs) serve as a source from which credits are channelled to different sectors of the economy through their intermediation role. It is on this intermediation role that the Federal Government of Nigeria (FGN) and the Central Bank of Nigeria (CBN) intervention funds for the manufacturing sector and other subsectors were channelled through commercial banks (Yua, Yua, & Ogbonna, 2021).

Although credit extension to the private sector has grown over recent months, Nigeria's credit penetration remains low due to low levels of formal and informal financial inclusion. The government's access to credit is crowding out lending to the private sector.

Furthermore, notwithstanding the enhanced financial intermediation in the economy following the financial reforms of the 1990's, credits to the manufacturing sector as a proportion of total banking credits did not improve significantly. Bank credit was believed to induce efficient and effective performance of the economy's output growth. The fluctuation in the total credit share of GDP is a result of monetary policy by the monetary authority to regulate the supply of money by banks to the public and private sectors in order to stem inflation in the Nigerian economy. Based on the above discussion, this paper addresses the following research questions.

i. What is the impact of Deposit Money Banks' credit on Economic growth in Nigeria?
ii. What is the impact of banks' credit through financial deepening on Economic growth in Nigeria?
iii. Is there a long-run relationship between banks' credit and Economic growth in Nigeria?
iv. What is the causality relationship between banks' credit and Economic growth in Nigeria?

This paper investigates the impact of banks' credit on economic growth in Nigeria for the period 1981 to 2021. Time series data on Real Gross Domestic Product (RGDP), Bank's credit (BCR), inflation rate (INF), Government expenditure (GEX), trade openness (OPN), Bank prime lending rate (BPLR), exchange rate (EXCH) and financial deepening (FIND) were sourced from the Central bank of Nigeria (CBN) Statistical Bulletin (2024), and a dummy variable (DU) for financial deregulation was employed.

LITERATURE REVIEW

In this paper, some theoretical and empirical work were reviewed with the intention of picking a gap to be minimized. The loanable funds doctrine of the market interest rate shows that interest rate is determined by the demand for and supply of loanable funds. The demand for loanable funds has government, businessmen and consumers who need these funds for purposes of investment, hoarding and consumption. The theory of loanable funds provides a link between deposit money bank credits and manufacturing sector output in that it buttresses the fact that borrowing for investment in the manufacturing sector is determined by the existing rate of interest.

The supply-leading hypothesis presumes that the economy responds to growth in the real sector facilitated by financial development. The proponents of this hypothesis believed that the activities of financial institutions, as expressed in credit extension, serve as a useful tool for increasing the productive capacity of the economy. The "demand-following hypothesis", which was introduced by Robinson (1952), stated that financial progress follows economic growth. Other theories reviewed in this paper include Gross and Pure Theory of Interest, Time Preference Theory of Interest**,** and the Classical Theory of Interest.

Many papers have been published on Deposit Money Bank credit, but with varying results. Asuquo, Onuchuku and Nteegah (2021) used an error-correction mechanism to explore the impact of Deposit Money Bank (DMB) credit on manufacturing-sector performance in Nigeria between 1981 and 2019. The findings of the error-correction model revealed that deposit money banks' credit to the manufacturing sector had a positive impact on manufacturing performance. This confirmed the critical role of cost of funds in investment decisions and the performance of the economy at large.

Olusegun (2021) examined the determinants and sustainability of manufacturing sector performance in Nigeria from 1994 to 2019. The paper applied the Error Correction Model (ECM) and Pairwise Granger Causality (PGC) techniques and found that the disequilibrium was adjusted at 77.5%. Yua, Yua, and Ogbonna (2021) examined the role of deposit money bank credit on industrial output in Nigeria using the ARDL Bound test and regression. The findings of the study revealed that deposit money bank credit and money supply were significantly related to industrial output in Nigeria, whereas the inflation rate and lending rate were not.

Musa and Okologume (2020) examined the influence of Deposit Money Banks on the Nigerian Economy from 2009 to 2018 using ordinary least squares (OLS). The result revealed that the credit of deposit money banks had a positive and significant influence on the Nigerian economy. Ozigbo (2020) investigated the impact of interest rate dynamics on the performance of Nigeria's manufacturing subsector from 1980 to 1999. The error-correction mechanism was applied, and the results showed that Nigeria's high interest rate has hindered the performance of the manufacturing sub-sector.

Otubu (2019) examined the impact of bank credit on the manufacturing sector in Nigeria from 1980 to 2015. The paper applied the error correction model and Granger causality in its analysis. The results of the error-correction model indicate that bank credit to the manufacturing sector had a positive impact on manufacturing sector output. Other papers in line with this conclusion include Godwin and Idaraobong (2019), Tams-Alasia et al (2018), and Ogunmuyiwa, Okuneye, and Amaefule (2017).

However, most of the reviewed works employed time-series data but could not investigate the impact of deposit money banks' credit on financial deepening and manufacturing sector output in Nigeria.

The Model

The loanable fund theory was the theoretical framework adopted for this study. This explains that the market interest rate is determined by the factors that control the supply of and demand for loanable funds.

To avoid the problem of spurious correlations in the regression analysis, the time-series properties were investigated using the standard augmented Dickey-Fuller (ADF) unit root test. The general form of the ADF test was specified following three models that represent pure random walk, random walk with drift and random walk with drift and trend:

$$\Delta\psi_t = \Omega\psi_{t-1} + \sum_{i=1}^{p}\beta_i\Delta\psi_{t-1} + \varepsilon_t \quad \ldots\ldots\ldots\ldots\ldots\ldots 1$$

$$\Delta\psi_t = \alpha_0 + \Omega\psi_{t-1} + \sum_{i=1}^{p}\beta_i\Delta\psi_{t-i} + \varepsilon_t \quad \ldots\ldots\ldots\ldots\ldots\ldots 2$$

$$\Delta\psi_t = \alpha_0 + \Omega\Psi + \beta_2 t + \sum_{i=1}^{p}\beta_i\Delta\psi_{t-1} + \varepsilon_t \quad \ldots\ldots\ldots\ldots\ldots\ldots 3$$

where: $\Omega = (\lambda - 1)$.

The co-integration test was also used to detect the presence of a long-run relationship among the variables in the model. The Autoregressive Distributed Lag (ARDL) Bounds test for Cointegration was applied

The models for the study are the Auto Regressive Distributed Lag (ARDL) model and the interactive model. The Auto Regressive Distributed Lag (ARDL) model was chosen because it can handle varying orders of integration among the variables. The interactive model was designed to capture the effect of deposit money banks' credit on manufacturing output resulting from financial deepening in Nigeria.

The functional form of the models was specified as:

GDPg = f(BCR, GEX, BPLR, EXCH, FIND, DU) …….4

The functional form of the model was transformed into econometric form in order to determine the sign and magnitude of the explanatory variables on the dependent variable and the inclusion of the random term.

$GDPg = \beta_0 + \beta_1 BCR + \beta_2 GEX + \beta_3 BPLR + \beta_4 EXCH + \beta_5 FIND + \beta_6 DU + \mu$. …… 5

Where:

GDPg = Growth rate of GDP

BCR = Bank Credit

GEX = Government Expenditure

OPN = Openness

BPLR = Bank Prime Lending Rate

BPLR = Bank Prime Lending Rate

EXCH =Exchange Rate

FIND = Financial deepening

INF = Inflation rate

The ARDL-ECM was specified by introducing a differenced operator and the speed of adjustment in the model. This was done to enable the model to capture both the long-run and short-run dynamics. Thus:

$$\Delta GDPg_T = \alpha_0 + \alpha_1 \sum_{i=1}^{n} \Delta BCR_{t-i} + \alpha_2 \sum_{i=1}^{n} \Delta GEX_{t-i} + \alpha_3 \sum_{i=1}^{n} \Delta OPN_{t-i} + \alpha_4 \sum_{i=1}^{n} \Delta \mathrm{BPLR}_{t-i} + \alpha_5 \sum_{i=1}^{n} \Delta EXCH_{t-i} + \alpha_6 \sum_{i=1}^{n} \Delta FIND_{t-i} + \alpha_6 \sum_{i=1}^{n} \Delta INF_{t-i} + \alpha_7 ECM_{t-1} + U_t \dots \dots \dots 6$$

Where;

α_0= a constant

$\alpha_1 - \beta_5$ = coefficients of the independent variables

ECM_{t-1} = Speed of adjustment

μ = the disturbance term or error term.

t = Time period

To examine the structural stability of manufacturing sector output vis-à-vis deregulation, interest rate and exchange rate in Nigeria, the dummy variable technique was employed. Thus, equation 3.5 translates to a dummy variable structural break model expressed as equation (3.7).

$\Delta GDPg_t = â_o + â_1\Delta BPLR_t + â_2\Delta\ EXCH_t + â_3\Delta BCR_t + â_4\Delta GEX_t$

$+ â_5\Delta FIND_t + b_oDU + b_1DU\_BPLR + b_2DU\_EXCH + â_6ECM_{t-1} + \mu_t$ ….. 7

DU = DUMMY = 1 for the period starting 1986 (Post-SAP) and DU = 0, otherwise (1981 to 1985, Pre-SAP era),

$â_1 < 0$, $â_2 > 0$, $â_3 < 0$, $â_4 > 0$, $â_5 < 0$.

b_0 = differential Intercept,

b_1, and b_2 = differential slope coefficients telling the extent to which the slope coefficients of the post-SAP period manufacturing sector output function differ from the manufacturing sector output function of the pre-SAP era and u_t = error term.

Equation 3.5 was specified in ARDL model form as follows:

$$\Delta GDPg = \beta_0 + \beta_1 BCR + \beta_2 GEX + \beta_3 BPLR + \beta_4 EXCH + \beta_5 FIND + \beta_6 DU + \sum_{i=1}^{k} \delta_{1i}\Delta GDPg_{t-1} + \sum_{i=1}^{k} \delta_{2i}\Delta BCR_{t-1} + \sum_{i=1}^{k} \delta_{3i}\Delta GEX_{t-1} + \sum_{i=1}^{k} \delta_{4i}\Delta BPLR_{t-1} + \sum_{i=1}^{k} \delta_{5i}\Delta EXCH_{t-1} + \sum_{i=1}^{k} \delta_{6i}\Delta FIND_{t-1} + \sum_{i=1}^{k} \delta_{7i}\Delta DU_{t-1} + \delta_{8i}ECM_{t-1} + \varepsilon_t \quad \text{..... 8}$$

The Granger Causality test was also carried out. The essence of causality analysis, using the Granger Causality test, was to ascertain whether a causal relationship exists between two variables of interest. Granger causality test for the series was specified as:

$$Y_t = \sum_{i=1}^{k} \delta_{11i} Y_{t-1} + \sum_{i=1}^{k} \delta_{12i} Y_{t-1} + U_{1t} \quad \text{..... 9}$$

$$X_t = \sum_{i=1}^{k} \delta_{21i} Y_{t-1} + \sum_{i=1}^{k} \delta_{22i} Y_{t-1} + U_{2t} \quad \text{..... 10}$$

where Y = dependent variable, X = independent variables in the model, t = the current period of the variables and t-i = the lagged period of the variables, δ_{11} to δ_{22} = the coefficients of the lagged variables, and U_1 and U_2 = mutually uncorrelated white noise error terms. The Granger causality analysis decision rule follows the F-distribution. Therefore, reject the null hypothesis if the p(F-statistic) < 0.05; otherwise, accept. Different post estimation tests, such as Breusch-Godfrey Serial Correlation LM Test, Heteroskedasticity Test and Normality Test, were carried out.

This paper used time series secondary data on manufacturing sector output (MANOUT), deposit money bank credit (DMBCR), inflation rate (INF) Government expenditure (GEX), trade openness

(OPN), deposit money bank prime lending rate (DMBPLR), exchange rate (EXCH) and financial deepening (FIND) sourced from Central bank of Nigeria (CBN) Statistical Bulletin (2021), and Dummy Variable (DU) for financial deregulation. Econometric software for the data estimation is E-View 13.

RESULT

Descriptive statistics describe the distribution of individual values for the variables used. It shows the mean, median, standard deviation, Jarque-Bera and its probability value (Used to measure normality of the data). The descriptive statistics results for the study are presented in Table 4.1. below:

Table 1: Result of Descriptive statistics

Variables	Mean	Maximum	Minimum	Std. Dev.	Jarque-Bera	Proby
MANOUT	14.32	21.098	9.6.	5.036	4.333	0.115
DCPS	9.27093	19.625	4.95752	3.47591	11.2101	0.00368
DU	0.8750	1.00000	0.00000	0.33493	50.7483	0.00000
EXR	112.00	435.000	0.63560	115.737	7.89907	0.01926
FD	2.6440	124.292	-89.5776	24.596	537.918	0.00000
GDPGR	3.0416	15.32916	-13.1279	5.38535	9.0751	0.0107

Source: *Researcher's Computation from E-view 9*

Table 1 reveals the individual distributions of the variables used, highlighting their median, mean, maximum, and minimum values, standard deviations, and Jarque-Bera statistics (normality Test). Manufacturing output (MANOUT) had a mean of 14.31992, a maximum of 21.09825, and a minimum of 9.6. Manufacturing output recorded a standard deviation of 5.036123, which is lower than its mean. The result of the Jarque-Bera value of 4.332679 with its probability value of 0.114596 indicates that the variable was normally distributed.

Domestic Credit to the Private Sector (DCPS), Gross domestic product growth rate (GDPGR), Exchange Rate (EXR) and monetary policy rate (MPR) recorded mean values of 9.27, 3.04, 112 and 13.07 respectively. The maximum value recorded by DCPS was 19.63 while those of GPGR, EXR, and MPR were 15.32916, 112.986 and 26. The result further showed that EXR, GDPGR, trade openness (TOP) and MPR were not normally distributed.

The result of the unit root test was presented with the aid of Table 2

Table 2: Result of ADF Unit Root Test

VARIABLES	ADF LEVEL	ADF STAT	ADF 1ST DIFF	ADF STAT	ORDER OF INTEGRATION
MANOUT	-1.306280	-2.93694	-7.146920	-2.938987	I(1)
DCPS	-2.36475	-2.938987	-5.773672	-2.943427	I(1)
EXR	-2.332157	-2.36942	-4.758406	-2.938987	I(1)
FD	-5.00634	-2.938987	****	****	I(0)
GXP	-5.675490	***	***	***	I(0)
INFL	-2.9676	-2.938987	-5.832010	-2.938987	I(1)
INTR	-2.370535	2.951025	-5.047070	-2.938987	I(1)
MPR	-3.534993	-2.938987	***	***	I(0)
TOP	-2.421431	-2.938987	-7.767411	-2.938987	I(1)

Source: Author's Computations

The ADF tests were conducted on level form and first-difference form. Table 2 showed that all the variables used in this study were stationary in first differences, except Financial Deepening, Government Expenditure, and Monetary Policy Rate, which were integrated of order zero. The parameter (MANOUT) became stationary only after taking the first difference, with a 5% critical value of -2.93694 being less than the ADF critical value.

A co-integration test was done using the ADF co-integration analysis. The result was presented with the aid of Table 3.

Table 3: ADF Co-integration Test result

Null Hypothesis: RESID01 has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.487158	0.0145
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

The result of the Augmented Dickey-Fuller co-integration test statistic (Resid01) was -3.487, which was well above the 5% critical value of -2.95. The result indicates the presence of a long-run relationship among the variables. The Johansen co-integration test was also carried out to confirm the result of ADF, and the results were shown in Table 4.

Table 4: Johansen co-integration test result

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.990813	513.2271	239.2354	0.0000
At most 1 *	0.930851	358.4575	197.3709	0.0000
At most 2 *	0.911889	270.2982	159.5297	0.0000
At most 3 *	0.869006	190.1359	125.6154	0.0000
At most 4 *	0.682154	123.0600	95.75366	0.0002
At most 5 *	0.631385	85.23573	69.81889	0.0018
At most 6 *	0.500477	52.30161	47.85613	0.0180
At most 7	0.421641	29.39627	29.79707	0.0556
At most 8	0.286545	11.32679	15.49471	0.1922
At most 9	0.005584	0.184785	3.841466	0.6673

Trace test indicates 7 cointegrating eqn(s) at the 0.05 level
* Denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

The result of the Johansen co-integration test also confirmed at least 7 co-integrating equations. This showed that the variables have a long-run relationship.

The Autoregressive Distributed Lag (ARDL) model was estimated after a preliminary investigation on the properties of the variables in the model. The results of this model were presented with the aid of Table 5.

Table 5: The results of the ARDL Model

Selected Model: ARDL (4, 1, 3, 4, 0, 0, 2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
MANOUT(-1)	0.401864	0.159743	2.515689	0.0229
MANOUT(-2)	0.244726	0.173315	1.412027	0.1771
MANOUT(-3)	0.317089	0.149765	2.117241	0.0503
MANOUT(-4)	-0.371375	0.130023	-2.856215	0.0114
DCPS	0.123706	0.076951	1.607582	0.1275
DCPS(-1)	-0.151542	0.075870	-1.997400	0.0631
FD	0.007854	0.007947	0.988331	0.3377
FD(-1)	-0.002778	0.007037	-0.394787	0.6982
FD(-2)	0.012237	0.005473	2.235829	0.0400
FD(-3)	0.009315	0.006282	1.482862	0.1575
GDPGR	-0.031150	0.049861	-0.624749	0.5409

GDPGR(-1)	-0.049166	0.052627	-0.934228	0.3641
GDPGR(-2)	-0.060467	0.052906	-1.142919	0.2699
GDPGR(-3)	-0.034089	0.056613	-0.602138	0.5555
GDPGR(-4)	-0.171611	0.057021	-3.009626	0.0083
EXR	-0.027198	0.005251	-5.179541	0.0001
GXP	0.000826	0.000194	4.246649	0.0006
MPR	-0.000937	0.053910	-0.017386	0.9863
MPR(-1)	0.215480	0.055590	3.876212	0.0013
MPR(-2)	0.165519	0.071416	2.317680	0.0340
C	2.987957	2.215919	1.348405	0.1963
R-squared	0.989802	Mean dependent var		13.72124

The result indicated a maximum lag length of 4 with a constant intercept of 2.987957. The positive constant intercept in the result indicated that manufacturing output was 2.988, with all factors determining its level held constant. The coefficients at lags 1, 3, and 4 of manufacturing output (MANOUT) were statistically significant, as indicated by their t-statistics and p-values. This corresponds with the expectation that the previous values of the level of manufacturing output determine the current ones.

Domestic credit to the private sector was positively related to economic growth. A unit increase in domestic credit to the sector increased economic growth by 0.124, but it was statistically insignificant, as indicated by its p-value. The previous value of 2 years of financial deepening was statistically significant, with a t-statistic of 2.2358 and a p-value of 0.04, whereas other lags were insignificant, as their p-values were greater than the 5% level of significance. The result also showed that GDP growth had negative effects on economic growth and was insignificant, except at lag 4. It was also observed from the result that the exchange rate and the monetary policy rate had a negative effect on economic growth, while government expenditure and lag 1 of the monetary policy rate had a positive effect.

Domestic Credit to the Private Sector (DCPS) interacted with the level of Financial Deepening (FD) and the interest rate (INTR) to identify the mechanism through which DCPS affects manufacturing output. The result of this was presented with the aid of Table 4.6

Table 6: The Result of the Interactive Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.028083	0.413165	9.749328	0.0000
DCPS	-0.170091	0.057620	-2.951932	0.0072
DU	0.192743	0.138374	1.392920	0.1770
EXR	-0.004288	0.000605	-7.086360	0.0000
FD	-0.016564	0.012214	-1.356139	0.1882
GDPGR	-0.008991	0.005634	-1.595776	0.1242
INFL	-0.002342	0.002132	-1.098578	0.2833

INTR	-0.063867	0.029896	-2.136338	0.0435
MPR	0.020500	0.013536	1.514489	0.1435
TOP	-0.004569	0.003052	-1.497140	0.1480
DCPS*FD	0.002172	0.001700	1.277766	0.2141
DCPS*INTR	0.008513	0.003364	2.530278	0.0187
R-squared	0.933188	Mean dependent var		2.632227

The interactive model showed that domestic credit to the private sector significantly affects output growth through interest rate and has an insignificant effect through financial deepening. The coefficient of the interaction of DCPS and interest was 0.0085 with a t-statistic of 2.53 and a p-value of 0.0187. This indicates that domestic credit to the private sector can be productive through a moderate interest rate in Nigeria. It was also reported that the interest rate significantly influenced output growth in Nigeria. An increase in interest rate reduced output growth by 0.063867 with a t-statistic of -2.136 and a p-value of 0.0435. The t-statistics and p-values for the interest rate clearly indicated that it was statistically significant in the model.

The results also indicated that domestic credit to the private sector and the exchange rate were negatively related to output growth in Nigeria during the period under investigation. An increase in DCPS reduced output growth by 0.17, while an increase in the exchange rate reduced it by 0.0042. The t-statistics for DCPS and EXR were -2.95 and -7.086, respectively. These statistics showed that DCPS and EXR were significantly affecting output growth in Nigeria. The p-values for DCPS and EXR were 0.0072 and 0.0000, respectively, indicating that both variables were significant determinants of output growth in Nigeria. Other variables that had an insignificant effect on output growth in Nigeria were regime change, Financial Deepening, GDPGR, inflation rate, monetary policy rate, and Trade openness. It is pertinent to note that an increase in domestic credit to the private sector boosted manufacturing output in Nigeria.

The Granger Causality test was carried out, and the results were presented in Table 7

Table 7: Granger Causality result

Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
DCPS does not Granger Cause GDPg	39	1.03156	0.3673
GDPg does not Granger Cause DCPS		9.77597	0.0004
GDPGR does not Granger CauseGDPg	39	4.79307	0.0147
GDPgT does not Granger Cause GDPGR		3.15805	0.0552
GXP does not Granger Cause GDPg	39	3.89533	0.0300
GDPg does not Granger Cause GXP		1.00056	0.3782
GDPg does not Granger Cause DU	36	4.22542	0.0238
DU does not Granger Cause GDPg		0.02216	0.9781

INFL does not Granger Cause FD	39	2.87606	0.0701
FD does not Granger Cause INFL		6.56430	0.0039
INTR does not Granger Cause FD	33	5.57075	0.0092
FD does not Granger Cause INTR		1.08530	0.3516
MPR does not Granger Cause FD	39	4.13156	0.0248
FD does not Granger Cause MPR		0.19540	0.8234

The result of the Granger causality test showed that output growth Granger-causes domestic credit to the private sector, and the reverse was not the case. This means that shocks from output growth motivate the need for domestic credit to the private sector in Nigeria. The result further showed that growth in GDP and government expenditure Granger-cause output growth in Nigeria. It was further observed from the Granger causality results that financial deepening Granger-caused inflation, while the interest rate and monetary policy rate Granger-caused financial deepening within the period under investigation.

Conclusion

The study was an empirical analysis of the relationship between Deposit Money Banks (DMBs) and economic growth in Nigeria. From 1981-2024, with the underlying objectives of ascertaining the impact of banks' credit on economic growth, determining the impact of banks' credit through financial deepening and interest rate, examining the long-run relationship between banks' credit and economic growth and determining the causality relationship between banks' credit and economic growth in Nigeria

The ARDL result indicates a positive constant intercept. Showing that manufacturing output was 2.988, as all the factors determining its level were assumed to be statistically equal to zero. Output growth (GDPg) was statistically significant as indicated by its t-statistics and p-values.

The coefficient on domestic credit to the private sector indicates a positive relationship between domestic credit to the sector and output growth in Nigeria. It showed that a unit increase in domestic credit to the sector increased output, but the increase was statistically insignificant, as indicated by its p-value.

Domestic credit to the private sector was identified as a useful factor in boosting economic growth in Nigeria. Thus, this study analysed banks' credit and GDP growth in Nigeria for a period of forty years, from 1981 through 2024, and found that credit to the private sector, exchange rate, Government expenditure, and interest rate play vital roles in determining economic growth. Based on the foregoing, the study concluded that domestic credit to the private sector, government expenditure, interest rate, and exchange rate were the core factors determining the level of GDP growth in Nigeria. This paper recommends that the government's expenditure be allocated to sectors based on priority and the need for sustainable development in Nigeria. The government,

through Nigeria's monetary authorities, should moderate other prevailing macroeconomic trends in the economy.

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