



Financial intermediation and economic growth nexus in Nigeria

Mathew Oluwaseun Adeagbo (PhD)

Department of Economics, Oyo State College of Education, Lanlate,

Email: oadeagbomathew@yahoo.com , 08034943882

Abstract

The impact of financial intermediation on the growth of an economy has become a controversial discuss among researchers with no unanimity. As the activities is said to be germane to the economic development process some findings still comes out with it having an undesirable effect on the growth process of the nations studied. To take a stand therefore, this study observed the nexus between financial intermediation and economic growth process in Nigeria using data covering 1985 to 2023. While economic growth was taken as the explained variable other explanatory variables which were confirmed as important, through the various test carried out in the study, were used. After carrying out the unit root test and finding a blend of first difference and levels significance, analysis was done using an Auto Regressive Distributed Lag (ARDL) estimation technique. From the findings, it was discovered that financial intermediation activities influence economic progress. All the control variables present positive effect on economic growth, though not statistically significant except that of financial openness, with the exception of inflation which encumbers the development of the nation. Premised on this, suggestions weremade to the government to fortify regulatory basis controlling financial services in order to improve stability in the fiscal sector and also legislates practicable policy to keep inflation at bay so as to encourage both local and foreign investors to commit their investable fund to domestic market in other to boost productivity and growth, among others.

Keywords: Banks, Economic Growth, Financial Intermediation, Nigeria, Openness

JELClassification: E52, E58, E62, F43.

Introduction

Every nation strives to eliminate, or bring to the barest minimum, the occurrence of corruption which arise from unproductive credit delivery system; no wonder Nigeria as

a country continue to frown at money laundering which thus calls for her introduction of cashless rule by the central bank in 2012 to adjust the cash driven economy and reduce the interest/charges

paid by customers. The aim is to promote the involvement of financial intermediaries in the economy, reduce cash transactions, increase automated payment, and minimise corruption, in addition to reshaping the orientation of the many Nigerians that are still unbanked.

In every economy, financial resources have been seen as a crucial factor for improving growth through a well-organised financial intermediation. Economic growth in a modern economy relies on a well-organised financial system that attracts internal savings and draws external capital for productive investments. Financial intermediaries, most especially banks, performs an essential function in a country's financial plan through various technological innovative activities that propel a nations progress, they function as a channel through which excess savings of an economic unit is made available to the needy unit thus providing a mechanism for efficient allocation of investible funds (Kings & Levine, 1993; Rajan & Zingales, 1998; Aziakpono, 2005; Udoh & Ogbuagu, 2012; Sulaiman & Aluko, 2015; Unvan&Yakubu, 2020; Konstantakopoulou, 2023). They thus ensure sufficient liquidity as well as risk controlling by providing a mechanism for risk diversification and risk-sharing.

The significance of these organizations in engendering economic progress has been a prominent topic of discuss among researchers. Some economists believe that financial institutions played a crucial intermediary role of bridging the gap between different economic sectors and as well created a conducive environment for would be investors thereby fulfilling the various

economic policies of the government. This they do by re-allocation of savings which brings about improved productivity and technical change in an economy.

Some studies advocate that financial intermediaries help to direct surplus savings to borrowers to encourage spending on physical capital, incite innovation and creative process thereby bringing about economic advancement. It thus serves as a means through which excess financial resources are passed on to sectors that can make use of them for productive purpose, thereby bringing about economic growth through improved capital formation (Kaitohu, 2004; Ujah & Amaechi, 2005; Adolphus& Samuel, 2023).

Availability of credit has been seen as an important factor in daily economic activity; for business and firms, it is used to purchase machinery equipment and exhibit other capital projects; for government it is used in running of her capital and recurrent expenses and individuals used it in meeting their self-daily needs, meeting their self-employed business requirements and purchase of goods and services, farmers used it to purchase inputs (seeds, fertilizers, chemicals), erect bans and many more.

According to Bencivenga and Smith (1991) financial institutions are set up to perform this role of credit creation, they does this majorly through acceptance of deposits and after holding required cash reserve ratio to meet up anticipated demand deposit withdrawal, they lends to a large number of agents for investment in productive capital which spur economic growth and development. They further claimed that these banks avert the abrupt folding up of business by entrepreneurs

who have cash crunch. As an intermediation industry, they thus see to the judicious use of the unproductive excess funds held by the public as well preventing the invested one from been mismanaged (Bencivenga & Smith, 1991; Afolabi, 1998; Nwanyanwu, 2010). This they achieved by directing the surplus to those investors who can put them into effective use to execute their ideas but do not have the wherewithal.

Nwanyanwu (2010) further explained the importance of availability of credit in the resuscitation of a nation experiencing natural mishap. He asserts that it can help to sustain a reasonable business dimension as it is a prerequisite to start and/or enlarge it to realize the benefit of economies of scale. In the same vein, Agbada and Osuji (2013) affirmed that a well-organized financial system, improved job opportunities, increase productivity as well as rising income level is only made possible through an efficient financial management system. This indicates that financial intermediation contributes to better economic welfare of the inhabitants.

In spite of the above elucidation, there has never been a clear stand by scholars as regards the direction of financial intermediaries' activities vis-à-vis the advancement of a nation as different scholars come up with contradictory results. Some scholars report that the accomplishments of financial intermediaries in an economy is a major determinant of a nation's economic progress (Mckinnon, 1973; Shaw, 1973; Alimi & Adeoye, 2020; Miftahu & Abdullahi, 2023) while others report a contrary view (Acha, 2011; Zaghdoudi, Ochi & Soiltani, 2013). Based on above contradictory outcomes this

study sets to take a stand and shed more light on the controversial outcome using a specific scope in Nigeria.

Statement of the Problem

There is no economic reform without financial reform and financial reform, especially in Nigeria, has been seen as a continuous process since early 80's (Uboh, 2005). Universally, the financial intermediation roles of financial institutions indicate their exceptional function as a tool that propels the growth of an economy. Like the case in Nigeria, it was discovered that a high percentage of the population are unbanked which thus affect the bank's power to create more credit. This has also been compounded by the merger and acquisition of banks through the bank policy in 2015.

To fight the above identified menace a one-time Central Bank of Nigeria governor, Professor Godwin Emefiele, towards the end of year 2022, calls for a change in currency which forces a high percentage of the inhabitants of the country to move their unbanked money out to the bank. However, the accompanied hardship of the process makes people to reject the policy and it is short lived. This thus revealed that financial sectors ability, especially banks, is affected by the unbanked population thus leading to the unresolved question of the ability of banks mediation role in economic development. This study therefore sets to find out the extent of the unbanked population's influence on financial institution's ability vis-à-vis a nation's economic progress in Nigeria and suggest possible way of improving banks mediation role to achieve economic development.

Conceptual Clarifications

Financial Intermediation

Financial intermediation is the procedure of connecting the surplus economic units with no instantaneous financial necessities to investors, by financial institutions, to investors with lesser fund to cater for their investment at a price. In other words, it is a procedure of making excess saved funds available to the eventual users (Akisulire, 2010). Corroborating this, Blum (2012) described it as an act of moving the surplus funds of particular components to others with lesser resources at an agreed rate. Hence, the success of financial intermediation hinges on financial instruments as well as institutions of this nature, majorly banks in the Nigeria context, functioning jointly to achieve the national development.

Economic Growth

On most occasions, economic growths have been viewed in quantitative term with reference to previous year's performance of the nation. For instance, Warr, Ayres, Eisenmanger, Krausmann and Schandi, (2010) defines it as a rise in aggregate economic productivity of a nation during a specific period of time. Nwamuo (2020) describes it as the nominal rate at which the gross domestic product of a country increase over a specified period after inflationary adjustment not minding the structural changes in the economy. Economic growth has also been taken to be a long time increase in aggregate productivity in an economy that causes the real per capita income of a country to rise over a long period of time

(Todaro & Smith, 2011; Jelilov & Mohammad, 2015; Adeagbo, 2019, 2021).

Empirical Review

There has been a heated debate among scholars with regards consequences of fiscal mediation activities on the progress of different economies employing various analytical tools which has made the argument inconclusive. Some reported a positive significant relationship (Adusei & Kofi, 2013; Bogdan & Opris, 2013; Alimi & Adeoye, 2020; Loayza & Beck, 2000, Adolphus & Samuel, 2023), some reported negative effects (Acha, 2011; Zaghdoudi, Ochi & Soiltani, 2013) while others have mixed results (Hao, 2006). These reviews are both inter and intra country in nature. For example, Levine, Loayza and Beck (2000) observed the consequence of fiscal intermediaries' actions the progress of 71 countries with the application of different panel approaches. Their findings revealed a favourable correlation among the dependent and explanatory variables across the countries. The study is in an inter-country analysis.

Atindehou, Gueyie and Amenounve. (2005) explored the influence of financial institution's economic intervention in relation to economic advancement of West African countries. They found out the existence of a favourable correlation between bank mediation activities and economic advancement in the sampled countries.

Adusei and Kofi (2013) in a multi study analysis examined the influence of financial institution's mediation role on a nation's economy between 1995 and 2011. The analysis of the data showed a favourable influence during the period.

In another cross-country analysis, Bogdan and Opris (2013) carried out the same research to see the influence of financial institution's mediation role on economic progress in 28 developed and third world countries alike, using data spanning 2001-2010. The result from the analysis of the collected data based on different econometric methodologies revealed that their role favourably impact the progress in a country.

In contradiction to the above findings, Zaghdoudi, Ochi and Soiltani (2013) in their studies with respect to the outcome of bank's mediation role on advancement the Middle East and North Africa (MENA) countries economy established that economic progress in studied area is negatively affected banks intermediations.

Murty, Sailaja and Demissie (2012) also investigated the influence of bank mediation role on development of Ethiopia especially in long-run using Johansen cointegration analytical technique. From their findings it was discovered that, private sector loans taking from banks serves as a form of propelling tools for economic progress especially in the long-run. Hao (2006) observed the effect of banks' intermediation and financial expansion of 28 provinces on china between 1995 and 1999 and came out with the findings that the act favourably influences the provinces' economic advancement.

In another country-specific study Rexeang and Rathanasiri (2011) investigated the consequence of fiscal and monetary intermediation on the economic advancement of Sri-Lanka using spanning 1977-2008. In other to investigate the short-run dynamic of

the model formed, a Granger causality test was carried out while the Engle-Granger methodology was employed to assert the long-term association. Findings indicated a positive long-run but weaker influence of fiscal and monetary policy on the nation's economic advancement.

Contradicting the results of the preceding reviews, Acha (2011) carried out the same study on Nigeria and come up with the conclusion that banks' intermediation in an economy has no direct influence on economic advancement of the country.

From the above review of previous studies, it can be seen that the influence of financial intermediary's activities on economic advancement remained inconclusive as findings differ across board hence the need for this study to take a stand. To take a stand therefore, this research is set to explore the consequence of financial mediation role on economic advancement in Nigeria.

Research Methodology

The study covered the period of 1985 to 2023 using World Development Indicator data for the variables except that of financial openness which will be garnered from Chin and Ito Financial Openness Index.

Model Specification

To evaluate the data gathered on the variables, the study specified an econometric model. An econometric model, according to Koutsoyiannis (2001), should be specified built on an economic theory coupled with evidences that can be linked to the concerned incident. To this end this study followed the work of Levine, Loayza and Beck (2000) with little modification with introduction of other

cogent explanatory variables the functional form of which is presented below:

$$\text{GDP} = f(\text{MS}, \text{FINT}, \text{FIOP}, \text{GFCF}, \text{INFR}) \dots\dots\dots (i)$$

Money supply, commercial bank deposits as well as commercial bank credits were used as index of financial intermediation. Incorporating this notion, the functional form of the equation becomes

$$\text{GDP} = f(\text{MS}, \text{CBDP}, \text{CBCR}, \text{FIOP}, \text{GFCF}, \text{INFR}) \dots\dots\dots (ii)$$

Putting equation (iii) above in econometric and logarithm form it gives

$$\text{GDP}_{gr_t} = \beta_0 + \beta_1 \ln \text{MS}_t + \beta_2 \ln \text{CBDP}_t + \beta_3 \ln \text{CBCR}_t + \beta_4 \ln \text{FIOP}_t + \beta_5 \ln \text{GFCF}_t + \beta_6 \ln \text{INFR}_t + \mu \dots\dots\dots (iii)$$

whereby

GDP_{gr} = Gross Domestic Product growth rate proxy for Economic Growth

MS = Broad Money supply

CBDP = Commercial Bank Deposit

CBCR = Commercial Bank Credit

FIOP = Financial openness

GFCF = Gross Fixed Capital Formation

INFR = Inflation Rate (taken to be the Consumer price Index)

β_0 to β_6 are vectors of the variables, μ = error term, t = time trend,

On the *a priori* $\beta_0, \beta_6 < 0$, $\beta_4, \beta_5 > 0$ while $\beta_1, \beta_2, \beta_3$ are < 0 or > 0 .

To standardize the result of this research, the stationarity together with the relationships of the included variables, were tested. To do this, the Augmented Dickey Fuller (ADF) test and Phillip-Perron statistics as well as the Autoregressive Distributed Lags (ARDL) were carried out. The Ordinary Least Square (OLS) estimation was then performed to know the consequence of included explanatory variables on the explained ones.

Unit root test

In order to avoid having an erroneous regression result which can arise by conducting regression analysis on non-stationary variables a unit root test was carried out to know the stationarity state of the included variables. This was premised on the assumption of non-existence of unit root in the variable. Below is the outcome of the test established from Augmented Dickey Fuller test and the Phillip-Perron analytical technique.

Table 1

Variable		ADF Statistical value	Probability value	Phillip-Perron value	Probability value	Concluded integration order	Inference
GDP _{gr_t}	I(0)	-5.465	0.000***	-5.466	0.000***	I(0)	Stationarity at level
lnMS _t	I(0)	-3.852	0.590	-3.273	0.428	I(1)	1 st diff stationarity
	I(1)	-4.683	0.000***	-4.572	0.000***		
lnCBDP _t	I(0)	-3.267	0.199	-3.0167	0.133	I(1)	1 st diff stationarity
	I(1)	-4.892	0.020**	-4.936	0.040**		
lnCBCR _t	I(0)	-2.189	0.477	-1.774	0.734	I(1)	1 st diff stationarity
	I(1)	-3.402	0.061*	-3.566	0.060*		
	I(0)	-0.518	0.982	-0.514	0.980		1 st diff

$\ln \text{FIOP}_t$	I(1)	-7.264	0.000***	-7.308	0.000***	I(1)	stationarity
$\ln \text{GFCF}_t$	I(0)	-5.472	0.030**	-3.768	0.040**	I(0)	Stationarity at level
$\ln \text{INFR}_t$	I(0)	-4.068	0.551	-5.001	0.546	I(1)	1 st diff stationarity
	I(1)	-7.082	0.000***	-6.067	0.000***		

*, **, and *** indicates significance at 10, 5, and 1 percent respectively, I(0) means level, I(1) indicates 1st difference.

The result above based on 1%, 5% and 10% significant level revealed a mixture of levels and intercept stationarity. From the test statistics, it was revealed that GDPgr_t and GFCF_t are significant at levels while MS_t , CBDP_t , CBDP_t , FIOP_t , and INFR_t are

Table 2

Test performed	Critical Limit	Number of parameters
F-statistic	5.30	7
Critical Value Bounds		
Level of significant	levels	1 st diff
10%	2.20	3.09
5%	2.54	3.47
2.5%	2.05	3.09
1%	3.27	4.35

The analysis is premised on the decision to reject the default hypothesis if the F-statistics from the results are higher than the critical value bound of I(1), which is the lower bound, and hence assume that there is co-integration, which means that the dependent variable and its explanatory factors have a long run relationship otherwise we accept the default hypothesis. In a contrary case of the values falling between levels and first difference, the test is adjudged indecisive and the result is thus questionable.

As can be detected from table 2, the F-statistic is bigger than the critical limit for I(1) at 5% significant level, thus upholding a long run link between the regress and its regressors.

significant at first difference. We therefore discard the default hypothesis this then calls for ARDL bound testing cointegration relationship process (shown in table 2, authors computation) since the underlying variables are mixed ones.

Long run cointegration regression estimation with ARDL method was then employed to study the consequence of the descriptive variables on the economic progress of the country.

Robustness and analytical investigation results

This research undertook an additional regression analysis with a heteroscedasticity test using the residuals gotten from the original equation. To accept the null hypothesis, the probability must be greater than 5%; otherwise, it will be discarded and we will be forced to the alternate hypothesis. The outcome is shown in Table 3:

Table 3: Heteroskedasticity Test: White

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.540	Prob. F(8,30)	0.460
Obs*R-squared	4.918	Prob. Chi-Square (8)	0.762
Scaled explained SS	11.261	Prob. Chi-Square (8)	0.183

The presence of heteroskedasticity in a model implies that the coefficients estimated from the regression analysis would be biased, hence the need for the various diagnostic tests as revealed in tables 3 and 4. Table 3 established the probability value been larger than the 5%

significance threshold since the R^2 value is 4.918 and the resultant Chi-square value was 0.762 thus accepting the alternative hypothesis that the model was devoid of heteroskedasticity.

Table 4 Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.157	Prob. F(2,28)	0.07
Obs*R-squared	4.794	Prob. Chi-Square(2)	0.05

Going further and employing Breusch Godfrey in its serial Correlation Lagrange Multiplier test; table 4 revealed F-statistics value of 2.157 at probability value of 0.07 which is greater than 0.05, thus confirming that the model is free from the problem of autocorrelation.

Following from various general diagnostic test results on tables 1 to 4, and confirmations that the model is devoid of heteroskedasticity and as well free from the problem of autocorrelation, the study ensue to investigate the performance of each independent variable on the dependent one; this is explained from the outcome of the analysis in table 5

Table 5: Regression analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ln(MS)	0.211	0.346	-3.889	0.203
ln(CBDP)	0.010	0.115	-2.061	0.601
ln(CBCR)	0.031	0.131	-2.081	0.630
ln(FIOP)	2.009	0.781	2.851	0.013
ln(GFCF)	0.089	0.119	0.849	0.446
ln(INFR)	-0.058	0.016	-3.206	0.004
C	5.011	3.723	1.739	0.086
R-squared	0.921	Mean dependent var		4.002
Adjusted R-squared	0.890	S.D. dependent var		3.506
S.E. of regression	2.315	Akaike info criterion		4.162
Sum squared resid	91.11	Schwarz criterion		5.616
Log likelihood	-60.97	Hannan-Quinn criter.		5.006
F-statistic	7.818	Durbin-Watson stat		2.106

Prob(F-statistic)	0.001			
-------------------	-------	--	--	--

*Note: Dependent Variable: GDPGR. Method: ARDL. Dynamic regressors (3 lags, automatic). P-values and any subsequent tests do not account for model selection. $\ln(\text{MS})$ $\ln(\text{CBDP})$ $\ln(\text{CBCR})$, $\ln(\text{FIOP})$, $\ln(\text{GFCF})$, $\ln(\text{INFR})$

The summary of the regression analysis in table 5 confirmed that the variables are not just pushovers in the determinant of economic advancement in Nigeria as they accounted for about 92% of the variation in GDPgr. This is confirmed by the R-squared value of the model and further strengthened by the adjusted R-squared value.

As a whole, the model is adjudged to be significant since the probability of F-statistics which is a measure of the joint effects of the descriptive variables produce a corresponding probability value of 0.001 which is statistically significant at 1%. It therefore sufficed to conclude that all the explanatory variables in the model are significant determining factors of GDPgr in Nigeria. The variables in the model are also serially correlated; this is confirmed by the value of Durbin-Waston with approximately 2.09 which falls within the acceptable range in an econometric analytical rule.

Following the analysis in table 5, a 1% rise in broad money supply, Commercial bank deposits and credit giving by Commercial banks has a favourable influence on the nation's economic advancement though however these positive contributions are statistically insignificant. This may be ascribed to the macroeconomic volatilities that disturb banks' intermediation undertakings. For example, demand deposit dwindles in a volatile economy (especially during high inflation) which leads to reduction in bank reserves and thus restricts

bank's ability to give loans to productive sector alone. This fit in to the *a priori expectation* postulated in this study.

Also, the contribution of gross fixed capital formation to economic progress in Nigeria, though positive, is insignificant. What this implied is that an upsurge in local investment boosts local productivities but the influence is not significant enough to bring about advancement in the national economy. This conforms to the findings of Kanu and Ozurumba (2014) on related research in Nigeria and as well fall in line with a *prior expectation* postulated in this study.

Financial openness presents a favorable effect on the nation's advancement as a percentage rise in openness to the global market brings about 2.0 units rise in economic advancement of the nation and the result is significance statistically. This suggest that liberalizing the fiscal sector is imperative for the progress of a nation as it tends to enhance competition in banks by offering lower rate of interest to productive sectors which thus improve the gross domestic product of a nation.

Contrariwise the result shown that inflation impaired economic advancement significantly, as inflation increases, growth is subdued, as it is evident in the diversion of investable resources to consumption during the period thus contributing to low level of domestic output. It also discourages investors from investing in the local market given the instability in the economic conditions. From

the table therefore, it can be seen that a percentage increase in inflation brings about 0.6 unit decrease in economic progress. The result thus aligns with the *a priori expectation* hypothesized in this study.

Summary, Conclusion, and Recommendation

This study explored the nexus between financial intermediary's activities and economic advancement in Nigeria by means of data that covers 1985 to 2023. The study carried out a unit root test which confirmed some ingredients to be significant at levels and others at first difference making ARDL estimation approach to be the appropriate estimation technique for analyzing the model since it has been proved to be the estimation method capable of handling such situation and as well take care of small samples. The bound test analysis outcomes revealed that the ingredients exhibit a long-term correlation among themselves. Various analytical tests were performed to ensure a standardized research result making it dependable and different from other research outcomes.

Generally, the result exposed a positive sway of financial intermediaries' activities on national progress. Sequel to the outcomes it was recommended that government should fortify the regulatory framework controlling financial services so as to enhance stability in the financial sector. Also, workable policy to keep inflation at bay should be enacted; this will encourage both local and foreign investors to commit their investable fund to domestic market thus boosting productivity and growth. In addition, the provision of inducements for local investors to enhance

investments and invariably economic advancement was advocated from the part of the government. This may be in form of lessening the encumbrance of borrowings and as well increase the volume of credit to private sectors. Finally, policy makers should formulate policies that will control the macroeconomic volatilities so that the contributions of Commercial bank deposits and Commercial bank credit becomes significant.

References

- 1) Acha, I. A. (2011). Does bank financial intermediation cause growth in developing economies? The Nigerian experience. *International Journal of Business and Management*, 3(1), 156- 161.
- 2) Adeagbo, M. O. (2019). Industrialization and sustainable development in Nigeria. *Review in Social Sciences*, 17(1), 129-139.
- 3) Adeagbo, M. O. (2021). Monetary policy and economic growth nexus in Nigeria. *Anna Journal of Interdisciplinary Studies* 3(1&2), 167-182.
- 4) Adolphus, J. T & Samuel, D. (2023). Financial intermediation and economic growth in Nigeria *World Journal of Finance and Investment Research* 6(12), 1-15.
- 5) Adusei, M., & Kofi, A. S. (2013). The impact of credit union financial intermediation on economic growth: A multi-country analysis. *Global Journal of Business Research*, 7(5), 71-78.
- 6) Afolabi, L. (1998). *Monetary Economics*. Perry Barr Ltd, Lagos.

- 7) Akinsulire, O. (2010). *Financial Management*. Lagos: Ceemol Nig. Ltd.
- 8) Alimi, A. A. & Adeoye, M. A. (2020). Analysis of financial intermediation activities on economic growth in Nigeria: Vector error correction model approach. *International Journal of Finance and Accounting*, 9(1), 7-12.
- 9) Atindehou, R. B., Gueyie, J. P., & Amenounve, E. K. (2005). Financial intermediation and economic growth: Evidence from Western Africa. *Applied Financial Economics*, 15(11), 770-790.
- 10) Aziakpono, M. (2005). Financial development and economic growth in Southern Africa. *Reducing Capital Cost in Southern Africa*, 1(1), 137-167.
- 11) Bencinvenga, V. R., & Smith, B. D. (1991). Financial intermediation and endogenous growth. *Review of Economics Studies*, 58, 195-209.
- 12) Bogdan, D. I. M. A., & Opris, P. E. (2023). Financial intermediation and economic growth. *Timisoara Journal of Economics and Business*, 6(20), 127-136.
- 13) Hao, C. (2006). Development of financial intermediation and economic growth: The Chinese experience. *China Economic Review*, 17(4), 347-362.
- 14) Jelilov, G., & Muhammad, Y. M. (2015). Energy growth and energy consumption in Nigeria. *The Empirical Economics Letters*, 1187-1196.
- 15) John, E. I., & Nwekemezie, O. A. (2019). Effect of financial intermediation on economic development in Nigeria. *IOSR Journal of Economic and Finance*, 10(1), 22-32.
- 16) Kanu, S. I. & Ozurumba, B. A. (2014). Capital formation and economic growth in Nigeria. *Global Journal of Human Social Science: Economics*, 14(4), 43-58.
- 17) Kings, R. G., & Levine, R. (1993). Finance and growth Schumpeter might be right. *Quarterly Journal of Economics*, 717-736.
- 18) Konstantakopoulou, I. (2023). Financial intermediation, Economic growth and business cycle it plays a crucial role in promoting economic growth. *Journal of Risk Financial Management*, 16(12), 514.
- 19) Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of Monetary Economics*, 46, 31-45.
- 20) Mckinnon, R. (1973). *Money and Capital in Economic Development*. The Brookings Institute, Washington.
- 21) Miftahu, I., & Abdullahi, H. (2023). Effect of financial intermediation on capital market in Nigeria. *International Journal of Advanced Multidisciplinary Research and Studies*, 3(2), 969-979.
- 22) Murty, K. S., Sailaja, K., & Demissie, W. M. (2012). The long-run impact of bank credit on economic growth in Ethiopia: Evidence from Johansen's multivariate cointegration approach. *European Journal of Business Management*, 4(14), 20-33.
- 23) Nwanyanwu, O. J. (2010). An analysis of bank credit on the Nigeria economic

- growth (1992-2008). *Jos Journal of Economics*, 4: 43-58.
- 24) Rajan, R. G., & Zingales, L. (1998). Financial dependence and growth. *American Economic Review*, 88(June): 559-587.
- 25) Rexeang, W., & Rathanasiri, R. A. (2011). Financial intermediation and economic growth: A lesson from Sri-Lanka. *Journal of Faculty of Commerce and Management Studies*, 37-54.
- 26) Shaw, E. S. (1973). *Financial Deepening in Economic Development*. Oxford University Press New York.
- 27) Sulaiman, L. A., & Aluko, O. A. (2015). Financial intermediation and economic growth: A test for causality in Nigeria. *Banks and Bank System*, 10(4), 69-74.
- 28) Uboh, G. A. (2005). *Selected Essays on Contemporary Issues in Nigerian Banking System*. Ibadan: University Press Plc.
- 29) Udoh, E. & Ogbuagu, U. R. (2012). Interest rate liberalization, financial development and economic growth in Nigeria. *Asian Social Sciences* 8(3): 292-302.
- 30) Unvan, Y. A., & Yakubu, I. N. (2020). Do bank-specific factors drive banks deposit in Ghana? *Journal of Computational and Applied Mathematics*, 376, 1-7.
- 31) Zaghdoudi, T., Ochi, A., & Soiltani, H (2013). Banking intermediation and economic growth: Some evidence from MENA countries. *Advances in Management and Applied Economics*, 3(4), 51-57.