



Financial intermediation and economic growth in Nigeria

Anthony Abraham

Department of Economics and Development Studies, Faculty of Social Sciences, Federal University Otuoke, Nigeria

Abstract

This work focuses on financial intermediation and how it can transmit to economic growth in Nigeria. The study uses data of financial intermediation to the agricultural, manufacturing, service sector to the economy as a medium enhance economic growth within the period, 1980-2021. The study employed unit root, co-integration and error correction mechanism as techniques of analysis. The result of unit root indicates that Augmented Dickey Fuller (ADF) shows that it is integrated of order one. The co-integration test conducted indicates that both the Trace and Max-Eigen statistics has two Co-integrating variables. Finally, the ECM (-1) is negatively signed and designates that the speed of adjustment from the short run dynamics to its long run equilibrium. The ECM (-1) value -0.603324 or 60 per cent and is internally consistent at 5 per cent. The study concludes that reasonable amount should be channelled into the various sectors examined to boost the economy of Nigeria and lessen the dependence on oil. The study recommends that government should channel funds into these sectors to enhance the economy as a whole.

Keywords: financial intermediation, economic growth, manufacturing sector, service sector, agricultural sector

Introduction

Background to the study

The part played by financial intermediation in economic growth has been epitomized in several literatures of finance. Moreover, the performance of specific tasks, several theoretical models posit that they lessen the costs associated with information acquisition and the conduct of financial transactions (Manasseh, Okoh, Abada, Ogbuabor, Ogbuabor, Alio, Lawal, Nwakoby and Asogw, 2021) ^[15]. In addition to these, numerous studies have shown that financial intermediation does more than cost mitigation. It makes provision for insurances and risk sharing (Emmanuel and Odum, 2019) ^[7], stimulates the funding of liquidity needs through credit lines and aids the creation of specialized products (Alimi and Adeoye, 2020) ^[2]. The idea of financial intermediation is not quite new. Over decades now, it has been a subject of study at the both macro-level and the micro- level. At the macro-level, the significance of financial intermediation cannot be over-emphasised. Nonetheless, there are mixed feelings about this. Although some argue that it accelerate the efficiency of the financial system (Gromb and Vayanos, 2010) ^[9], others have also argued that it is sagging in nature and serves as a conduit through which monetary policy is effected (Emmanuel and Odum, 2019) ^[7] and contracts, not available in the financial market, are implemented (Bamidele, Lucas and Olumuyiwa, 2018) ^[5]. At micro- level, studies have revealed that financial intermediation encourages the reorganization and liquidation of distressed firms as well as eradicating the inefficiencies related with the absence of inter-temporal smoothing, as a result of incomplete market. Lately, the impact of financial intermediation on the growth of an economy generated a heated debate. Although some studies opined that financial intermediation drives economic growth, others have argued that economic growth drives financial intermediation. Nevertheless, there are studies, which have argued that a bi-directional causality exists between financial intermediation and economic growth (Odhiambo; 2011). This study seeks is an addition to the body of literature by examining the association between financial intermediation and economic growth in Nigeria from 1980 to 2021.

Statement of the problem

Nigeria's financial reform is an on-going process and has been implemented as part of the wide-range market-oriented economic reforms since the late 1980s. Globally, the financial intermediation activities of banks mirror their unique roles as the instrument of growth in any economy. Central Bank of Nigeria (CBN) has imbued the total of N600 billion naira into the Nigerian banking sector to recapitalize the banks that have liquidity crisis and credit crux caused by excessive lending, extravagance, and sleaze. The recent audits of the Nigerian banks by the Central Bank of Nigeria (CBN) have exposed the inefficiency and ineffectiveness of the banking sector and revealed that the majority of these banks were ill-managed and that corruption has almost destroyed the system. As a result, the CBN committed himself to clean the financial mess. Factors that motivate financial intermediation activities in the economy are largely under-researched in Nigeria. This is considered very crucial

to ensure that financial institutions have the desired impact on the economy at large. There is a dearth of research on the effect of bank intermediation activities on economic growth in Nigeria since the introduction of the merger and acquisition of banks in 2005. This study aims to fill significant gaps on this issue especially concerning intermediation activities of Nigerian Deposit Money Banks

Theoretical Literature Reviewed

Theory of Delegated Monitoring and Financial Intermediation

An intermediary such as a commercial bank has delegated the task of costly monitoring of loan contracts carved with firms who borrow from it. It has an overweight cost advantage in collecting the information because the alternative is either duplication of effort if each lender monitors directly or a free-rider problem in which case no lender monitors. As a result, financial intermediation theories are generally grounded on some cost advantage for the intermediary.

Financial Repression Theory

Financial repression refers to a wide array of policies that allow a government to place its debt with financial institutions at relatively low-interest rates. Financial repression is caused by interest rate ceilings, liquidity ratio requirements, high bank reserve requirements, capital controls, restrictions on market entry into the financial sector, credit ceilings or restrictions on directions of credit allocation, and government ownership or domination of banks. Economists have commonly argued that financial repression prevents the efficient allocation of capital and thereby impairs economic growth

Information Production theory

Surplus units could incur substantial search costs if they were to seek out borrowers directly. If banks did not exist, then there would be duplication of information production costs as surplus units would individually incur considerable expenses in seeking out the relevant information before they committed funds of specializing agents such as banks that choose to produce the same information

Empirical Literature Reviewed

Manasseh, Okoh, Abada, Ogbuabor, Ogbuabor, Alio, Lawal, Nwakoby and Asogw (2021) empirically investigated the impact of financial intermediation of economic growth in Nigeria. Quarterly time series data generated from the World Bank Development indicator and the Nigerian Bureau of Statistic for the periods 1994Q 1 to 2018Q were used for the analysis, and Ordinary Least Squares (OLS) regression technique was adopted for the estimation of the hypotheses. Per capita GDP was used as a measure of economic growth, while bank deposit, bank credit and bank reserves are measures of financial intermediation. Further investigation also show that bank deposit is positively and significantly related to GDPpc, suggesting that increase in bank deposit brings about 0.244193 increases in economic growth. We further observed that bank credit impacted positively on economic growth. Though, the impact was found to be insignificant. Hence, we also found bank reserve to assert significant and positive impact on economic growth. From the findings, we suggest for good policy reforms that may promote the efficiency and the development of bank which serve as a critical factor for economic growth in Nigeria.

Asiamah (2020) study sought to dwell on how commercial banks' credit allocated to the private sector impacts on the growth of the entire economy of Ghana. The study made use of secondary data relating to financial intermediation and economic growth spanning from 1993 to 2018. Purposive sampling technique was used in selecting data and its source. To estimate the parameters in the econometric model stated in the study using times series data, Auto-Regressive Distributive Lag (ARDL) bounds testing approach to co-integration developed by Pesaran *et al.* was employed. Overall, the empirical evidence obtained indicates that there is a negative long-run relationship between domestic banks credit to the private sector and Ghana's economic growth, though statistically insignificant at 5% significance level. In the short-run however, the negative relationship between the two variables is statistically significant at the same significance level.

Nwonye, Anowor, Uzomba, Abu, Chikwendu, Ojiogu and Edeh (2020) study adopting Auto-Regressive Distributed Lag bounds testing approach reflected on financial intermediation in an attempt to assess how it has affected economic performance (proxied by output per capita). The empirical results denoted that funds to the private sector are trapped in the incessant risks prevalent in developing economies; the implication is that any increase in per capita output could have emanated from seldom-productive sources like sales of natural resources that rarely have inter sectoral links. The study thus recommends that there should be a consistent fight from the demand and supply side plus political approach to ensure adequate monitoring.

Alimi and Adeoye (2020)^[2] evaluated the effect of financial intermediation activities on the growth of Nigeria's economy. Secondary data were used and sourced through the Central Bank of Nigeria Statistical Bulletins within 1983 and 2018. Descriptive statistics such as mean, median, skewness, and mode, etc. and econometric statistics like Ordinary Least Squares (OLS) were used to analyse the data obtained. The multiple regression results showed that the computed F-statistic with corresponding probability value ($F(8, 28) = 464.23$, $\text{Prob} > F = 0.0003$) and adjusted R^2 (0.832), indicated that broad money supply ($\beta = 0.661791$), size of credit ($\beta = 4.337539$), and credit delivered to the private sector ($\beta = 4.31341$) have a positive effect on economic growth at $p \leq 0.05$. The result of the co-integration test using trace statistics suggests a long-run relationship among the variables

($H_0:n=4$ that is, $32.9048 < 45.41$) and the Vector Error Correction Model (VECM) was employed to evaluate the short-run effects of the Co-integrated series. It was concluded that financial intermediation activities by banks had a statistically significant impact on the growth of Nigeria's economy. It is therefore recommended that there should be a reduction in lending rate associated with the size of credit, increased volume of credit delivered to the private sector, sustenance of on-going reforms and evolving measures to boost deposit mobilization which would spur investment, innovation and engender growth in the Nigerian economy. Also, there should be a review of monetary policy by the Central Bank of Nigeria (CBN) with the target of increasing the money supply to be able to reduce the costs of borrowing (lending interest rate). The achievement of this will motivate investors and encourage them to borrow more money.

Emmanuel and Odum (2019) ^[7] study examined the effect of financial intermediation on the development of the economy of Nigeria using data spanning 1986 to 2017. The data were obtained from Central Bank of Nigeria Statistical Bulletin, World Bank (World Development Indicators) and International Monetary Fund (World Economic Outlook). The study considered credit to private sector, lending rate and money supply as independent variables, while real GDP growth rate and unemployment rate were used as dependent variables. Auto-regressive distributed Lag (ARDL) technique was employed. In other to achieve the objective of the study, series of tests were conducted, including normality test, stationarity test, co-integration test, ARDL estimation and error correction. The tests provided the basis for the conclusion that credit to private sector do not really contributes positively to the development of the economy. This could be due to high lending rate (interest rate). High lending rate is detrimental to the development of the economy. Thus, the study recommends, among others, that the monetary authority should make policies to compel banks to lower their lending rates to encourage the productive sectors of the economy to perform better.

Sarah and Daway-Ducanes (2019) study explores the relationship between financial development and growth in manufacturing and service sectors in 77 developing economies over the period 1984–2013. Specifically, we examine whether the size of the financial sector matters and if it does, whether the size of the financial sector in these countries is of a sufficient scale for credit and liquidity expansion to benefit the economy. Using the two-step system generalized method of moments, we find a u-shaped relationship between either manufacturing or services growth and financial size, indicating that a critical level of financial scale has to be achieved for financial expansion to positively affect the growth. For some 50%–90 per cent of the economies in the sample, there is a robustly long-run adverse effect of financial expansion on both manufacturing and services growth, indicating a case of 'too little' finance, likely explained by a combination of weak institutions, market failures and the existence of large and lumpy investments that require sufficient financial scale.

Bamidele, Lucas and Olumuyiwa (2018) ^[5] study investigates the impact of financial intermediaries on capital market development in Nigeria employing co-integration. To capture the activities of financial intermediaries, five proxies were used to explain financial intermediaries which include credit to the private sector to GDP, broad money supply and total bank savings while on the other hand, market capitalization was used to capture capital market development covering the period of 1981 to 2016. The result revealed that in the long run, credit to private sector and money supply will lead to an increase in capital market development while banks total savings and government expenditure results to a decrease in capital market development in the long run. The study recommends that the Central Bank of Nigeria should ensure that the domestic credits provided by the banking sector are directed into their appropriate uses and government expenditure be directed to productive sectors and recurrent expenditure be reduced by government. Credit facilities should also not be restricted to the large-scale manufacturing industries only, but it should also be extended to small and medium scale enterprises.

Benjamin (2019) noted that despite the abundant literature on financial development and economic growth nexus, the debate is far from settled. In this paper we create a financial development index using principal component analysis (PCA) and use it to examine the effect of financial intermediation on economic growth within the East African Community (EAC) using panel data over the period 1985-2017. The DOLS and FMOLS models are estimated since they control for heterogeneity, serial correlation, small sample bias and endogeneity in the presence of long run relationship. The results indicate that financial intermediation has a positive and significant effect on economic performance of the EAC countries in the long run. Among the controls, capital formation and FDI also have positive effects on growth while the growth of the population reduces the per capita income.

Usman, Alimi and Onayemi (2018) ^[26] evaluated the effect of bank intermediation activities on economic growth in Nigeria using secondary data obtained from Central Bank of Nigeria Statistical Bulletins within the period 1983 and 2014. The OLS regression result showed that loan and advances and money supply have positive effect on economic growth. The co-integration result indicated the existence of a long-run relationship between the variables. The study concluded that financial intermediation by banks has statistically significant impact on economic growth in Nigeria.

Oluwasogo, Princess, Oluwatoyin and Folasade (2017) ^[23] examined the effect of financial intermediation on economic growth in Nigeria covering the period 1980 to 2014. The study used Johansen co-integration test and Error Correction Model. The study showed that financial intermediation has a long-run relationship with economic growth.

Adediran, Ekejiuba, Matthew and Adegboye (2017) ^[1] study examined the effect of financial intermediation on economic growth in Nigeria. The study period covered between 1980 and 2014. The introduction of financial intermediation by financial intermediaries in Nigeria was necessary due to the challenges, issues and limitations

of the direct financing system. The unit root test was carried out using the Augmented Dickey-fuller and Philip-Perron tests in order to confirm the stationarity of the data, then the Johansen co-integration test was used to estimate the long run relationship between the dependent and independent variables in this study. The Vector Error Correction Model (VECM) test was conducted. The result showed that financial intermediation has a long-run relationship with economic growth in Nigeria. Therefore, the study recommended that the regulatory authorities of financial intermediaries such as the Central Bank of Nigeria (CBN), having obtained knowledge from this research work on the impact of financial intermediation on economic growth should encourage and enhance the activities of financial intermediaries. This could be done by reducing the level of the cash-reserve ratio in order to make more funds available for credits to the private sector of the economy.

Anuli and Dennis (2017) investigates the relationship between financial depth, macroeconomic volatility, and economic growth in Nigeria using a general model of error correction and causality model with time series sourced from Central Bank of Nigeria Bulletin 2012. The result shows a long-run impact of financial deepening on exchange rate volatility and economic growth while the error correction term indicates that there is no long-run impact of financial depth on growth volatility. On one hand, there is no short run impact of financial depth on exchange rate and growth volatility though most of the financial deepening variables show signs of dampening the volatility of exchange rate and growth. On the other hand, the error correction result suggests that there is a long-run and short-run impact of financial deepening on economic growth. The causality result showed no causality between financial deepening variable, economic growth, and growth volatility but a unidirectional causality between exchange rate volatility, stock traded, stock market capitalization, and broad money. We therefore, suggest that government and policy makers to embrace policies that will deepen financial services in Nigeria.

Gisanabagabo and Ngalawa (2016) ^[10] empirically investigated the possible co-integration and causal link between financial intermediation and economic growth in Rwanda, using quarterly data spanning 1966Q1 to 2010Q4. A Structural Vector Autoregressive model was used to analyse the short-run dynamics between the variables used. The findings showed evidence of co-integrating relationship between financial intermediation and economic growth. The study observed that a shock to domestic private sector credit accounts for the largest portion of fluctuations in real output growth, while the shock to potential liquidity came second.

Seven and Yetikner (2016) examined the link between banks, stock markets and growth by grouping countries by their income levels and using the system-GMM estimation. They found that; the development of the banking sector is positively correlated with economic growth in low and middle-income countries while the effect is surprisingly negative for high income countries. Secondly, they found that stock markets are positively correlated with growth in middle and high-income countries.

Iwedi, Okey-Nwala, Kenn-Ndubuisi and Adamgbo (2016) ^[14] study examines the long run and short run dynamics between financial intermediation development and economic growth in Nigeria using annual time series data spanning the period 1970-2015 by employing the VAR testing approach, Johansen co-integration testing technique and Engle and granger causality test. The results indicate that there is a presence of long run equilibrium between financial intermediation development indicators and economic growth. This implies that both indicators affect Nigeria economy in the long run while the VAR result shows that both indicators of financial intermediation development exhibit positive and negative signs when lagged once or twice and this relation is low and insignificant especially in the case of credit to private sector to GDP, this coefficient did not show the expected sign. A possible explanation for this is that credits to private sector are not channelled to productive uses but are diverted to other personal uses. The result of causality shows a unidirectional causality running from the financial intermediation development indicators to real GDP and not vice versa. The study concludes that M_2 to GDP exert more influence on the Nigeria economy than the credit to private to GDP. As such it was recommended that policy on financial development should be emphasized in other to propel and stir up economic growth in Nigeria.

Murtala, Siba, Ahmad, Muhammad (2015) ^[17] study empirically investigated the relationship between financial intermediaries and economic growth in Nigeria. Annual time series data covering 1970 to 2013 were used to analyse the long run and short run relationship between the development of financial intermediaries and economic growth along with the direction of causality between the indicators. The results of the unit root test show that the variables are integrated at $I(1)$. Co-integration is being found between the series in the presence of a structural break in 1987, 1992 and 1996. Using bound testing technique for co-integration a stable long-run relationship was found between the indicators of financial intermediaries and the economic growth. Error correction coefficient was statistically significant. It was concluded that insurance premium and value of stock transaction have a positive impact on economic growth in both short runs and long-run. However, bank credit has a negative influence on economic growth. The causality test reveals a bi-directional relationship between bank credit and economic growth while a unidirectional causality moves from economic growth to insurance premium and value of stock transactions. Here remains an important policy implication for the concerned individuals of Nigeria, that is, they have to emphasize in financial development to ignite economic growth.

Iwedi and Igbani (2015) ^[13] study models the relationship between financial intermediation functions of banks and economic growth in Nigeria using data spanning (1970-2014). Credit to private sector (CPS), banks deposit liabilities (DLS), and money supply (MOS) were used as proxy for bank financial intermediation functions while gross domestic product represents economic growth. The econometric tools of the regression analysis and co integration test were used. The analysis revealed that no short run relationship existence between CPS, DLS and

GDP in Nigeria. However, the analysis revealed a long run relationship between bank financial intermediation indicators and gross domestic product in Nigeria.

Olowofeso, Adeleke and Udoji (2015) ^[22] examined the impacts of private sector credit on economic growth in Nigeria using the Gregory and Hansen (1996) co-integration test which accounts for structural breaks and endogeneity problems. The method was applied to quarterly data spanning 2000: Q1 to 2014: Q4, while the fully modified ordinary least squares procedure was employed to estimate the model coefficients. The study found a co-integrating relationship between output and its selected determinants, albeit, with a structural break in 2012Q1. Amongst others, findings from the error correction model confirmed a positive and statistically significant effect of private sector credit on output, while increased prime lending rate was inhibiting growth. In view of the financial intermediation roles of deposit money banks, the paper supports efforts of the Central Bank of Nigeria (CBN) in promoting a sound and real sector-friendly financial system.

Nwanne (2015) ^[18] assessed the implications of cost of financial intermediation on economic growth in Nigeria. The study made use of ordinary least square regression analysis. The co-integration test indicated along-run relationship between cost of financial intermediation and economic growth in Nigeria. The study shows that total loan (TL) has significantly impacted on economic growth in Nigeria, that interest rate has significantly impacted positively on the growth of Nigerian economy and that the level of total deposit over the years has impacted negatively on economic growth in Nigeria. The study pointed out a policy implication that improper management of financial intermediation cost may have caused several macroeconomic consequences in Nigerian economy and the framework for demonstrating its consequence in the real sector of the economy. Hence, the issue of how total loan, interest rate and total deposit link to the level of economic growth is of a great concern in Nigerian economic performance. The study recommended that Nigerian government should ensure that proper control and regulations should guide financial intermediation cost in order to achieve a sound financial system.

Model specification

The model for the study adopted the model used by...

in his study, the real gross domestic product (RGDP) is proxy as dependent variable while. For financial intermediation, two indicators commonly used as proxy are the ratio of broad money supply (M2) to nominal gross domestic product (NGDP) and the ratio of domestic credit to the private sector (CPS) to the nominal gross domestic product (NDGP). The former measures the capability of the banks to mobilize funds for investment purposes, the latter measures the financial opportunities available to firms, most especially new firms.

It is formulated as thus

$$rgdp = (rbms_2, rcps)$$

Where

Rgdp= real gross domestic product (RGDP) is proxy as dependent variable

$rbms_2$ = proxy for the ratio of broad money supply (M₂) to nominal gross domestic product (NGDP)

Rcps= ratio of domestic credit to the private sector

This current study uses the above with modifications of the variables as can be seen;

$$rgdp = (rcas, rcms, rcss, rcqm)$$

RCAS= the ratio of credit to agricultural sector

RCMS= the ratio of credit to manufacturing sector

RCSS= the ratio of credit to service sector

RCQM= the ratio of credit to quarrying and mining sector

The econometric form is given as

$$rgdp_t = \Omega_0 + \Omega_1 rcas_t + \Omega_2 rcms_t + \Omega_3 rcss_t + \Omega_4 rcqm_t + \mu_t$$

RCAS= the ratio of credit to agricultural sector at time t

RCMS= the ratio of credit to manufacturing sector at time t

RCSS= the ratio of credit to service sector at time t

The augmented dickey-fuller test

The time series variables levels and order of integration are determined using ADF unit root test advanced by Dickey and Fuller (1979). This is established on the following model

$$\Delta X_t = \delta_0 + \delta_1 \Delta X_{t-1} + \sum_{i=1}^n Y_i \Delta X_{t-1} + \sum t_i \quad (3)$$

For the trend

$$\Delta X_t = \delta_0 + \delta_1 \Delta X_{t-1} + \delta_2 t + \sum_{i=1}^n Y_i X_{t-1} + \sum t_2 \quad (4)$$

The tau-statistic test the null hypothesis of $\delta_1 = 0$ (i.e. not stationary) against the alternative that $\delta_1 < 0$ (i.e. stationary). If the series is not stationary at level i.e 1 (0) it will be differenced d times to be stationary to determine its order of integration.

Interpretation of empirical results

Table 1: unit root test (ADF)

ADF Test: level				ADF Test: 1 ST DFF		
Variables	Test Stat	5 %	Order	Test Stat	5 %	Order
RGDP	-1.355543	-3.759743	1(0)	-4.557970	-3.828975	1(1)
RCAS	-1.399381	-3.552973	1(0)	-7.552114	-3.552973	1(1)
R	-3.104123	-3.526609	1(0)	-7.845084	-3.529758	1(1)
R	-0.213067	-3.552973	1(0)	-5.030066	-3.552973	1(1)

NS= Not stationary. N = Stationary. 5 %

Source: Authors' computation (E. view 9.0)

From Table 1, the variables are integrated of order 1(1) using the ADF test to decide the time series properties of the model. All variables were found to be stationary at first difference

Table 2: co-integration tests result (trace statistic)

Hypothesized No. of CE(s)	Eigenvalue	TRACE Statistic	0.05 Critical Value	Prob.**
None	0.576262	43.29622	50.24578	0.0307
At most 1*	0.257821	14.96106	35.01090	0.4039
At most 2*	0.143736	5.121634	18.39771	0.9285
At most 3	2.47E-05	0.000815	3.841466	0.9783

Source: Authors' computation (E. view 9.0)

From Table 1I, Johansen co-integration test is used to ascertain the co-integrating link between the variables. The null hypothesis of no co-integration is rejected at 0.05 level for two co-integrating equation. The trace statistic indicate that there is two co-integrating equation among the variables at 0.05 per cent level of significance. Hence, a long run equilibrium link is proven between these variables and the hypothesized essentials for the period under consideration, 1980 - 2021.

Table 3: Cointegration tests result (Max-eigen statistic)

Hypothesized No. of CE(s)	Eigenvalue	TRACE Statistic	0.05 Critical Value	Prob.**
None*	0.576262	28.33516	25.81507	0.0276
At most 1*	0.257821	9.839429	4.25202	0.0125
At most 2	0.143736	5.120820	17.14769	0.8934
At most 3	2.47E-05	0.000815	3.841466	0.9783

Source: Authors' computation (E. view 9.0)

From Table 3, Johansen co-integration test is used to recognize the co-integrating linkage among the variables. The null hypothesis of no co-integration is rejected at 0.05 levels for two co-integrating equation. The Max-Eigen statistic indicates two co-integrating equation between the variables at 5 per cent level of significance. Accordingly, a long run equilibrium linking is acknowledged between these variables and the hypothesized fundamentals for the period under consideration, 1980 - 2021.

Table 4: ECM Parsimonious Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D (RCAS)	2.214167	2.576216	0.859465	0.3977
D (RCAS (-1))	10.88724	1.758730	6.190395	0.0000
D (RCAS (-2))	8.431687	2.545466	3.312434	0.0026
D (RCMS (-1))	19468.99	13224.32	1.472211	0.1525
D (RCSS)	-2.129411	1.981451	-1.074673	0.2920
D (RCSS (-1))	3.049734	1.795633	1.698417	0.1009
ECM (-1)	-0.603324	0.069254	-2.914378	0.0386

Source: Authors' computation (E. view 9.0)

From table 4, the ECM (-1) is negatively signed and designates that the speed of adjustment from the short run dynamics to its long run equilibrium. The ECM (-1) value -0.603324 or 60 per cent and is internally consistent at 5 per cent. The adjusted R^2 is 0.311725 or 31 per cent. The Durbin-Watson test statistic value is 1.745289 and reveals absence of positive first order serial correction in the model.

Structural Stability

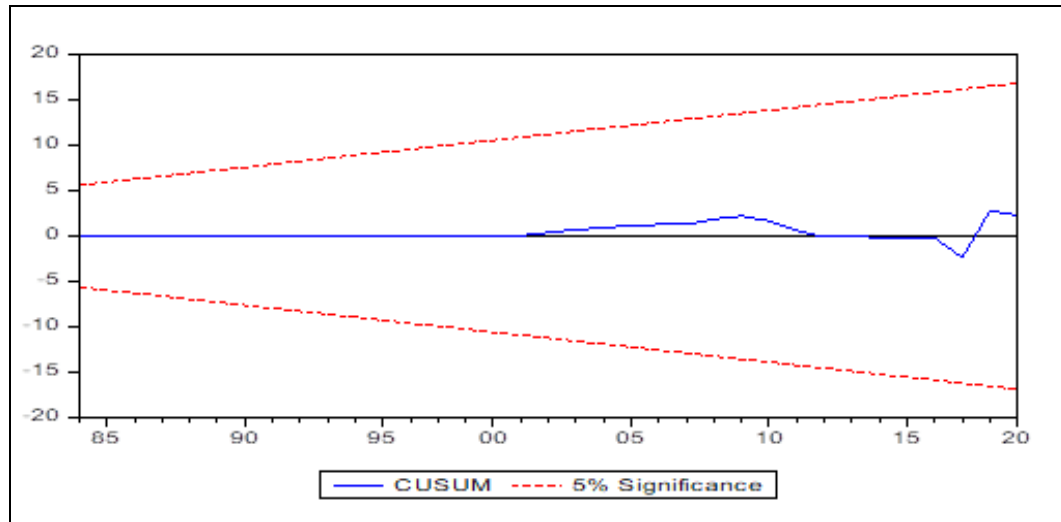


Fig 1: CUSUM Test

The stability test displays that all the variables are stable since the CUSUM test, falls within 5 per cent critical bound for stability as can be seen in fig 1.

The study examined the effect of financial intermediation on economic growth in Nigeria using country annual data obtained from Central Bank of Nigeria from 1980 to 2021. The study used the unit root, the co-integration test and the ECM to analysis the relationship between financial intermediation on economic growth in Nigeria.

The results of the study, hence, discovered a statistically significant impact of financial intermediation activities on the growth of Nigeria's economy. This, consequently, submit that the performance of the financial intermediaries such as banks influences economic growth and found out that credit to the agricultural sector indicates the capacity and efficiency of financial intermediaries in allotting funds to finance economic growth. The result of the unit root test indicated that the stationarity of all the variables has been established. The Johansen co-integration test result exhibited that the long-run relationship exists among the variables and a short-run link was established using the Error Correction Model (ECM).

Conclusion and Recommendations

Conclusively, financial intermediation activities indices in the study explain a greater proportion of changes in economic growth; however, it was found out that some of the indices that have an insignificant effect and unexpected affiliation with economic growth, indicating that the banking intermediation role has not been completely discovered on the Nigerian economy. This might due to the level of inflexible challenges and difficulty in implementing a policy that may enhance the smooth flow of financial intermediation to achieve the desired results.

It is therefore recommended that there should be a reduction in lending rate associated with the size of credit, increased volume of credit to all sectors, sustenance of on-going reforms and evolving measures to boost deposit mobilization which would spur investment and engender growth in the Nigerian economy.

References

1. Adediran O, Ekejiuba PC, Matthew O, Adegboye FB. CO-integration Analysis of Financial Intermediation and Economic Growth in Nigeria. *Journal of Internet Banking and Commerce*,2017;22(8):1-12.
2. Alimi AA, Adeoye MA. Analysis of financial intermediation activities on economic growth in Nigeria-Vector error correction model approach. *International Journal of Finance and Accounting*, 2020;9(1):7-12.
3. Anuli RO, Dennis BE. Financial deepening implications for macro-economic volatility and economic growth in Nigeria, A multivariate approach. *International Journal of Economics, Finance and Management Sciences*,2017;5(1):66-80.
4. Adjei S, Bismar Kosee, Mensah O. Financial Deepening and Economic Growth in Ghana; A Cointegration Analysis. *International Journal of Current Research*,2016;8(1):25736-25743.

5. Bamidele MI, Lucas OE, Olumuyiwa GY. Financial intermediaries and capital market development in Nigeria. College of Business and Economics, 2018;21(10):69-85.
6. Benjamin KM. Financial intermediation and economic growth in the East African Community: A financial index approach. African Journal of Economic Review, 2019;7(2):165-182.
7. Emmanuel IJ, Odum A N. Effect of financial intermediation on economic development of Nigeria. Journal of Economics and Finance, 2019;10(1):23-32.
8. Olumuyiwa GY, Olowofela OE, Yunusa AL, Folamib RA. Effect of financial innovation and economic growth: Evidence from African countries. International Journal of Commerce and Finance, 2021;7(1):130-140.
9. Gromb D, Vayanos D. A model of financial capital liquidity based on intermediary capital. Journal of European Economic Association, 2010;8(2-3):456-466.
10. Gisanabagabo S, Ngalawa H. Financial intermediation and economic growth: Evidence from Rwanda. Journal of Economics and Financial Science, 2016;10(2):253-273.
11. Hao C. Development of financial intermediation and economic growth: The Chinese experience. China Economic Review, 2006;17(4):347-362.
12. Hassan K, Sanchez B, Yu J. Financial development and economic growth: New evidence from panel data, The Quarterly Review of Economics and Finance, 2011;51:88-104.
13. Iwedi M, Igbani DS. Modelling Financial Intermediation Functions of Banks: Theory and Empirical Evidence from Nigeria. Research Journal of Finance and Accounting, 2015;6(18):159-174.
14. Iwedi M, Okey-Nwala PO, Kenn-Ndubuisi JI, Adamgbo SLC. Financial intermediation development and economic growth: Empirical evidence from Nigeria. Business Research Review, 2016;2(2):33-39.
15. Manasseh CO, Okoh IO, Abada FC, Ogbuabor FA, Ogbuabor JE, Alio FC, *et al.* Impact of financial intermediaries on Nigerian economic growth. International Journal of Financial Research, 2021;12(1):26-38.
16. Mehran HA. Financial intermediation and economic growth in Saudi Arabia: An empirical analysis, 1968-2010. Modern Economy, 2012;3(5):626.
17. Murtala Siba, Ahmad Muhammad. An empirical study on the relationship between financial intermediaries and economic growth in Nigeria: A Co. integration and Causality Analysis. Journal of Economics and Finance, 2015;6(4):15-31.
18. Nwanne TFI. Implications of financial intermediation cost on economic growth in Nigeria. International Journal of Small Business and Entrepreneurship Research, 2015;3(5):23-32.
19. Nwonye NG, Anowor OF, Uzomba PC, Abu A, Chikwendu NF, Ojiogu MC, *et al.* Financial intermediation and economic performance in Nigeria: An ARDL Approach. International Journal of Advanced Science and Technology, 2020;29(7):8353-8361.
20. Oba E. Financial intermediaries and economic growth: The Nigerian evidence. *Acta Universitatis anubius. Economica*, 2014, 10(30).
21. Odhiambo N. Financial intermediaries versus financial markets: A South African experience. International Business and Economic Research Journal, 2011;10(2):77-84.
22. Olowofeso EO, Adeleke AO, Udoji AO. Impact of private sector credit on economic growth in Nigeria. CBN Journal of Applied Statistics, 2015;6(2):81-101.
23. Oluwasogo A, Princess EC, Oluwatoyin MA, Folasade AB. Co-integration analysis of financial intermediation and economic growth in Nigeria. Journal of Internet Banking and Commerce, 2017;22(S8):1-12.
24. Seven, Yetikner. Financial intermediation and economic growth in the East African Community: A financial index approach. African Journal of Economic Review, 2019;7(2):165-182.
25. Shittu AI. Financial intermediation and economic growth in Nigeria. British Journal of Arts and Social Sciences, 2012;4(2):164-173.
26. Usman OA, Alimi AA, Onayemi MA. Analysis of bank intermediation activities on economic growth in Nigeria– a Co-integration Approach. Journal of Accounting and Financial Management, 2018;4(6):1-8.