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IMPACT OF FINANCIAL DEEPENING ON ECONOMIC GROWTH IN NIGERIA

ABSTRACT

This study examined the impact of financial deepening on economic growth in Nigeria from 1980 – 2022, to achieve the objectives, the study examined the impact of market capitalization ratio to gross domestic product, money multiplier to gross domestic product, ratio of broad money supply to gross domestic product and ratio of total bank credit to private sectors in Nigeria. The data were obtained from Central Bank of Nigeria statistical bulletin (2024) and analyzed using the error correction methodology (ECM). The result shows that market based capitalization ratio, money multiplier to gross domestic and ratio of broad money supply to gross domestic product had direct and significant impact on the economic growth rate in Nigeria. Therefore, the study recommends that government policies should be directed towards improving the capital market functioning, improving credits mobilization towards the private sectors as well as increasing and ensuring appropriate money supply injections that would help to sustain the temple of economic growth rate as inspired by the financial deepening in the Nigerian economy.

Keywords: Financial deepening, economic growth, market capitalization, money supply

JEL Classification: O16, O40, N2, E51

1. Introduction

Economic growth and development have been viewed to be essentially linked to high levels of monetization of an economy and invariably, financial development. This is particularly true in less developed economies where it is believed that the provision of adequate financial resources is a prerequisite for economic transformation. The velocity of this transformation will be affected by the degree of financial services industries that is prevalent in the economy (Azege, 2015). Hence, financial institution contributes to the real productivity of the economy and to the overall standard of living giving their capacity to satisfy the needs and preferences of surplus and deficit units of the economy. Aghion, Angeletos, Banerjee, and Manova (2017) opined that financial system development can alleviate the liquidity limitation on firms and assist long-term investment, which eventually reduces the volatility of price, investment and growth.

In addition, it stimulates the acquisition and dissemination of information, ease risk diversification and management and assists resource mobilization. In the wake of this, a number of factors have been identified as culpable which include the structural characteristics of the Nigeria environment; ineffective policy factor problems, and exogenously determined factors (lack of technical advancement, socio-political and religious conditions); low productivity; high degree of illiteracy level; and low population concentration in the urban areas and informal sector arrangement. These structural and environmental factors are very important because they form the bases for financial deepening (Ayodele, 2012). These factors restrain the financial sectors growth in less developed countries and make it difficult for large population to access and benefit from formal financial services. In the view of Azege (2015), demand and supply factors limits financial deepening in developing countries in the areas of low mobilization of deposits, lack of collateral, high level financial illiteracy, high services charge, documentation requirement and lack of basic infrastructure limits financial intermediation.

Financial deepening aims to improve economic conditions through increased competitive efficiency within financial markets thereby indirectly benefitting non-financial sectors of the economy. It also helps in increasing the provision and choices of financial services which would come through its financial infrastructure. Nzotta (2014) ascertain that financial deepening is the ability of financial institutions in an economy to effectively mobilize savings for investment purposes. Financial deepening vigorously attracts the reservoir of savings and idle funds and allocates same to entrepreneurs, business, households and government for investment projects and other purposes with a view of returns which forms the basis for economic growth. The growing importance of stock market and banks around the world has recently opened a new avenue of research into the relationship between financial deepening and economic growth.

The general idea that economic growth is significantly impacted by financial deepening was first highlighted by Schumpeter in 1911 (Okoli, 2010). The financial deepening role in economic growth has received much attention. However, the focus has been almost entirely on bank based financial deepening measures, while ignoring the possible impact of stock market development. Financial reforms have been a regular feature of the Nigeria financial system. As part of its objective, the Central Bank of Nigeria (CBN) has ensured that the financial sector has remained liquid with a view to competing effectively within the global financial market. The reforms have evolved in response to the challenges posed by developments in the system such as globalization, technological innovation and financial crisis. The reforms often seek to act proactively to strengthen the system,

thus, there is need to deepen the financial sector and reposition it for growth and integration into global financial system in conformity with global best practices.

The following hypotheses were tested in this study.

H₀₁: Market based capitalization ratio has no impact on economic growth in Nigeria.

H₀₂: Money multiplier does not have impact on economic growth in Nigeria.

H₀₃: Bank credit to private sector does not induce economic growth in Nigeria.

H₀₄: Ratio of broad money supply to GDP has no effect on economic growth in Nigeria.

The research work covers the period 1980 to 2022, which is the grey, boom and doom periods of capital market development in Nigeria. Within this period great strides were made in infrastructures, institutions and regulations that pertain to the capital market.

This study is structured into five sections. Section one is the introduction which focuses on the background to the study including the hypotheses; section two is the literature review; section three focuses on the research methodology and model specification; section four presents the data analysis and discussion of findings; while section five concludes the study and proffer recommendations based on the findings.

2. Literature Review

2.1 Theoretical Literature

2.1.1 Complementary Hypothesis

McKinnon (1973) and Shaw (1973) assert that, alleviating financial restrictions in developing countries by allowing market forces to determine real interest rates can exert a positive effect on growth rates as interest rates rises to its competitive market equilibrium. This, they question the applicability of the neo-classical approach to developing countries, arguing that low interest rates crowd out high-yielding investment, create a preferences for capital intensive projects, discourage future savings and thereby reduce both the quality and quantity of investments in an economy. This theory argues that money and capital are complements, rather than substitutes. Productive investment and therefore capital accumulation occur because large real money stock makes greater amount of loan able funds available to borrowers.

Expanded financial intermediation between savers and investors increases the incentive to save and invest, improving the efficiency of investments (Fry, 1993) in other words, low real deposit rates of interest shrinks the liability of the banking system consequently impeding the supply of investment finance. Thus, increasing interest rates to equilibrium levels should increase the rate of economic growth.

2.1.2 Financial Repression Theory

In developing countries, the term financial repression implies government interfering in financial markets activities. However, the hypothesis depends on the criticism of Neoclassical and Keynesian views about interest rate policies. The financial repression theory emanates from the two independent studies by McKinnon (1973) and Shaw (1973). Because developing countries are exposed to financial repression, banks create limitations to financial deepening and economic growth rates with veto powers on potential investment projects. For an efficient market, government must not interfere with financial markets; deposit rates and credit rates must occur in market conditions. If this situation can be met, organization of financial system will be guaranteed.

2.1.3 Keynesian Theory of Financial Deepening

The Keynesian theory of financial deepening asserts that financial deepening occurs due to an expansion in government expenditure. In order to reach full employment, the government should inject money into the economy by increasing government expenditure. An increase in government expenditure increases aggregate demand and income, thereby raising demand for money (McKinnon, 1973). It was revealed by Robinson (1952) that it is the necessity from high economic growth that creates demand in the financial sector. Thus, in this view, it is the improvements in the economy that derive higher demand for the use of money, which consequently promotes financial development. In other words, financial markets develop and progress as a result of increased demand for their services from the growing real sector. Causality runs from economic growth to financial development, that is, an increase in economic growth causes a rise in demand for financial services and these results in the expansion of the financial sector.

2.1.4 Endogenous Growth Theory

Recent literature on the endogenous growth theory has rekindled the debate on the relationship between financial development and economic growth. Since in the 1990s, several authors have incorporated financial institutions in the analysis of endogenous growth models (see for instance (Greenwood & Jovanovic, 1990; and Levine, 1997). These models show economic growth performance in relation to financial development,

technology and income distribution. Greenwood and Jovanovic (1990) consider a model that allows examining the relation between growth and income distribution as well as between financial structure and economic development. The authors assume a positive two-way causal relationship between financial development and growth. In the first hand, financial institutions collect and analyze information in order to find the investment opportunities with the highest return; they channel funds to the most productive uses, thereby increasing the efficiency of investment and growth. On the other hand, growth provides the means needed to implement and develop costly financial structure.

2.1.5 The Supply – Leading Theory

The supply – leading theory postulates a positive impact of financial development on economic growth. Patrick (1966) advocated for a supply leading strategy that the existence of financial institutions and supply of their financial assets, liabilities and related financial services will lead to an efficient allocation of resources from surplus units to deficit units. On the other hand, a number of studies have argued in favour of finance – led growth approach/finance – led causal relationship between finance and economic growth (Cameron, 1996, and Levine, 1997). Greenwood and Jonanovic (1990) also observed that financial institution produce better information, improve resource allocation (through financing firms with the best technology) and thereby induces growth. However, the rationale for the supply – leading approach to the development of a country’s financial system and the overall economic development lies in its potential benefits to the economy in stimulating real economic growth and development.

2.1.6 The Demand – Following Theory

The theory suggests a demand following relationship between financial sector and economic growth. This theory was developed by Patrick (1966). He argues that the creation of modern financial institutions, their financial assets and liabilities and related financial services are a response to the demand for these services by investors and savers in the real economy. Thus economic growth creates a demand for developed financial institutions and services as a result of higher demand for financial services. As such, an increasing demand for financial services might induce an expansion in the financial sector as the real economy grows (i.e. financial sector responds positively to economic growth). The theory stipulates that the growth of the economy generates additional demand for financial services, “which brings about a supply response in the growth of the financial system” (Patrick 1966). The demand – following financial hypothesis assumes that there is a high elasticity in the supply of entrepreneurship in the financial service “relative to growing opportunities for profit from provision of

financial services”, this will result to sufficient expansion in the number and various types of financial institutions.

2.2 Empirical Literature

In the study by Anachedo and Osakwe (2023), the effects of financial deepening on economic growth was examined for Nigeria from 1985 to 2021. The study used time series data on GDP growth, credit to private sector as a percentage of GDP, Money supply as a percentage of GDP, market capitalization as a percentage of GDP and insurance premium sourced from Central Bank of Nigeria statistical bulletin. Using the Ordinary Least Square regression technique and the Granger Causality test, findings revealed that increasing the credit to private sector has actually coincided with rising economic growth rate. It is further revealed that Market capitalization as a percentage of GDP was also found to have a positive connection with the rate of economic growth in Nigeria and that both ratio of money supply to GDP and insurance industry premiums have negative and significant relationships with economic growth rate in Nigeria. The work therefore recommended that the monetary authorities should strive to increase the participation of more companies in the Nigerian stock market as this will lead to standardized practices that will ultimately improve economic growth and the monetary authorities should also control the monetary stock and tailor it to the prevailing level of economic activities.

Al-Shawesh and Yathish (2022) investigated the impact of financial deepening on economic growth for Yemen using time series data. The Autoregressive Distributed Lag Model (ARDL) methodology was employed, while data was collected from the World Bank, Yemen's central bank, and the central statistical organization for 1994-2018. The study used the independent variable of financial deepening captured by credit to the private sector, grants, remittances, money supply, banks assets, and foreign direct investment, while the dependent variable gross domestic product is used to measure the economic growth. The results revealed a significant impact of financial deepening on Yemen's economic growth and found the existence of co-integration between the variables and long run relationship. The study recommended that policies that encourage credit borrowing for the private sector should be encouraged.

Okafor, Bowale, Onabote, Afolabi, and Ejemeyovwi (2021) examined financial deepening and economic growth in Nigeria. The study employed the Johannsen Cointegration, error correction and granger causality as estimation techniques to determine the nexus between financial deepening and economic growth. The variables contained in the model include the ratio of credit to the private sector to gross domestic product which proxy bank-based

financial deepening, the proportion of market capitalization to gross domestic product which proxy for stock market development. The result of the analysis revealed that the Nigerian economic growth is influenced by financial deepening positively and significantly, especially the bank-based financial depth.

In their study on financial deepening and economic growth nexus in Nigeria for the period 1970 to 2013, Karimo and Ogbonna (2017) adopted the Toda–Yamamoto augmented Granger causality test to show that the growth-financial deepening nexus in Nigeria follows the supply-leading hypothesis. Meaning that it is financial deepening that leads to growth and not vice versa. The study recommended that policy efforts should be directed towards eliminating obstacles that inhibit the growth of credit to the private sector, and must restore investors' confidence in the stock market operations.

Nwanna and Chinwudu (2016) examined financial deepening and economic growth in Nigeria from 1985 to 2014. . It focused on the impact of stock market and bank deepening variables such as money supply, market capitalization, private sector credit and financial savings have on economic growth of Nigeria. . The ordinary least square (OLS) econometric techniques were employed and The result of the analysis reveals that both bank based and stock market financial deepening proxies has significant and positive effect on economic growth and that the banking sector and stock market in Nigeria has an important role in the process of economic growth.

Luqman (2014) studied the financial deepening and economic growth in Pakistan. The results show that foreign direct investment, inflation, economic growth and financial deepening proxy by credit to private sector are co-integrated, hence, a long run relationship exists among them. The study test the variable using the vector error correction model and found out that the level of financial deepening in Pakistan has remained relatively low.

Fatima (2014) examined the casual relationship between financial deepening and economic growth in morocco for the periods, 1990-2000. The ratio of liquid liabilities (M3) to GDP, ratio of domestic credit providing by the banking sector to GDP and domestic credit were the financial debt indicators used. Using the granger causality test, the study found a short-run relationship between financial deepening and economic growth.

Ndebbio (2014) study financial deepening and economic growth: evidence from selected sub-Saharan Africa countries using the ratio of money supply to GDP and growth rate per capital real money balance as

indicators of financial deepening. The study found positive and statistically significant impact on growth rate in per capital real money balance on real per capital GDP growth.

2.3 Theoretical Framework

This study is anchored on the supply-lending and demand-following hypothesis of the financial deepening growth nexus. According to Agu and Chukwu (2008) the leading proponent of the supply leading hypothesis is Schumpeter (1911) supported by Calderon and Liu (2012) and McKinnon (1973) among others. The hypothesis asserts that financial development has a positive effect on economic growth.

Accordingly, the effect runs from financial development to economic growth and it is caused by an improvement in the efficiency of capital accumulation or an increase in the rate of savings as well as the rate of investment. One of the most significant effects of the supply leading approach is that, as entrepreneurs have new access to the supply lending funds, their expectations increase and new horizons (or possible alternative) are opened up, thereby making the entrepreneur “think big”. The demand-following view on the other hand, states that financial development responds to changes in the real sector. The Keynesian theory of financial deepening asserts that financial deepening occurs due to expansion in government expenditure. In order to reach full employment, the government should inject money into the economy by increasing government expenditure. An increase in government expenditure increases aggregate demand and income, thereby raising demand for money (McKinnon, 1973). Robinson (1952) reveals that it is the necessity from high economic growth that created demand in the financial sector. Thus, in this view, it is the improvements in the economy that drive higher demand of the use of money, which consequently promotes financial development. In other words, financial markets develop and progress as a result of increased demand for their services from the growing real sector. Causality runs from economic growth to financial development, that is, an increase in economic growth caused a rise in demand for financial services and these results in the expansion of the financial sector.

3. Research Methodology

3.1 Model Specification

Following a detailed review of previous studies and improving upon the theory, economic growth Y_t is expressed as a function of financial deepening, F_t , and a set of control variable, Z_t as expressed below.

$$Y_t = f(F_t, Z_t) \quad (1)$$

Improving upon the theoretical postulate in equation (1), the equation is expanded to accommodate the indicators of financial deepening and other growth determinants. Thus,

$$Y_t = \alpha F_t + \alpha Z_t + u_t \quad (2)$$

This research work adapted the model of Victor and Samuel (2017) with slight modifications. In their model, the researchers expressed economic growth as a function of financial deepening measured by market capitalization, currency deposits ratio and interest rate. This study incorporates other variables such as money multiplier and ratio of broad money supply to GDP. Therefore the model is stated as thus;

$$GDPGR = f(MC/GDP, MM/GDP, M2/GDP, BC/PSC) \quad (3)$$

$$GDPGR = \beta_0 + \beta_1 MC/GDP + \beta_2 MM/GDP + \beta_3 M2/GDP + \beta_4 BC/PSC + u_t \quad (4)$$

$$\beta_0 > 0; \beta_1 > 0; \beta_2 > 0; \beta_3 > 0 \text{ and } \beta_4 < 0$$

Where: GDPGR = Gross Domestic Product Growth Rate; MC/GDP = Market Based Capitalization Ratio; MM/GDP = Money Multiplier to GDP; M2/GDP = Ratio of Broad Money Supply to GDP; BC/PSC = Bank Credit to Private Sector in Nigeria

The error correction model for equation (4) is expressed as follows:

The long-run model:

Where:

$$GDPGR_t = \delta_0 + \sum_{i=1}^p \delta_1 (MC_GDP)_{t-i} + \sum_{i=0}^p \delta_2 (MM_GDP)_{t-i} + \sum_{i=0}^p \delta_3 (M2_GDP)_{t-i} + \sum_{i=0}^p \delta_4 (BC_PSC)_{t-i} + \beta ECM_{t-1} + v_t \quad (5)$$

The short-run model (ECM model):

Where:

$$\Delta(GDPGR)_t = \delta_0 + \sum_{i=1}^p \delta_1 \Delta(MC_GDP)_{t-i} + \sum_{i=0}^p \delta_2 \Delta(MM_GDP)_{t-i} + \sum_{i=0}^p \delta_3 \Delta(M2_GDP)_{t-i} + \sum_{i=0}^p \delta_4 \Delta(BC_PSC)_{t-i} + \beta ECM_{t-1} + v_t \quad (6)$$

Where β is the error correction term and it measures the speed of adjustment towards the long-run equilibrium and the remaining coefficients provide the short-run dynamics. The coefficients from δ_1 to δ_0 represent the short-run coefficient δ_0 is the drift component, while v_t is the stochastic error term.

3.2 Sources of Data

The data used for this study are basically time series data (secondary data) spanning between 1980 and 2022, sourced from Central Bank of Nigeria (CBN) statistical bulletin (various issues).

4. RESULTS AND DISCUSSION

4.1 Regression Analysis

This sub section begins with stationarity test so as to determine the presence of unit root or otherwise of the variables.

Table 1: Unit Root Test Result

Variables	ADF at Level	ADF at first diff.	Critical value at 5%	Order of integ.
GDPGR	-1.623260 (0.4618)	-9.843715 (0.0000)	2.94	I(1)
MC/GDP	0.011444 (0.9543)	-6.396034 (0.0000)	2.94	I (1)
MM/GDP	-2.293258 (0.1788)	-6.50215 (0.0000)	2.94	I (1)
M2/GDP	-0.214714 (0.9285)	-5.925057 (0.0000)	2.94	I (1)
BC/PSC	-0.673527 (0.8424)	-5.428650 (0.0000)	2.94	I (1)

Source: Extracted from E-view regression output

For a series to be stationary, the empirical value of ADF statistic must be greater than the critical value at 0.05 level in absolute term. Based on this decision rule, the GDPGR, MC/GDP, MM/GDP, M2/GDP and BS/PSC were all stationary at first difference. This was based on the fact that their respective empirical values were greater than the critical value of 2.94 respectively. As such, with respect to the stationarity status of the series, the researcher concluded that the selected series were all stationary at first difference.

Table 2: Co-integration Result

Hypothesized No CE(s)	Trace Statistic	0.05 Critical Value	Prob. **	Hypothesized No CE(s)	Max- Eigen Statistic	0.05 Critical Value	Prob. **
None*	76.93692	69.81889	0.0121	None*	35.67135	33.87687	0.0302
At most 1	41.26557	47.85613	0.1804	At most 1*	29.01523	27.58434	0.0326
At most 2	12.25034	29.79707	0.9228	At most 2	8.219217	21.13162	0.8898
At most 3	4.031125	15.49471	0.9010	At most 3	3.969151	14.26460	0.8626
At most 4	0.061974	3.841466	0.8034	At most 4	0.061974	3.841466	0.8034

Source: Extracted from E-view regression output

Based on the result of the trace statistics in Table 2, the null hypothesis of “None” co-integrating equation was rejected on the ground that the empirical trace statistic was greater than the critical value (i.e. $76.93692 > 69.81889$) at 0.05 level. The null hypothesis of “At most 1” co-integration was accepted on the ground, (i.e. $41.26557 < 47.85613$). In the same vein, the null hypothesis of “At most 2” co-integration was as well accepted. This was based on the fact that the empirical trace statistic -12.25034 was less than the critical value 29.79707. But the null hypothesis of “At most 3” co-integrating equations was accepted since the trace statistic was less than the critical value $4.031125 < 15.49471$. Hence, trace statistic indicated the presence of one (1) co-integrating equation.

The null hypothesis for “None” co-integrating equation was rejected since the empirical max-eigen statistic of 35.67135 was greater than the critical value of 33.87687, (i.e. $35.67135 > 33.87687$) at 0.05 level. In the same vein, the null hypothesis of “At most 1” co-integrating equation was also rejected on the same ground, (i.e. $29.01523 > 27.58434$). But the null hypothesis of “At most 2” co-integrating equations was accepted on the ground that the empirical max-eigen statistic was less than the critical value (i.e. $8.219217 < 21.13162$). Hence, max-eigen statistic indicated the presence of two co-integrating equations. Based on the results on Table 4.2, it can be empirically concluded that there exist a co-integrating relationship among the selected variables in the model so specified. This implies that market based capitalization to GDP, money multiplier to GDP, ratio of broad money supply to GDP and bank credit to private sector in Nigeria have a long run relationship with the Gross Domestic Product Growth Rate (GDPGR) in Nigeria.

Table 3: Error Correction Mechanism (ECM) Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.352100	0.374147	0.941074	0.3529
D(M2_GDP)	0.079206	0.352545	0.224670	0.8235
D(MC_GDP)	0.000520	0.000156	3.335936	0.0019
D(MM_GDP)	0.004990	0.111109	0.044907	0.9644
D(BC_PSC)	-0.381906	0.309608	-1.233518	0.2254
ECM(-1)	-0.699073	0.153000	-4.569098	0.0001
R ²	0.773828			
Adjusted R ²	0.686860			
Akaike info criterion	4.609454			
Schwarz criterion	4.857693			
Hannan-Quinn criter.	4.700443			
F-statistic	4.298436	Durbin-Watson stat	2.035165	
Prob(F-statistic)	0.003617			

Source: Author's extract from E-view 9 regression output

Since the variables were all stationary at first difference, we employed error correction mechanism (ECM) to determine the relationship between the dependent variable and the independent variables of the model. The result in Table 3 indicates that the error correction mechanism (ecm) is -0.699073. This implies that there is a speed of adjustment of 69.9 percent. In other words, any disequilibrium between the short run and the long run will be adjusted back to equilibrium by a speed of 69.9 percent. This value is consistent with theory in that it has the correct sign (negative) and the value also lies between 0 and 1 as is expected. The probability value is less than 0.05, signifying that the error correction mechanism is statistically significant at 0.05 level.

The coefficient of Bank Credit to Private Sector in Nigeria (BC/PSC) is -0.381906. It had an inverse relationship with Gross Domestic Product Growth Rate (GDPGR) in the short run. A unit increase in BC/PSC will lead to a 0.381906 decrease in GDPGR in the economy on the short run. This relationship is consistent with a priori expectation and is statistically not significant at 0.05. The significance of this relationship was based on the fact that the probability value for BC/PSC is greater than 0.05, i.e. 0.2254 > 0.05.

The coefficient of Ratio of Broad Money Supply to GDP (M2/GDP) was 0.079206. It had direct relationship with GDPGR in the short run. This relationship is also consistent with a priori expectation; thus, an increase in M2/GDP will increase the level of GDPGR. A unit increase in M2/GDP will make GDPGR to increase by

0.079206 units. With a probability of 0.8235, the relationship between M2/GDP and GDPGR is statistically not significant at 0.05 level.

The coefficient of Market Based Capitalization Growth Rate (MC/GDP) was 0.000520. It had a direct relationship with GDPGR. This is consistent with a priori expectation and is statistically significant at 0.05 level. A unit increase in MC/GDP will lead to 0.000520 unit increase in GDPGR. Money Multiplier to Gross Domestic Product (MM/GDP) also had a direct relationship with GDPGR. A unit increase in MM/GDP will trigger off a rise in GDPGR by 0.004990 unit. However, this relationship is statistically not significant since the probability value of MM/GDP is greater than 0.05. (i.e. $0.9644 > 0.05$)

The coefficient of determination (R^2) was 0.773828. This showed that the selected explanatory variables were able to explain 77.3828 percent of the total systematic variation in GDPGR. The unexplained 22.6172 percent was attributed to the error term. The adjusted coefficient of determination (R^{-2}) was 0.686860. This showed that the explanatory variables were able to explain 68.6860 percent of the total variation in the dependent variable while the unexplained 31.3140 percent is accounted for by the error term. The F-statistic was 4.298436, while the probability value of the F-statistic was 0.003617. Since the probability value of the F-statistic is less than 0.05, it means that F-statistic was statistically significant at 0.05 level. Hence, the goodness of fit is statistically significant at 0.05 level. Durbin-Watson statistic is approximately two. This implies that there is absence of autocorrelation among the successive values of the error term. The result is consistent and unbiased.

4.2 Discussion of Findings

The results obtained from the empirical analysis are far-reaching and generally apt for policy as well as empirical directions. It is on the basis of this that the discussion of this result is conducted. First, it is established that bank credit to private sector in Nigeria (BC/PSC) retards output. This is not surprising given that credit does not get to the actual investors who need them for productive use.

The study also found that ratio of broad money supply to GDP (M2/GDP) directly impacts economic growth, though not significantly. Again, the study underscores the relevance of market capitalization as a key determinant of economic growth. This observed positive effect of market capitalization on economic growth is in sync with Ewah, Esang and Bassey (2009).

5. Conclusion and Recommendations

This study centered on the analysis of the impact of financial deepening on economic growth rate in Nigeria. The results showed that there is a direct and robust significant relationship between gross domestic product growth rate (GDPGR), financial deepening (Market Based Capitalization Ratio, Ratio of Money Multiplier to GDP and Broad Money Supply to GDP).

The result obtained shows that financial deepening has a direct and significant impact on the economic growth rate in Nigeria. The conclusion drawn from this study is that the relationship between economic growth and financial deepening in Nigeria follows the “supply-leading hypothesis” and not the “the demand-following”, “feedback”, or “neutral” hypothesis. The policy implication of this finding is that to grow the Nigeria economy, attention must be given to the level of development of financial system as it may boost the capital accumulation efficiency and or increase the level of savings and thus investment. Further specific attention must be given to the ease of doing business in the stock market and the cost of capital in the money market (financial access).

In view of the findings emanating from this study, the following recommendations are made:

- i. Government policy direction should focus on money stock diversification, economic volatility and market capitalization which the result indicates are yet to make positive and significant impact on growth. Nevertheless, they are still desired for enhancing overall economic growth.
- ii. Government policies should also be geared towards increasing money supply and efficient capital market that will enhance overall economic efficiency, increase investor confidence, create and expand liquidity, mobilize savings, enhance capital accumulation, transfer resources from traditional sectors to growth inducing sectors and also to promote competent entrepreneurial response in various sectors of the economy.
- iii. Effective means of improving credit channels and liquidity to private firms by banks should be encourage by Central Bank of Nigeria and an aggressive policy should be pursued to remove all obstacles that could undermine the growth of credit to the private sector. Thus, the policy that establish asset management corporation should be strengthened in other to free the deposit money banks from high incidence of non-performing loans, and thereby, enhance their ability to extend more credit to the economy.
- iv. The capital market is still shallow and there are bottlenecks inhibiting the ease of doing business hence policy efforts should aim at restoring investor’s confidence by improving the institutional and legal framework for stock market operations, and promoting security ownership and efficiency in the stock

market. This will also ensure that stock prices truly reflect their actual values or the expected future profitability of companies.

References

- Aghion, P., Angeletos, D. B., Banerjee, A., & Manova, K. (2017). Volatility and growth: Credit constraints and the composition of investment. *Journal of Monetary Economics*, 57, 246-65.
- Agu, C. C., & Chukwu, J. O. (2008). Multivariate causality between financial depth and economic growth in Nigeria. *African Review of Money, Finance and Banking*, 7, 7–21.
- Al-Shawesh, M. H. A., & Yathish, K. (2022). The impact of financial deepening on economic growth: Empirical evidence from Yemen (1994-2018). *Journal of Economics, Management and Trade*, 28(8), 70-77. <https://doi.org/10.9734/jemt/2022/v28i830431>.
- Anachedo, C. K., & Osakwe, C. I. (2023). Effects of financial deepening on economic growth: The Nigerian experience. *African Banking and Financial Review Journal*, 1(1), 40 – 54.
- Ayodele, S. (2012). Financial intermediation and economic growth in Nigeria. *British Journal of Arts and Social Science*, 4(2). 164-179.
- Azege, M. (2015). The impact of financial intermediation on economic growth: The Nigeria perspective. *Central Bank of Nigeria Bullion Publication*.
- Calderon, C. & Liu, L. (2012). The direction of causality between financial development and economic growth. *Working Paper*, no. 184.
- Ewah, S.O.E., Esang, E.A., & Bassey, J.U. (2009). Appraisal of capital market efficiency on economic growth in Nigeria. *International Journal of Business and Management*, 4(12), 219-225. Retrieved from www.ccsenet.org/journal.html.
- Fatima, A. M. (2004). Does Financial Development cause Economic Growth? An empirical investigation drawing on the Moroccan experience. *Lancaster University Management School working papers*.
- Fry, M. (1993). Financial repression and economic growth. *Working paper IFGWP-93-07, International finance Group*, University of Birmingham, UK.
- Greenwood, J., & Jovanovic, B. (1990). Financial development, growth, and the distribution of income, *Journal of Political Economy*, 98(5). 1076-1107. <http://krepublshers.com/02-Journals/T-Anth/Anth-10-0-000-08-Web/Anth-10-4-000-08>.
- Karimo, T. M., & Ogbonna, O.E. (2017). Financial deepening and economic growth nexus in Nigeria: Supply-leading or demand-following? *Economies*, 5(4), 1 – 18. <https://doi.org/10.3390/economies5010004>.

- Levine, R. (1997). Financial development and economic growth: Views and Agenda. *Journal of Economic Literature*, 35, 688–726.
- Luqman, S. (2014). Financial deepening and economic growth in Pakistan: An application of cointegration and VECM Approach. *Interdisciplinary Journal of Contemporary Research in Business*, 5(12), 36 – 40.
- McKinnon, R. I. (1973). *Money and capital in economic development*. The Brookings Institution, Washington D. C.
- Ndebbio, J. E. (2004). Financial deepening, economic growth and development: Evidence from selected Sub-Saharan African countries. *African Economic Research Consortium, Nairobi*. Research Paper 142.
- Nwanna, I. O., & Chinwudu, C. F. (2016). Effects of financial deepening on economic growth in Nigeria. *Journal of Economic and Finance*, 7(4), 11 -28.
- Nzotta, S. M. (2014). *Money, banking and finance*. Owerri, Ospray Publishers. 462-487.
- Okafor, V., Bowale, E., Onabote, A., Afolabi, A., & Ejemeyovwi, J. (2021). Financial deepening and economic growth in Nigeria: A Johansen and error correction model techniques. *International Journal of Financial Research*, 12(2), 263 – 273.
- Okoli, M. N. (2010). Evaluating the nexus between financial deepening and stock market in Nigeria. *European Scientific Journal*, 8(15), 18 – 29.
- Robinson, J. (1952). The Generalization of the General Theory. In *Rate of Interest and Other Essays*. London, UK: Macmillan.
- Schumpeter, J. A. (1911). *The theory of economic development*. Cambridge, Mass: Harvard University Press.
- Shaw, E. S. (1973). *Financial deepening in economic development*. New York Oxford University Press.