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FINANCIAL DEEPENING AND ECONOMIC GROWTH IN NIGERIA: AN AUTOREGRESSIVE DISTRIBUTED LAG APPROACH

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ABSTRACT: This study investigates the effect of financial deepening on economic growth in Nigeria. The annual times series data from 1991 to 2022 were used for the study, while the ex-post facto research design was adopted for the study. The Augmented Dickey Fuller (ADF) and the Phillipps-Perron methods were used to test for unit roots. The data were analyzed using the Autoregressive Distributed Lag (ARDL) approach. In contrast, the Breusch-Pagan-Godfrey test for heteroskedasticity, Correlogram of Residuals Squared, Cusum test and Histogram Normality test were also used for the diagnostic test. The outcome of the long-run analysis indicates that the Ratio of broad money to GDP and Market capitalization have a positive and significant effect on the Gross Domestic Product, while Credit to the private sector to GDP has an inverse and significant impact on the Gross Domestic Product. Conversely, the Liquidity ratio of commercial banks has a negative and no significant effect on the Gross Domestic Product. Thus, the study finds that financial deepening significantly impacts Nigeria's economic growth. Hence, the study concludes that financial deepening has a significant effect on economic growth in Nigeria. Finally, the study suggests that Banks should extend more credit facilities to sectors of the economy that are production-driven.

Keywords: Broad Money, Credit to Private Sector, Economic Growth, Financial Deepening

INTRODUCTION

The financial system is known for providing support towards financial stability, managing risk, fostering investment, efficiency in the allocation of resources and promotion of economic growth. A properly functioning financial system acts as an essential nutrient for a healthy economy. As in Sahay et al. (2015), "financial systems in emerging markets (EMs) have deepened substantially in recent decades, but most are well below the levels reached in advanced economies (AEs). As of the end of 2013, the outstanding private credit accounted for about 50 percent of GDP in the average emerging market, while capital markets have increased by 10 to 15 percent of the Gross Domestic Product and have averaged about 40 percent of the GDP since 2000. Nevertheless, these levels still lag behind those in advanced economies, where private credit averages more than 130 percent of GDP and stock market capitalization is about 70 percent of GDP. This is despite the deleveraging process that has taken place following the 2008 global financial crisis" (p. 6).

An advanced financial system serves as a catalyst for the enhancement of economic growth by allowing economic agents to diversify their portfolios as well as meet their liquidity

requirements. Financial innovations encourage a higher level of savings and capital accumulation and, consequently, a higher level of economic growth (Gbanador et al., 2023; Levine, 1997; Mishra, 2008). Financial deepening concerns itself with increasing the provision of financial services with a broader choice of services geared towards the various units of society, whether through the formal banking sector or through informal platforms. It is an increased ratio of money supply to Gross Domestic Product (GDP). The more liquid money is accessible in an economy, the more chances exist for continual growth (Shaw, 1973). Financial deepening deals with the measures through which diverse financial services are made accessible to users by broadening the depth and breadth of the financial system in terms of efficiency, liquidity and volume as a means of achieving financial inclusion and economic growth.

Financial deepening is important for economic growth because it enhances economic conditions by creating a healthy environment for the financial players in the economy and indirectly extending its benefit to the non-financial sector of the economy. Financial deepening is the way in which financial institutions in an economy try to effectively mobilize savings for investment purposes (Nzotta & Okereke, 2009).

In examining the effect of financial deepening on economic growth in Nigeria, there exist divergent opinions regarding the direction of influence. The outcome of some studies indicates that financial deepening enhances economic growth in Nigeria (Abubakar et al., 2020; Ajudua & Odishika, 2022; Nwanna & Chinwudu (2016); Yinusa et al., 2020). In contrast, the outcome from other studies suggests that financial deepening does not necessarily contribute to economic growth (Amaefula, (2019; Ighoroje & Lucky, 2021; Nwakobi et al., 2019). Furthermore, most of the studies conducted using Nigerian data adopted strictly financial inclusion variables rather than using financial deepening variables as identified by the CBN in addition to variables from the banking sector, capital markets etc. This trend creates a gap that this study intends to bridge by using the ratio of broad money to GDP, credit to private sector to GDP, liquidity ratio, market capitalization and the Gross Domestic Product to examine the nexus between financial deepening and economic growth in Nigeria.

LITERATURE REVIEW

The General equilibrium theory of interest is the theory upon which this work in anchored. The General equilibrium theory of interest was introduced by John R. Hicks in 1937. Hick's general equilibrium theory is a synchronisation of the Classical and Keynesian theories of interest rate. Hick's theory of interest stipulates that the determination of interest rate depends on the equilibrium in both the real sector variables and the monetary sector variables. Thus, the equilibrium between investment and savings (I=S), which are real sector variables and the equilibrium between demand and supply of money (MD = MS), which are monetary sector variables, are what determine interest rate. The implication of this assertion is that the equilibrium interest rate is a condition whereby there exists a general equilibrium between the variables in both the real sector and the monetary sector of the economy (Gbanador, 2021; Gbanador & Giami, 2024). This theory is appropriate to this study because the interest rate is an important determinant of both credit to the private sector and the broad money supply. In most cases, a loan customer will decline to take a credit facility if the interest rate charged on the facility is high ceteris paribus.

Amaefula (2019) evaluated the effect of financial deepening on economic growth in Nigeria from 1981 to 2016. The Autoregressive Distributed Lag (ARDL) approach was employed for

the data analysis. Money supply and Credit to the private sector were used as proxies for financial deepening, while the Gross Domestic Product was used as a proxy for economic growth in Nigeria. The outcome of the analysis shows that the financial deepening variables adopted for the study had no significant effect on economic growth. However, there is a positive and significant pooled additive effect at 1%. Similarly, Nwakobi et al. (2019) investigated the influence of financial deepening on economic growth in Nigeria using time series data spanning the periods of 1986 to 2018. The data were collated from the Central Bank of Nigeria Statistical Bulletin and the Nigerian Stock Exchange fact book. The study employed the ordinary least square multiple regression and the Auto-regressive Distributive Lag (ARDL) model for the data analysis. The findings indicate that financial deepening does not influence economic growth within the study period.

In a recent study, Abubakar et al. (2020) investigated the effect of financial deepening on economic growth in Nigeria using time series data spanning the periods of 1960-2017. The study employs the ex-post facto research design while the ordinary least square multiple regression was used in analyzing the data that were culled from the CBN statistical bulletin. Broad money supply and credit to the private sector were used to proxy financial deepening, while the Gross domestic product was used to proxy economic growth. Based on the findings, the study concludes that broad money supply drives economic growth in Nigeria while credit to private sector retards economic growth in Nigeria. The study, therefore, suggests that the Federal government of Nigeria, through the Central Bank of Nigeria, should increase the volume of broad money supply to the economy in order to enhance economic growth in Nigeria.

Yinusa et al. (2020) assessed the nexus between institutional quality, financial development and inclusive growth in Nigeria using annual time series from 1984 to 2017. The ordinary least square multiple regression was used for the data analysis, while the asymmetric cointegration approach was utilised to check the long-run relationship between the variables. The findings reveal a long-run relationship between institutional quality, financial development and inclusive growth in Nigeria within the periods under review. Therefore, the study concludes that institutional quality and financial development are crucial variables that influence inclusive growth in Nigeria.

In a related study, Echekoba (2019) evaluates the effect of financial deepening on economic growth in Nigeria from 1990 to 2016 using annual time series data. The data was sourced from the CBN Statistical Bulletin and the National Bureau for Statistics, while the Ordinary Least Square (OLS) multiple regression was adopted for the data analysis. The finding reveals a link between financial deepening and economic growth. Therefore, the study suggests that the regulatory authorities should ensure that adequate policy measures are put in place to promote financial sector development and economic growth in Nigeria.

Nwosu et al. (2021) studied financial deepening, financial system fragility and economic growth in Nigeria using quarterly time series data spanning the periods of 2007 to 2018. The study used the non-linear co-integrating ARDL approach to analyse the data, and the findings indicate a positive nexus between financial deepening and growth. Conversely, there is a non-linear relationship between financial system fragility and economic growth. Thus, the study suggests that the CBN should identify high-risk sectors, with the aim of encouraging banks to reduce lending to them while partnering with the Securities and Exchange Commission (SEC) to provide sector-product-backed securities to enhance funding to those sectors.

Osasere et al. (2020) examine the influence of financial deepening on economic growth in Nigeria using annual time series data from 1990-2017. The secondary data research design was utilised for the study, while the Ordinary least square multiple regression was used for the data analysis. Money supply to gross domestic product, Credit to the private sector to gross domestic product, Inflation rate and Gross fixed capital formation to gross domestic product were used as proxies for financial deepening. In contrast, Gross Domestic Product was used as a proxy for economic growth. The findings indicate that the independent variables have a long-run effect on economic growth since the ECM result shows an inverse and significant relationship. Based on the findings, the study suggests that the government should create an environment that will enable domestic investors to invest their funds.

Nwanna and Chinwudu (2016) evaluated the influence of financial deepening on economic growth in Nigeria using time series data from 1985 to 2014. The ordinary least square multiple regression econometric technique was adopted for the data analysis. The gross domestic product was used as a proxy for economic growth. In contrast, the private sector credit ratio to gross domestic product, market capitalisation ratio to gross domestic product and financial savings ratio to gross domestic product were used as estimates of financial deepening. The findings indicate that bank-based and stock market financial deepening proxies have a significant and positive influence on economic growth. Therefore, the study concludes that financial deepening has a significant effect on economic growth in Nigeria.

Ajudua and Odishika (2022) assessed financial deepening on economic growth in Nigeria using time series data spanning the periods of 1986 to 2020. Ex-post facto research was employed in the study. At the same time, the Ordinary least square (OLS) regression method, Auto-regressive Distributed Lag (ARDL) approach and the Error Correction Mechanism estimation techniques were used for the data analysis. The broad money supply, credit to the private sector, market capitalisation, bank lending rate and liquid liabilities were used as proxies for financial deepening. In contrast, the Gross domestic product was used as a proxy for economic growth. The findings indicate that money supply, market capitalisation and liquid liabilities positively influence economic growth in Nigeria. At the same time, credit to the private sector and lending rate have no significant effect on economic growth in Nigeria. Based on the findings, the study, therefore, suggests that by changing the lending rate, financial service providers could lend to the private sector at reasonable rates. By so doing, it will enhance savings, investment and economic growth.

Ghildiyal et al. (2015) used the Autoregressive Distributed Lag (ARDL) Bound testing strategy and the Granger Error Correction Model (ECM) technique to assess the causal effect of financial deepening on economic growth in India. The findings indicated a long-term relationship between financial development and economic growth. Based on the findings, the study concludes that financial deepening promotes economic growth both in the long run and the short run.

Ighoroje and Lucky (2021) investigate the effect of financial deepening on economic growth in Nigeria utilising time series data spanning the period of 1987 to 2019. Money supply, market capitalisation and the private sector as proportions of GDP were used as proxies for financial deepening. In contrast, Industrial sector output was used as a proxy for economic growth. The Ordinary least square and Autoregressive Distributed Lag (ARDL) models were used for the data analysis. The findings reveal that the long-run relationship between the variables was not statistically significant. Therefore, the study suggests the need to manage the money supply in the Nigerian economy. Similarly, Anaechedo and Osakwe (2023) assessed the effect of

financial deepening on economic growth in Nigeria using time series secondary data from 1985 to 2021. Credit to the Private Sector as a percentage of GDP, Money supply as a percentage of GDP, Market Capitalization as a percentage of GDP and insurance premiums were used to measure financial deepening, while GDP growth was used to measure economic growth. The Ordinary Least Square multiple regression method and the Granger Causality test were used to analyse the data. Based on the findings, the study concludes that financial deepening significantly influences economic growth in Nigeria.

METHODOLOGY

The study adopted the ex-post facto research design. This research design was employed to establish the cause-and-effect relationship among the variables. Annual time series data spanning through the periods of 1991 to 2022 were sourced from the CBN Statistical Bulletin. The Gross Domestic Product was used as a proxy for economic growth. Conversely, the Ratio of Broad Money to GDP (M2/GDP), Credit to Private Sector to GDP (CPS/GDP), Liquidity ratio of commercial banks and Market capitalisation were used as proxies for financial deepening variables.

Model Specification.

The functional specification of the model is given as;

$$GDP = f(RBM\ CPS, LQR, MCAP) \quad (1)$$

Where;

GDP = Gross Domestic Product

RBM = Ratio of Broad Money to GDP (M3/GDP)

CPS = Credit to Private Sector to GDP (CPS/GDP)

LQR = Liquidity ratio of commercial banks

MCAP = Market Capitalization

The econometric specification of this model is therefore stated as follows:

$$GDP = \beta_0 + \beta_1 RBM + \beta_2 CPS + B_3 LQR + \beta_4 MCAP + \mu_t \quad (2)$$

GDP, RBM, CPS, LQR and MCAP are as defined in equation (1) while;

β_0 = Regression Constant

β_1, β_2, β_3, β_4 = Regression coefficient.

μ_t =Stochastic Error Term

If equation (2) is tested in its logarithmic form (Log-linear) it becomes:

$$LGDP = \beta_0 + \beta_1 RBM + \beta_2 LCPS + \beta_3 LLQR + \beta_4 LMCAP + \mu_t \quad (3)$$

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

Where:

L = Logarithmic Form

This study utilised both the Augmented Dickey-Fuller (ADF) test (Dickey & Fuller, 1979) and the Phillips-Perron (PP) test (Phillips & Perron, 1988) to check for unit roots. The essence was to determine the variables' order of integration. The Autoregressive Distributed Lag (ARDL) approach is considered appropriate for this kind of study if the outcome of the unit-roots is integrated at both I(0) and I(1). Recall that the multiple regression that is employed for this study is anchored on the Autoregressive Distributed Lag (ARDL) approach as propounded by Pesaran and Shin (1999) and Pesaran et al (2001). Furthermore, the test for heteroskedasticity, Correlogram of Residuals Squared, Cusum test, and Histogram normality test constitute part of the diagnostic tests conducted for the study.

RESULTS AND DATA ANALYSIS

Several tools of analysis were employed for the data analysis. This subsection presents the various tests and their outcomes.

Table 1: Descriptive Analysis

	LGDP	LRBM	LCPS	LLQR	LMCAP
Mean	9.967280	2.777430	2.459277	3.860825	7.806855
Median	10.38759	2.714484	2.336245	3.863724	8.699573
Maximum	12.44103	3.214868	3.124565	4.646312	10.84328
Minimum	6.380224	2.135349	1.759581	3.272985	3.139833
Std. Dev.	1.708568	0.345442	0.471232	0.292663	2.340380
Skewness	-0.474857	-0.206858	-0.005205	0.250688	-0.524736
Kurtosis	2.087957	1.578978	1.275759	3.617058	1.963977
Jarque-Bera	2.311705	2.920619	3.964154	0.842852	2.899644
Probability	0.314789	0.232164	0.137783	0.656111	0.234612
Sum	318.9530	88.87777	78.69687	123.5464	249.8194
Sum Sq. Dev.	90.49531	3.699239	6.883845	2.655210	169.7987
Observations	32	32	32	32	32

Source: Researcher's computation using Eviews 10

The Jarque-Bera probability was used to check whether the variables are normally distributed or not. Based on the outcome of the descriptive statistic presented in Table 1, the result indicates that all the variables are normally distributed as the JB Prob. > 0.05.

Table 2: Unit Root (Stationarity) Test

Variables	Augmented Dickey-Fuller (ADF)Test Statistic	Mackinnon's Critical Values at 1%, 5% and 10% respectively			Order of Integration	Prob.
LGDP	-4.036412	-3.661661	-2.960411	-2.619160	I(0)	0.0039
LRBM	-4.555079	-3.670170	-2.963972	-2.621007	I(1)	0.0011
LCPS	-4.818614	-3.670170	-2.963972	-2.621007	I(1)	0.0005
LLQR	-6.516980	-3.670170	-2.963972	-2.621007	I(1)	0.0000
LMCAP	-4.318571	-3.670170	-2.963972	-2.621007	I(1)	0.0020

Source: Researcher's computation using Eviews 10

The Augmented Dickey-Fuller (ADF) test for unit root was conducted as indicated in Table 2, and the result indicated a mixed order. LGDP and LLDR are stationary at a level while LRBM, LCPS, LLQR and LMCAP are stationary at order (1). This result fulfils the condition for adopting the Autoregressive Distributed Lag approach for the data analysis.

Table 3: Unit Root (Stationarity) Test

Variables	Phillips-Perron (PP)Test Statistic	Mackinnon's Critical Values at 1%, 5% and 10% respectively			Order of Integration	Prob.
LGDP	-3.667205	-3.661661	-2.960411	-2.619160	I(0)	0.0099
LRBM	-4.645772	-3.670170	-2.963972	-2.621007	I(1)	0.0008
LCPS	-7.423395	-3.670170	-2.963972	-2.621007	I(1)	0.0000
LLQR	-8.770858	-3.670170	-2.963972	-2.621007	I(1)	0.0000
LMCAP	-4.270088	-3.670170	-2.963972	-2.621007	I(1)	0.0022

Source: Researcher's computation using Eviews 10

The Phillips-Perron (PP) test was also conducted for unit root as shown in Table 3. The result indicates that LGDP is stationary at level whereas LRBM, LCPS, LLQR and LMCAP are stationary at order (1). The outcome of this test further confirmed the need for the adoption of Autoregressive Distributed Lag technique for the analysis

Table 4: ARDL Bounds Test for Coitegration

F-Bounds Test		**Null Hypothesis: No levels relationship**		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	8.086897	10%	3.03	4.06
k	4	5%	3.47	4.57
		2.5%	3.89	5.07
		1%	4.4	5.72

Source: Researcher's computation using Eviews 10

The possibility of a long-run equilibrium relationship between the dependent and independent variables using the F-statistic as a means of comparison between the lower and upper bound of the cointegration output was determined using the Autoregressive Distributed Lag bound cointegration test. Based on the result in Table 4, the F-statistic of 8.086897 is higher than the lower bound of 3.47 and higher bound of 4.57 at 5% level of significance. The result indicates a long run equilibrium relationship between the dependent and independent variables.

Table 5: ARDL Short run Error Correction Model

ARDL Error Correction Regression
Dependent Variable: D(LGDP)
Selected Model: ARDL(1, 1, 0, 1, 2)
Case 5: Unrestricted Constant and Unrestricted Trend
Date: 10/27/24 Time: 05:07
Sample: 1991 2022
Included observations: 30

ECM Regression
Case 5: Unrestricted Constant and Unrestricted Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.272757	0.723372	7.289136	0.0000
@TREND	0.054010	0.008357	6.463116	0.0000
D(LRBM)	0.229984	0.113292	2.030013	0.0566
D(LLQR)	-0.017295	0.034865	-0.496047	0.6256
D(LMCAP)	0.213678	0.035926	5.947740	0.0000
D(LMCAP(-1))	-0.118960	0.040168	-2.961548	0.0080
CointEq(-1)*	-0.866549	0.123860	-6.996214	0.0000

R-squared	0.867151	Mean dependent var	0.187732
Adjusted R-squared	0.832494	S.D. dependent var	0.117188
S.E. of regression	0.047962	Akaike info criterion	-3.035856
Sum squared resid	0.052908	Schwarz criterion	-2.708910
Log likelihood	52.53785	Hannan-Quinn criter.	-2.931264
F-statistic	25.02142	Durbin-Watson stat	2.301887
Prob(F-statistic)	0.000000		

* p-value incompatible with t-Bounds distribution.

Source: Researcher's computation using Eviews 10

The Autoregressive Distributed Lag Short run Error Correction Model output is presented in Table 5. The result indicates that the Ratio of Broad Money to GDP (RBM) at the current level with a prob. value of 0.0566 and a coefficient of 0.229984 has a positive but insignificant impact on the GDP. Secondly, the Liquidity ratio of commercial banks (LQR) at the current level with a prob. value of 0.6256 and a coefficient of -0.017295 has a negative and insignificant influence on the GDP. The coefficient indicates that a 1% rise in the value of LQR will lead to a 1.73% decrease in the GDP. Finally, Market Capitalization (MCAP) at the current level with a prob. value of 0.0000 and a coefficient of 0.213678 has a positive and significant influence on the GDP. The coefficient indicates that a 1% rise in the value of MCAP will lead to a 21.37% increase in GDP. MCAP lagged 1 period shows a negative and significant impact

on the GDP. The coefficient of -0.118960 reveals that a 1% increase in the value of MCAP will necessitate an 11.90% fall in the GDP.

The ARDL-ECM, as depicted in Table 5, shows a speed of adjustment coefficient of -0.866549 and a prob. value of 0.0000. This connotes that there is an 86.65% speed of adjustment if there is any disequilibrium in the model from the short back to the long run annually. The R^2 result of 88.72% is the combined correlation of the independent variables while the adj. R^2 reveals that 83.25% of the variations in the Gross Domestic Product can be explained by the variation in the independent variables (RBM, CPS, LQR and MCAP).

Table 6: ARDL Long run Results

Levels Equation
Case 5: Unrestricted Constant and Unrestricted Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRBM	0.591541	0.191444	3.089894	0.0060
LCPS	-0.689220	0.170657	-4.038614	0.0007
LLQR	-0.196128	0.100746	-1.946756	0.0665
LMCAP	0.497961	0.031008	16.05936	0.0000

EC = LGDP - (0.5915*LRBM -0.6892*LCPS -0.1961*LLQR + 0.4980*LMCAP)

Source: Researcher's computation using Eviews 10

The long run result of the ARDL Model is presented in Table 6. The result indicates that Ratio of broad money to GDP (RBM) with a P-value of 0.0060 and coefficient of 0.591541 is positively significant to the Gross Domestic Product at 5% level of significance. Thus, every 1% increase in the value of RBM will lead to a 59.15% rise in the value of the GDP. The Credit to Private Sector to GDP (CPS) with a P-value of 0.0007 has an inverse and significant effect on the GDP while its coefficient of -0.689220 indicates that every 1 unit increase in the value of the CPS will lead to a 68.92% decrease in the value of GDP. Thirdly, Liquidity ratio of commercial banks (LQR) has a P-value of 0.0665 and a coefficient of -0.196128. This implies that LQR has a negative and insignificant influence on the GDP. The coefficient indicates that every 1% rise in LQR decreased the GDP by 19.61%. Finally, the result indicated that Market Capitalization (MCAP) with a P-value of 0.0000 and coefficient of 0.497961 is positively significant to the Gross Domestic Product at 5% level of significance. Thus, every 1 unit increase in the value of MCAP increases the GDP by 49.80%.

Table 7: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.006120	Prob. F(10,19)	0.0920
Obs*R-squared	15.40751	Prob. Chi-Square(10)	0.1179
Scaled explained SS	6.160820	Prob. Chi-Square(10)	0.8016

Source: Researcher's computation from Eviews 10

The Breusch-Pagan-Godfrey test was used to examine the presence of Heteroskedasticity using its F-statistic and the Observed R-Squared. The test's outcome indicates that the model is Homoskedastic, as their values are both higher than the P-value of 0.05. This indicates that there is no issue of heteroskedasticity.

Table 8: Correlogram of Residuals Squared

Date: 10/27/24 Time: 07:43
Sample: 1991 2022
Included observations: 30

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
. |**. |	. |**. |	1	0.234	0.234	1.8130	0.178
. *| . |	. *| . |	2	-0.136	-0.202	2.4474	0.294
. *| . |	. | . |	3	-0.127	-0.046	3.0218	0.388
. | . |	. | . |	4	-0.059	-0.044	3.1515	0.533
. | . |	. | . |	5	0.026	0.025	3.1780	0.673
. *| . |	. *| . |	6	-0.089	-0.138	3.4976	0.744
. | . |	. | . |	7	-0.033	0.030	3.5419	0.831
. *| . |	.**| . |	8	-0.183	-0.242	5.0051	0.757
. |* . |	. |**. |	9	0.147	0.290	5.9978	0.740
. |* . |	. | . |	10	0.199	-0.021	7.8957	0.639
. *| . |	. *| . |	11	-0.108	-0.142	8.4896	0.669
. *| . |	. | . |	12	-0.126	-0.033	9.3329	0.674
. *| . |	. | . |	13	-0.104	-0.045	9.9420	0.699
. |* . |	. |* . |	14	0.193	0.187	12.180	0.592
. |* . |	. | . |	15	0.085	-0.041	12.646	0.630
. *| . |	. *| . |	16	-0.076	-0.107	13.041	0.670

*Probabilities may not be valid for this equation specification.
Source: Researcher's computation from Eviews 10

Table 8 reveals the result of the Correlogram of Residuals Squared test. The result indicates the absence of serial correlation amongst the variables.

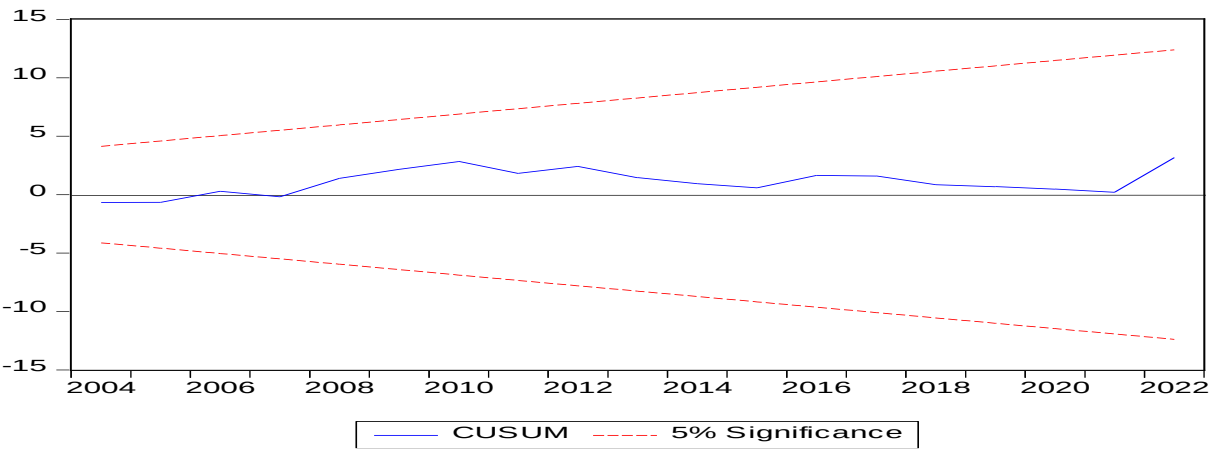

Figure 1. CUSUM Test

The CUSUM test was conducted to examine the model's stability. The result indicates that the model is stable and well specified.

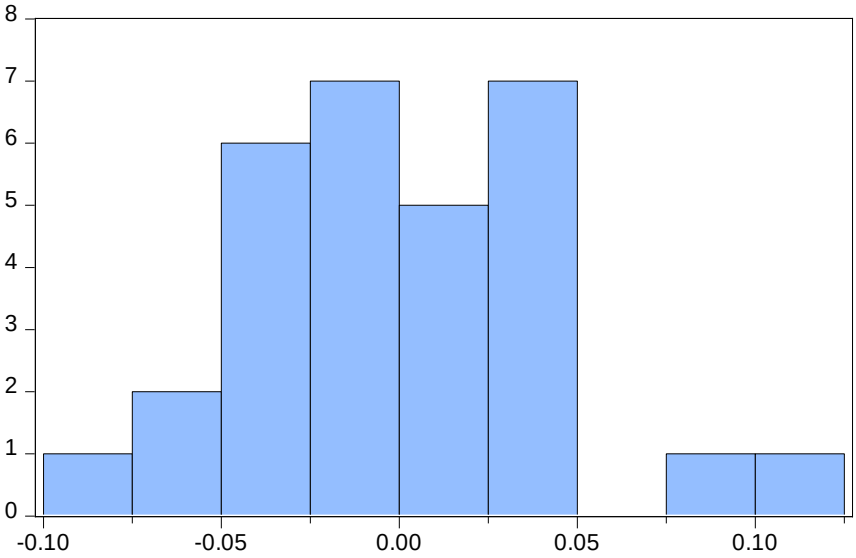

Figure 2. Histogram Normality Test

Source: Researcher's computation using Eviews 10

Figure 2. Histogram Normality Test

The Histogram normality test, shown in Figure 2, was conducted to assess whether the residuals are normally distributed. The result indicates that they are normally distributed as the Jarque-Bera Prob. > 0.05.

DISCUSSION OF THE FINDINGS

The foundation upon which this study is built is to examine the effect of financial deepening on economic growth in Nigeria. The ARDL-ECM, as depicted in Table 5, shows a speed of adjustment coefficient of -0.866549 and a prob. value of 0.0000. This connotes that there is an 86.65% speed of adjustment if there is any disequilibrium in the model from the short back to the long run annually. The R^2 result of 88.72% is the combined correlation of the independent variables while the adj. R^2 reveals that 83.25% of the variations in the Gross Domestic Product can be explained by the variation the independent variables (RBM, CPS, LQR and MCAP). The outcome of the long run analysis indicates that RBM and MCAP have positive and significant effect on the GDP while CPS has an inverse but significant influence on the GDP at 5% level of significance. This result tallied with Abubakar et al. (2020) and Ajudua and Odishika (2022). Conversely, LQR has a negative and no significant effect on the GDP. Finally, the study found that financial deepening influences economic growth in Nigeria.

Conclusion and Recommendation

From the findings, the study concludes that financial deepening has a significant effect on economic growth in Nigeria. Thus, the study suggests the following policy recommendations:

1. Banks should extend more credit facilities to sectors of the economy that are production-driven.
2. The listing requirement for companies should be less stringent so that more companies to be listed on the Nigerian Stock Exchange. This will enhance market capitalization and economic growth.
3. The Central Bank of Nigeria should adopt monetary policies that will ensure the right volume of a broad money supply in circulation. This is expected to lubricate the economy's growth.

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