Economic Growth and Financial Deepening – A Case Study of Nigeria

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Abstract: The study examined Economic Growth and Financial Deepening – A Case Study of Nigeria. The study employed the Variance Inflation Factor (VIF) to test the presence of multicollinearity in the model, Augmented Dicky Fuller (ADF) unit root test to check the stationarity of the variables, the Error Correction Mechanism (ECM) was used to estimate the model established, and the Pairwise Granger Causality test to check the existence of causality among the dependent and independent variables. The result of the study of cointegration and equilibrium test of Economic Growth and Financial Deepening shows generally, a long run cointegration between economic growth and financial deepening. However, further study of the relationship shows that money supply shows a significant relationship with economic growth, while credit to private sector shows insignificant relationship with economic growth. Furthermore, there is no significant causal relationship between credit to private sector and gross domestic product, while there is an existence of bi-directional causality between money supply and gross domestic product. The implication of this is that money supply as it can cause economic growth and vice versa, while credit to private sector does not have any impact on economic growth.

1. INTRODUCTION

Financial deepening can be seen as the extension of financial services to all the corners of a country. It is also the growth in financial services that helps more citizens participate in financial transaction.

Financial deepening is a term used often by economic development experts. It refers to the increased provision of financial services with a wider choice of services geared to all levels of society. Financial deepening generally means an increased ratio of money supply to GDP or some price index. By implication, it is the improvement on financial intermediation, financial markets, and financial institutions for improvement in the performance of the economy.

Hassan, Sanchez, and Yu (2011) opined that the major role of financial deepening is reduction in poverty. Onwumere et al (2013) is of the view that a country's financial system encompasses intermediation that involves savings allocation to investments. It includes the optimal use of available resources for economic growth and development. Ndebbio (2004) is of the opinion that the determinant of economic growth and development is the spread of finance and financial services to the people. It is an improvement on the financial assets supply in an economy which otherwise is called financial intermediation.

Boyd and Prescoth (1986) in their review pointed out that what brings about optimum resource allocation is the promotion of the distribution of capital resources for the growth and development of companies which should ordinarily be the role of financial institutions. This on its own brings about economic development which in turn requires more capital allocation that will impact more positively on the continuous growth of the economy.

It is instructive to note that economic growth may be impossible without improvement in the provision of financial services to the whole sectors of an economy. The relationship between financial intermediation and economic growth has been discussed by so many scholars such as Schumpeter (1911), Goldsmith (1969), McKinnon (1973), Shaw (1973).

The extension of financial intermediation deepens the participation of the financial system in the allocation of financial resources for economic growth and development. It involves taking funds from the surplus unit and allocating same to the deficit unit. It was Onwumere et al (2013) that said that the efficiency of a financial system whose role includes but not limited to intermediation can only be realized only when there is a promotion of the best resources allocation formula for development. Financial deepening of any economy is determined by the state of health of the financial sector, whose primary responsibility is credit creation. When we talk of financial deepening, we refer to the capacity of the financial system in fostering economic growth. The implication of

Economic Growth and Financial Deepening – A Case Study of Nigeria

this is that when there are several intermediation activities in an economy, there is every likelihood of more efficient allocation of funds.

There is no way an economy will do well without adequate funding and even allocation of resources from the financial institutions. This research therefore is set out to determine whether there exists long run relationships between financial deepening indices such as money supply, and credit to the private sector when compared to economic growth.

2. LITERATURE REVIEW
2.1 Theoretical Framework

McKinnon (1973); Shaw(1973); Levine(2001) who are renowned finance/economics scholars by several empirical studies, show that the Financial Sector is the chief support for the Economic growth of any economy. Solow (1957) in his paper titled ''A Contribution to the Theory of Economic Growth'' observed that economic growth is exists only on the accumulation of capital which implies the creation of enough savings which enables an increase in the allocation of funds for investment purposes. There are so many other hypotheses behind financial development and economic growth which includes but not limited to Demand-Following and Supply-Leading Hypothesis

2.1.1 Demand-Following Hypothesis

Robinson (1952), Kuznets (1955), Jung (1986) Lucas (1988), and Ireland (1994) are the proponents of this hypothesis. They are of the view that it is economic growth that stimulates the development of financial markets. This means that it is economic growth that creates the demand for financial products. By implication, amount spent on the development of financial market may lead to waste of resources. This hypothesis suggests that it is growth in the economy that brings about the increase in the demand for financial services which will in turn bring about more financial development. Some study in this direction discovered that economic growth causes financial development. Financial deepening is seen as a product of growth of the real sector.

2.1.2 Supply-Leading Hypothesis

This hypothesis proposes that that economic growth is caused by Financial deepening. Dermirguc-Kunt, Ross, Asli,Levine (2008) in the review of various theoretical studies putting into consideration the methods, discovered that financial development brings about economic growth. This study is in line with the Supply-Leading hypothesis which opines that the development of financial markets culminates in growth of savings and investment which in turn improves the accumulation of capital. The hypothesis is of the view that a well-structured and well-managed financial institution will encourage an efficient economy which creates savings mobilization, enhanced capital accumulation, efficient transfer of funds from surplus to deficit units, money creation and encourage the response of competent entrepreneurs.

2.2 Empirical Literature

There have been so many studies on financial deepening and economic growth in Nigeria and other parts of the world. However, we will review a few of them here.

Okoli (2010) in his study of the relationship between financial deepening and stock market returns and volatility in the Nigerian Stock Market, using GARCH (1,1) model, it was discovered that financial deepening as a ratio of market capitalization compared to GDP (Economic Growth) indicates a reduction in the stock market risk.

Darrat (1999) did a study of the role of financial deepening in economic growth in the middle eastern countries (Saudi Arabia, Turkey, and United Arab Emirate), using the granger causality test and error correction model, observed that financial deepening granger-causes economic growth, however the enormity of the evidence is different in the various countries under the study.

Onwumere, Onodugo and Ibe (2012) investigated the impact of financial deepening on economic growth in Nigeria, using broad money velocity, money stock diversification, economic volatility, market capitalization, and market liquidity as proxy for financial deepening, while GDP proxied economic growth. The study revealed that broad money velocity and market liquidity are significant to economic growth, while the other independent variables were not, hence the recommendation a deliberate policy on liquidity expansion, savings mobilization, and increase in money supply to enhance economic growth.

The study of Nzotta and Okereke (2009) made estimations of financial deepening in Nigeria from 1986 to 2007 using two-stage least square regression technique analysis and trend analytical technique in its study. The study reveals that ratio of cheques to GDP, ratio of deposit money banks to GDP, financial savings ratio and interest rate are significant in discovering financial deepening, though the study observed that the level of financial deepening is low in Nigeria.

Similarly, Igwe, Ede & Ukpere (2014) examined financial deepening and economic growth in Nigeria (1981-2012): A managerial Economic Perspective. This study employed the Augmented Dickey-Fuller (ADF), alongside Engle-Granger Cointegration and Error Correction Models to test the variables. The result shows that the credit to private sector was not significant to economic growth, while money supply was positive and weakly significant in the determination of economic growth, as such the conclusion was that

financial deepening does not have the desired significant impact on economic growth, hence a suggestion for improved credit allocation to enhance economic growth.

Ohiwofasa & Aiyedogbon (2013), studied Financial Deepening and Economic Growth in Nigeria: An Empirical Growth in Nigeria (1986 – 2011). This study used the Vector Autoregressive (VAR) technique to review the relationship between financial deepening and economic growth. It was observed that there was co-integration and long run relationship amongst the variables. A one-year lag of economic growth (GDP), gross national savings as a ratio of GDP (lag 1) and lag 1 of exchange rate have significant positive impact on the present economic growth. The Gross Capital Formation had a negative and significant relationship with economic growth. They recommended the stimulation of savings to have more funds in the financial system for intermediation. They also suggested a reasonable rate of lending as an incentive for investment.

In the study of Levine (1991) his model exposed the influence of stock markets on economic growth through improvement of the organization's efficiency. Agu and Chukwu (2009) in their study used the Johansen – Juselius and Toda – Yamamoto model to investigate economic growth in Nigeria from 1970-2015. The cointegration analysis revealed that there was a cointegration equation which means that there is a long-run relationship between economic growth and financial deepening. The Toda-Yamamoto causality test supports both demand-following and supply-leading hypothesis.

Similarly, Nazim (2005) investigated the role of banking sector deregulation on capital accumulation which leads to economic growth and development. Panel data was used on a 35-year information It was discovered in this study that using a dynamic generalized method on five Latin American countries testing the country-specific effects. The findings revealed a significant and positive relationship between the variables which implies that financial deepening plays an important role in the security of investment for economic development.

Adediran, Oduntan and Matthew (2017) in their study of development and inclusive growth, discovered that a long-run relationship between financial development and inclusive growth. The study employed the ARDL technique, using domestic credit to GDP as proxy for financial development. However, the study left out other variables that can be used as proxy for financial development like credit to private sector.

Okafor, Bowale, Onabote, Afolabi, & Ejemeyovwi (2021), studied the Financial Deepening and Economic Growth in Nigeria: A Johannsen and Error Correction Model Technique, employing real gross domestic product as proxy for GDP and market capitalization, credit to private sector, lending rates, labour participation and gross capital formation as proxies for financial deepening. The study used the cointegration technique and observed the existence of a long-run relationship among the variables. The Pairwise Granger Causality test indicated a bi-directional relationship between economic growth and financial deepening. The implication of the cointegration result is that financial deepening impacts on economic growth and vice-versa. This was confirmed by the causality test which showed that economic growth and financial deepening can cause each other.

Kawode (2015) investigated the impact of capital market on industrial growth in Nigeria. The result of the study indicated that government securities and all share indexes influence industrial growth significantly. In the same vein Igwe, Edeh & Ukpere (2014) examined the impact of financial deepening on economic growth from 1981 to 2012, employing ADF, and ECM. Broad Money Supply to GDP and Credit to the Private Sector to GDP were used as independent variables while GDP was used as an dependent variable. The result of the study shows that money supply significantly weak and positive, while credit to private sector is not significant and negative. This result shows that financial deepening does not influence economic growth. In their study, Andabai & Igbodika (2015) investigated the causal relationship between financial deepening and the performance of Nigerian economy with a data ranging from 1990 to 2013. The Engel and Granger model was used, and the result revealed that a causal relationship exists between financial deepening and performance of the Nigerian economy.

Nwanna & Chinwudu (2016) studied financial deepening and economic growth in Nigeria (1985 to 2014) using the ordinary least square method of analysis. The independent variables of this study are money supply, market capitalization, private sector credit and financial savings on growth (financial deepening proxies), while the gross domestic product was used as the dependent variable (economic growth proxy). The result of the study revealed that financial deepening proxies have significant and positive relationship with the economic growth proxies.

Mesagan, Olunkwa & Yusuf (2018) employed classical least square regression method in investigating the relationship between financial sector development and manufacturing performance in Nigeria. The study revealed that credit to private sector and money supply does not have significant but positive impact on manufacturing capacity utilization and manufacturing output.

Luqman (2014) did a study of Pakistan in respect of financial deepening and economic growth employing vector error correction model. The result of the study showed that foreign direct investment, inflation, credit to private sector and economic growth

maintains a long-run relationship. However, the study further indicated that there is a relative low level of financial deepening in Pakistan.

Similarly, Alrabadi and Kharabsheh (2016) examined the dynamic relationship between financial deepening and economic growth in Jordan (1992 – 20140). Vector Auto Regressive Regression was used alongside Granger causality and Johansen-Juselius cointegration employing quarterly data. The outcome shows that there is significant long-run relationship between financial deepening and economic growth, while the Granger Causality test reveals a bi-directional causality between financial deepening and economic growth, when financial deepening is proxied by credit to private sector. However, when money supply is used as a proxy for financial deepening, it showed that economic growth causes financial deepening only.

The study of Okafor V, Bowale E, Onabote A, & Afolabi J (2021), on Financial Deepening and Economic Growth in Nigeria: A Johannsen and Error Correction Model Technique, revealed that financial deepening impacts positively and significantly.

2.3 Research Gap

Financial deepening involves all services rendered by financial institutions. Extending financial services should not just be for the fun of it but should be geared towards economic growth and development of a country. A review of the previous studies on this subject shows divergent views. While some scholars of finance argue that financial deepening impacts on economic growth, some are of the view that it does not. Similarly, previous studies did a general analysis of the dependent variables, thereby having a general result. This study is focused on harmonizing previous positions or authenticating some established positions of the different schools of thought and at the same time do specific analyses of the dependent variables to pin down the variables responsible for what in the study.

3. METHODOLOGY

3.1 Data Collection

This study made use of data from Central Bank of Nigeria 2020 Statistical bulletin for a period of forty years (1981-2020) giving us a total number of forty observations.

3.2 Model Specification.

The regression model adopted for this study is as follows:

$Y = f(X)$………………………………(Basic Model)

$GDP = f(MS_2),CPS.$

$GDP = \beta_0 + \beta_1 MS_2 + \beta_2 CPS + e -$

Where;

GDP = Gross Domestic Product at Market Prices

MS_2 = Ratio of Money supply to GDP

CPS = Ratio of Credit to Private Sector to GDP

β_0 = Regression Constant term and, β_1, β_2, = Regression coefficients of the variations to determine the volatility of Money Supply and Credit to Private Sector respectively.

3.3 Estimation Techniques

Descriptive Statistics is employed in this study to know the distributive features of the data, while Serial correlation, Heteroscedasticity, Ramsey Reset test, Recursive Estimates of the CUSUM (Cumulative Sum Control) Test are used for residual diagnostic and stability tests. To test the presence of multicollinearity in the model, the Variance Inflation Factor (VIF) was used. Augmented Dicky Fuller (ADF) unit root test was employed to check the stationarity of the variables. Error Correction Mechanism (ECM) was used to estimate the model established. To ascertain the full causality implications of the variables in the model, Johansen cointegration was employed.

3.3.1 Variables

The variables used in the models are the independent variables (MS_2 and CPS) and dependent variables (GDP); the former is a representative of the output or effects while the latter represents the inputs or causes. Since the models are statistical the dependent variable is studied to see if and how much it varies as the independent variable varies.

3.3.2 A priori Expectation

It is expected that β_1 & $\beta_2 > 0$.

1. β_1 & β_2 are the coefficients of money supply and credit to private sector respectively. It is expected that the more the money supply and credit extension in the system, the more the economy expands, hence growth in the economy.

Economic Growth and Financial Deepening – A Case Study of Nigeria

4. ANALYSIS AND RESULTS

4.1 Trend Analysis of Data

This section starts with trend analysis of data. The time series plot of the data is shown in figure I below. The figures below showed that both MS_2/GDP and CPS/GDP trended upward with periods of peak and trough except GDP that trended smoothly upwards showing non-stationarity of the variables as expected.
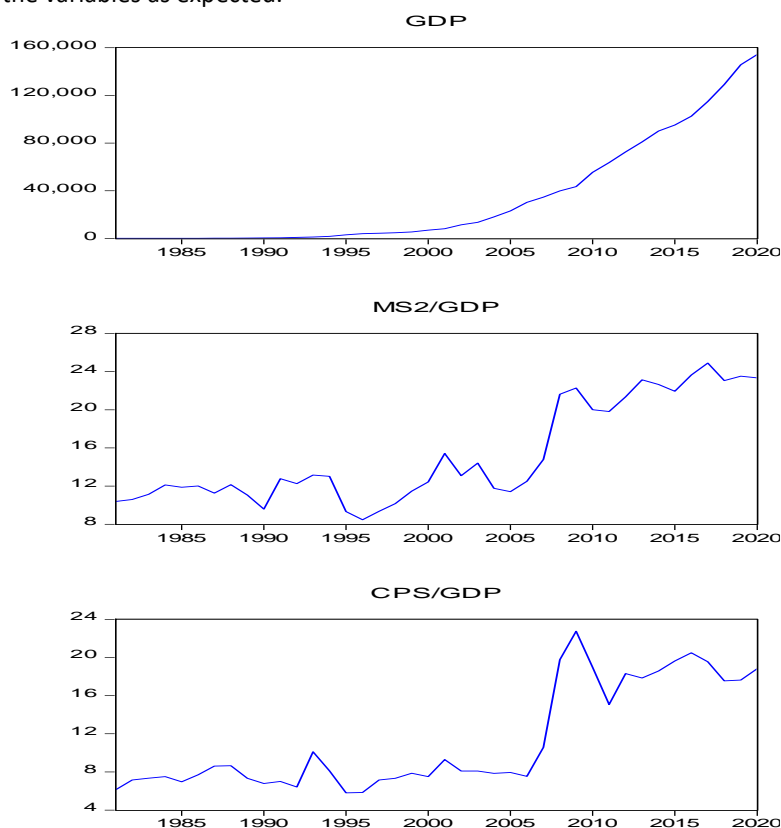

Figure 1: Trend Analysis of GDP, MS₂/GDP and CPS/GDP

4.2: Description of Variables

Table 1 below shows the distributional characteristics of all the data. As seen in table 1, the standard deviation of GDP, MS_2/GDP and CPS/GDP are 45875.59, 5.284174 and 5.477719 respectively, indicating high standard deviation. MS_2/GDP and CPS/GDP showed Kurtosis lower than normal suggesting platykurtic distributions while GDP recorded Kurtosis greater than 3, which is excess from the normal, an indication of a leptokurtic distribution. GDP, MS_2/GDP, and CPS/GDP have respective skewness coefficients of 1.265728, 0.614716 and 0.766911 suggesting positive skewed distribution. GDP and CPS/GDP recorded p-values of Jarque-Bera that are significant at 5%, evidence of abnormal distribution, while MS_2/GDP is insignificant at 5%, suggesting normal distribution.

Table 1: Descriptive Statistics for GDP, MS₂/GDP and CPS/GDP

	GDP	MS2_GDP	CPS_GDP
Mean	34087.79	15.23321	11.29330
Median	7648.622	12.64095	8.089291
Maximum	154252.3	24.89526	22.75484
Minimum	139.3105	8.464230	5.806165
Std. Dev.	45875.59	5.284174	5.477719
Skewness	1.265728	0.614716	0.766911
Kurtosis	3.351861	1.731911	1.849357
Jarque-Bera	10.88680	5.199253	6.127652
Probability	0.004325	0.074301	0.046709
Sum	1363512.	609.3285	451.7318
Sum Sq. Dev.	8.21E+10	1088.977	1170.211
Observations	40	40	40

Economic Growth and Financial Deepening – A Case Study of Nigeria

4.3: Global Utility Examination and Determination

It is important in macroeconomic analysis to ascertain the global usefulness of the specified models. This gives a researcher confidence to draw inferences that can be used for policy making. To do this end, the Ordinary Least Square (OLS) was used in this study.

4.3.1 Ordinary Least Square (OLS) Method

The result of the Ordinary Least Square (OLS) estimate is seen below in Table 2. It revealed that Durbin-Watson statistics is 0.711990, suggesting that autocorrelation is found. This is not good for further analysis and policy formulation, therefore ignored and subjected to stationarity test to choose an appropriate method for model estimation.

Table 2: Ordinary Least Square (OLS) method

Dependent Variable: GDP				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MS2_GDP	10947.96	2294.169	4.772081	0.0000
CPS_GDP	-3130.108	2213.109	-1.414348	0.1656
C	-97335.60	13068.10	-7.448334	0.0000
R-squared	0.820602	Mean dependent var		34087.79
Adjusted R-squared	0.810905	S.D. dependent var		45875.59
S.E. of regression	19949.03	Akaike info criterion		22.71179
Sum squared resid	1.47E+10	Schwarz criterion		22.83845
Log likelihood	-451.2357	Hannan-Quinn criter.		22.75759
F-statistic	84.62274	Durbin-Watson stat		0.711990
Prob(F-statistic)	0.000000			

4.4 Stationarity Properties of the Variables

In this study, the researcher employed Augmented Dickey Fuller (ADF) unit root test as shown below in table 3. As seen from the table 3 below, the entire variables did not attain stationarity at level, suggesting non-rejection of the null hypotheses that all the variables have unit root at level. They all achieved stationarity at first difference or differenced once to be stationary, indicating rejection of null hypotheses that the entire variable has unit root at first difference. Having confirmed that all the variables are integrated at order one or 1(1), then the researcher proceeded to co-integration test.

Table 3: ADF Unit Root Test at Level and First differenced Data

Variables	Maxlag	Level	1st Difference	Remarks
		ADF Statistics/P-value	ADF Statistics/ P-value	
LnGPD	9	-1.318810 (0.6112)	-3.334832 (0.0201)	@1(1)
LNMS2/GDP		-0.960905 (0.7575)	-5.771701 (0.0000)	@1(1)
LNCPS/GDP	9	-1.120155 (0.6982)	-5.393954 (0.0001)	@1(1)

4.5 Co-integration and Equilibrium Test

This is important to ascertain if there exist equilibrium relationships between the variables; GDP, MS2/GDP and CPS/GDP. Table 4 below shows that unrestricted rank tests (Trace and Maximum Eigenvalue) recorded two cointegration equations each at 5% level of significance at ''*none'' and, ''At most 2'' respectively. This is sufficient evidence to show that long run relationship exists between the dependent variable economic growth proxied by GDP and independent variables; financial deepening variables (MS2/GDP and CPS/GDP). By implication, there is a long run relationship between economic growth and financial deepening in Nigeria.

Table 4: Johansen Cointegration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.522951	38.34433	29.79707	0.0041

At most 1	0.159601	11.69941	15.49471	0.1719
At most 2 *	0.140242	5.439774	3.841466	0.0197
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.522951	26.64492	21.13162	0.0076
At most 1	0.159601	6.259637	14.26460	0.5801
At most 2 *	0.140242	5.439774	3.841466	0.0197

4.6 Estimation of Relationship between Economic Growth and Financial Deepening

This study, which employed the Error Correction Mechanism Test, revealed as follows in table 5; that MS_2/GDP significantly relate to economic growth, while CPS/GDP insignificantly relate to economic growth. Adjusted R-squared is 9.2%, suggesting that financial deepening only explain 9.2 % of the variables in the total variation of the economy proxied by GDP. This result is reliable for further investigation because problem of autocorrelation is totally negated since Durbin-Watson (DW) stat is 2.482210 in this study.

Table 5: Error Correction Mechanism Test

Dependent Variable: D(LNGDP)				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDP(-1))	0.923495	0.072749	12.69430	0.0000
D(LNMS2_GDP(-1))	0.434299	0.168341	2.579874	0.0148
D(LNMS2_GDP(-2))	-0.210747	0.165476	-1.273584	0.2123
D(LNCPS_GDP(-1))	-0.084869	0.117713	-0.720980	0.4763
D(LNCPS_GDP(-2))	0.189896	0.120672	1.573649	0.1257
ECM(-1)	-0.017698	0.011118	-1.591907	0.1216
R-squared	0.447339	Mean dependent var		0.185919
Adjusted R-squared	0.358200	S.D. dependent var		0.115243
S.E. of regression	0.092324	Akaike info criterion		-1.779632
Sum squared resid	0.264235	Schwarz criterion		-1.518402
Log likelihood	38.92320	Hannan-Quinn criter.		-1.687536
Durbin-Watson stat	2.482210			

4.7. Causal Relationship between GDP, MS_2/GDP and CPS/GDP

In macroeconomic analysis, causality test is a common tool used to check if causality exists or otherwise between any two or more variables. From the table 6 below, MS_2/GDP granger causes GDP, also GDP granger causes MS_2/GDP, suggesting bidirectional causality between MS_2/GDP and GDP. That means causality flows from MS_2/GDP to GDP with feedback effect. Again, CPS/GDP does not granger causes GDP, as well GDP does not granger cause CPS/GDP. These show no causality found between CPS/GDP and GDP.

Table 6: Pairwise Granger Causality Test Results

Null Hypothesis:	Obs	F-Statistic	Prob.
LNMS2_GDP does not Granger Cause LNGDP	38	3.47568	0.0427
LNGDP does not Granger Cause LNMS2_GDP		4.17889	0.0241
LNCPS_GDP does not Granger Cause LNGDP	38	0.22903	0.7966
LNGDP does not Granger Cause LNCPS_GDP		3.16212	0.0554

4.8. Residual Diagnostic and Stability Tests

For diagnostic and stability tests, Normality test, Serial correlation test, Ramsey Reset test, Recursive Estimates of the CUSUM (Cumulative Sum Control) Test and Variance Inflation Factor (VIF) were used as seen below;

Table 7: Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.483784	Prob. F(2,29)	0.2435
Obs*R-squared	3.434731	Prob. Chi-Square(2)	0.1795

Serial correlation test on table 7 above revealed that F-statistic coefficient is 1.483784 with p-value of 0.2435 and Obs*R-squared has coefficient of 3.434731 with p-value of 0.1795. The respective p-values are greater than the 5% level of significance, suggesting absence of serial correlation in the model used in this study.

Table 8: Ramsey Reset test

	Value	df	Probability	
t-statistic	0.107487	30	0.9151	
F-statistic	0.011554	(1, 30)	0.9151	
Likelihood ratio	0.014247	1	0.9050	

Table 8 above is The Ramsey Reset test conducted to ascertain the stability of the regression model. The result showed the respective p-values for t-statistic, F-statistic and Likelihood ratio are 0.9151, 0.9151 and 0.9050; greater than 5% significance or benchmark. This revealed that the model is stable.
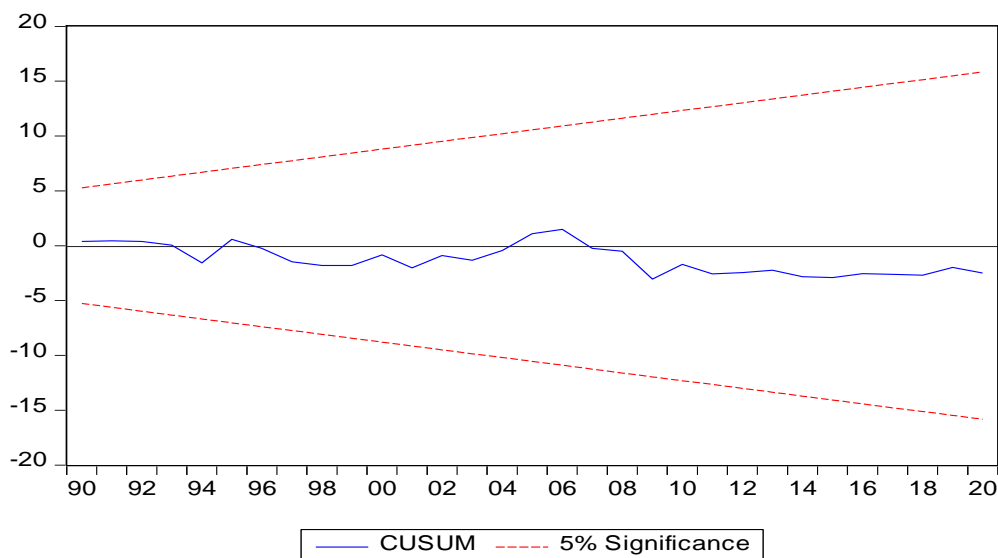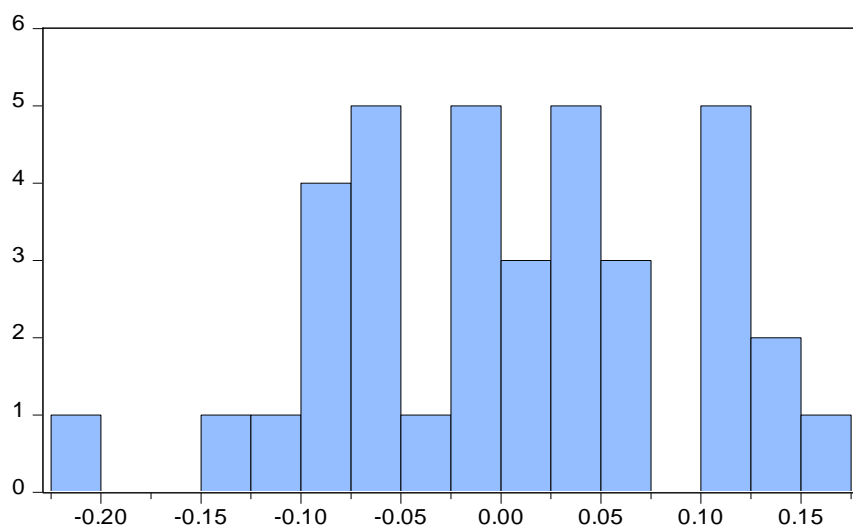

Figure 2: Recursive Estimates of the CUSUM (Cumulative Sum Control) Test

Recursive Estimates of the CUSUM in figure 2 above revealed that the blue line falls between the two red lines showing the 5% significance level boundaries. This confirmed that the model is stable

Table 9: Normal Distribution Test

Series: Residuals	
Sample 1984 2020	
Observations 37	
Mean	0.007614
Median	0.010893
Maximum	0.151809
Minimum	-0.200062
Std. Dev.	0.085325
Skewness	-0.138456
Kurtosis	2.427274
Jarque-Bera	0.623905
Probability	0.732016

Economic Growth and Financial Deepening – A Case Study of Nigeria

Histogram normality in table 9 showed that the coefficient of Jarque-Bera is 0.623905 with 0.732016; the p-value is more than 5% level of significance established in this study. This discloses that the data set is normally distributed

4.9 Discussion of Findings

To come up with inferences, this study employed the Variance Inflation Factor (VIF) to test the presence of multicollinearity in the model, Augmented Dicky Fuller (ADF) unit root test to check the stationarity of the variables, the Error Correction Mechanism (ECM) was used to estimate the model established, and the Pairwise Granger Causality test to check the existence of causality among the dependent and independent variables. To ascertain the full causality implications of the variables in the model, Johansen cointegration was employed. The result of the study of cointegration and equilibrium test of Economic Growth and Financial Deepening shows generally, a long run cointegration between economic growth and financial deepening. However, further study of the relationship shows that money supply shows a significant relationship with economic growth, while credit to private sector shows insignificant relationship with economic growth. Furthermore, there is no significant causal relationship between credit to private sector and gross domestic product, while there is an existence of bi-directional causality between money supply and gross domestic product. The implication of this is that money supply as it can cause economic growth and vice versa, while credit to private sector does not have any impact on economic growth. The result of this study is in line with that of Edeh &Ukpere(2014), and Nwanna & Chinwudu(2016) et al. Howevever, it is in contrast with the findings of Mesagan, Olunkwa & Yusuf (2018) and others.

5. SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

This study examined the relationship between Economic Growth and Financial Deepening – A case study of Nigeria. Analyses on this study was done as reported in chapter four above and results obtained. The result shows that Money supply which is one of the variables of financial deepening used in the study influences economic growth and can at the same time cause economic growth. Also economic growth can also cause financial deepening. It therefore suggests that as money supply increases, economic growth increases and vice versa and this validates one of the a priori expectations. On the other hand, credit to private sector does not have any influence on economic growth, neither does it cause economic growth and vice versa.

5.2 Conclusion

As a result of the findings, the cointegration analysis showed that there is a cointegration equation which means that there is a long-run relationship between economic growth and financial deepening. A further probe indicated that the relationship is between money supply and economic growth, while the credit to private sector has no relationship with economic growth. This was confirmed by the result of the causality test which shows a bi-directional causality between economic growth and money supply.

5.3 Recommendations

Consequent upon the result of the study the following recommendations are are made:
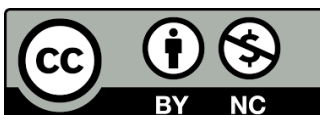
1. Monetary authorities should make sound policies that will guide effective and efficient money supply so as to impact more on economic growth.

2. There should be effective monitoring of the policies for efficiency

3. More economic variables that impact on economic growth should be engaged to make room for increase in financial deepening since the study revealed that economic growth causes financial deepening.

4. Financial institutions should review their credit policies so as to allocate more facilities to the private sector.

5. A review of the interest rate policy by monetary authorities to attract more applications for credit.

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Economic Growth and Financial Deepening – A Case Study of Nigeria

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