# Financial Inclusion and Inclusive Growth in Nigeria Between 1981 and 2017

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### Abstract

The paper examines the long-run relationship between financial inclusion and growth in Nigeria for the period 1981-2017. Using data from the Central Bank of Nigeria statistical bulletin 2018 and the World Development Indicator 2018, the study applies econometrics to examine effects of credit to private sector, money supply, Interest rate and Government Expenditure on Per capita Gross Domestic Product. The results of the ARDL show that financial inclusion increases inclusive growth and makes easy access to loan for investment. The study also validates the finance led growth hypothesis and establishes that finance causes growth in Nigeria. Given the findings, policy makers need to focus more on long run financial policies that can enhance the effectiveness of the financial sector (both money and capital markets) in promoting growth. Additionally, the government should work to provide an enabling environment and create awareness to enhance public trust in the country's financial system.

Keywords: financial inclusion, inclusive growth, ARDL

JEL Classification: 040

#### 1. Introduction

### 1.1 Background

Financial inclusion refers to a system that ensures the ease of access, availability and usage of the formal financial system by all economic agents in an economy. It is the delivery of financial services, including banking services and credit, at an affordable cost to even the vast sections of the disadvantaged and low-income groups who often tend to be excluded. The various financial services include access to savings, loans, insurance, payments and remittance facilities offered by the formal financial system. The International Monetary Fund (IMF) defined Financial Inclusion as the organized efforts aiming at the availability of financial services for everyone particularly for the poor and deprived.

The primary focus of financial inclusion is to extend financial services to the poor and underprivileged, to enables individuals to participate in the growth process by enhancing their access to economic opportunities and broadening their choices, which ultimately makes them more productive and efficient economic agents, thereby enhancing the inclusive growth in a country. The financial inclusion target in Nigeria is to bring the excluded areas into the banking system, expand scope, reduce banking stress and increase credit accessibility.

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Martinez (2011) identified financial access as an important policy tool employed by the government in stimulating growth given that financial access facilitates efficient allocation of productive resources, thereby reducing the cost of capital. An inclusive financial system helps the socially omitted individuals to integrate into the economy by creating opportunities for everyone (World Bank, 2008). Access to financial services contributes to promoting credit creation and enhancing capital accumulation, thereby raising the level of investment and economic activity. Sampoorn (2014) gave six pillars of financial inclusion which includes the following: universal access to banking facilities, financial Literacy programme, provision of basic banking accounts, micro credit availability and creation of credit guarantee fund for coverage of defaults in such accounts, micro Insurance, and unorganized sector pension schemes.

Inclusive growth according to Klasen (2010) allows participation and contribution by all members of society, with particular emphasis on the ability of the poor and disadvantaged to participate in growth (the "non-discriminatory" aspect of growth). Asian Development Bank, (2013) defines inclusive growth beyond the broad-based growth. That is, a type of growth that not only creates new economic opportunities but also ensures equal access to the opportunities created for all segments of the society, particularly the poor. The World Bank (2009) defines inclusive growth as the pace and pattern of economic growth which are interlinked and assessed together, with the aim of reducing absolute poverty. This definition adopts a longterm perspective and it implies a direct link between macro and micro determinants of growth. Thus, inclusive economic growth is not only about expanding national economies but also about ensuring that the most vulnerable people of societies are reached. Mckinley (2010) posits that indicators for inclusive growth should include the following areas.

- a) Growth, productive employment, and economic infrastructure;
- b) income poverty and equity, including gender equity;
- c) human capabilities; and
- d) social protection.

## 1.2 Need for Inclusive Growth

Nigeria needs inclusive growth to attain rapid and sustained growth, which would translate into economic development. Inclusive growth is necessary for sustainable development and equitable distribution of wealth and prosperity. Inclusive growth will spur developments in several areas, for example, rapid growth in the rural economy, sustainable urban growth, infrastructure development, reforms in education, health, growth in the agricultural sector, and a healthy public-private partnership. Hence, the intent to secure inclusivity in Nigeria will stir growth in all sectors of the economy, whereas good governance will ensure that it is sustained. The main thrust areas for promoting inclusive growth are the following:

- Removal of poverty and unemployment
- Removal of income inequalities
- ✤ Agricultural Development

- ✤ Good health care delivery
- ✤ Qualitative educational system
- Protecting environment

However, to attaining the objectives of inclusive growth an economy needs resources, whereby financial inclusion plays a part in the mobilization and generation of the resources. Financial inclusion, through appropriate financial services, can solve the problem of resource availability, mobilization and allocation particularly for those who do not have any access to such resources (Odeleye & Olusoji, 2018).

Financial inclusion has continued to attract global attention in development finance and economics, mainly due to its capacity to drive inclusive growth and sustainability of an economy. As Park and Mylenco (2015) have posited, it is"...an inclusive financial system expands access to financial services to poor households; [and] access to finance enables the poor to protect themselves against adverse shocks and to balance their consumption and thus improve their welfare"

In Nigeria, a bulk of the money in the economy stays outside the banking system, which is a cause for concern for several government agencies and policy makers. The Central Bank of Nigeria has expressed worry that a large number of Nigerians are financially excluded and are without bank accounts. In 2010, the Apex Bank set a target to reduce the number of financially excluded Nigerians from 46% in 2010 to 20% in 2020, but only succeeded in reducing the number to 41% as of 2018, which was only a five percent reduction in eight years (Okonji, 2018).

Nigeria has a higher proportion of financially excluded adults at 46.3%, compared with 26.0% in South Africa and 32.7% in Kenya. A survey conducted by the Enhancing Financial Innovation and Access (EFInA, 2010)had indicated that only 30.7 million out of the 85 million Nigerians above the age of eighteen had access to formal financial services, leaving over 54 million either served by informal institutions or totally unbanked. In addition, the male population had more access to finance than the female population; whereby 37% of the male population was formally banked, 6% had other formal access, 16% had informal access and 41% were financially excluded. For the female population, only 23% were formally banked, 6% had other formal access, 19% had informal access and 52% were financially excluded. (EFInA, 2010). The rate of exclusion was worse in the rural areas than in the urban areas. The North had the highest percentage of unbanked population and the lowest number of bank branches, which was as low as 0.99 to 1 branch per 100,000 customers compared with as high as over 5 branches per 100,000 in some parts of The South (EFInA, 2010). Following the Maya Declaration of 2011 on financial Inclusion for the unbanked, financial inclusion became a focus for policy makers and researchers alike because of its link to economic growth (Babajide et al. 2015). Thus, over time the central bank has established policies to enhance financial inclusion for the Nigerian economy, as an instrument for promoting inclusive growth.

# 2. Literature Review

## 2.1 Conceptual Review

Financial inclusion is being promoted worldwide due to its role in addressing global poverty, income inequality, underdevelopment and welfare (Kingsley (2013). Triki and Faye (2013), regard financial inclusion as a vital means of ascertaining that economic growth performance is inclusive, through its ability to increase household saving, enhance access to credit, and provide capital for investment. Hence, financial inclusion broadens the resource base of the financial system by developing a culture of savings among a large segment of the rural population and plays a role in the process of economic development (Joseph and Varghese, 2014).

Hariharan and Marktanner (2012) stated that inadequate financial inclusion is a multifaceted socioeconomic phenomenon that results from various factors, such as geography, culture, history, religion, socioeconomic inequality, structure of the economy and economic policy. Hence, they view financial inclusion as a strategy that is aimed at increasing the number of people who have access to formal financial services in the society. Khan (2011), stated that proper access to basic financial services would lead to increased economic activities and creation of jobs for rural households, as more people get engaged in economic activities, the disposable income of the rural household would rise, which would lead to increased savings and a robust deposit base for the bank. This multiplier effect will result in economic growth, which may entail inclusive growth. Sanusi (2011) ascribed the rise in poverty level in Nigeria to the challenges of financial inclusion. He argues that achieving a desired level of financial inclusion in Nigeria means empowering 70 per cent of the population living below the poverty level, and this would boost growth and development by generating multiple economic activities causing growth in national output and eventually alleviating poverty.

According to Subbarao (2009), financial inclusion is an important condition for a sustainable and equitable growth in that it provides a medium for bringing the savings of the poor into the formal financial intermediation system and channels them to investment. He argues further that the large number of low-cost deposits would offer banks an opportunity to reduce their dependence on bulk deposits and help them to manage both liquidity risks and asset-liability imbalances more efficiently. According to him, very few economies move from an agrarian system to a post-industrial modern society without a broad-based financial inclusion strategy. Financial Inclusion will make it possible for governments to make payments, such as credit guarantee funds, subsidies and wages, directly to the bank accounts of beneficiaries through electronic transfer channels. This will minimize transaction costs, pilferages, leakages and subsequently eliminate corruption from the society.

## 2.2 Theoretical Review

## Finance-Led Growth Hypothesis

Empirical literature on the causal relationship between financial development and economic growth in developed and developing countries stem from the "finance-led

growth hypothesis" or the supply-leading responses, which posits that the development of the financial sector drives the real sector of the economy and causes the economy to grow. Studies on financial development have identified four distinct areas as the driving force of economic growth. The main one is the provision of a reliable low cost means of payment to all, particularly the low-income groups. The second is the role that financial intermediation plays in increasing the volume of transactions and allocation of resources from the surplus units to the deficit units of the economy and in the process improve the distribution of resources (Odeniran and Udeaja, 2010). The third is the risk management effect, through curtailing the liquidity risks, which enables the financing of risky but more productive investments and innovations within the economy (Greenwood and Jovanovic, 1990; Bencivenga and Smith, 1991). Lastly, the financial sector provides information on possible investments and availability of capital within the system, thereby ameliorating the effects of asymmetric information (Ross, 2004).

## 2.3 Empirical Review

Various researchers have investigated the effect of financial inclusion on economic growth and development in various economies. Cyn-Young and Ragelio (2015) examined the relationship between financial inclusion, poverty and income inequality in Asia and sought to determine country-specific factors and macroeconomic variables that affect the level of financial inclusion for selected 37 developing Asian countries. They found that demographic factors and per capita income were statistically significant on their effect on financial inclusion. The study also showed that financial inclusion reduced income inequality and poverty. The study suggested that strong financial regulatory oversight, rule of law and enforcement of financial contract would improve financial inclusion efforts.

Nkwede (2015) examined financial inclusion and economic growth in Africa, using Nigeria as a case study for the period 1981 to 2013 and found a negative relationship between financial inclusion and growth of the Nigerian economy. He attributed the finding to a high level of financial exclusion of adults from financial services.

Ogiriki and Andabai (2014) confirmed a long-run equilibrium relationship between economic growth and financial intermediation in Nigeria. Aduda and Kulanda (2012) examined financial inclusion and financial sector stability with reference to the Kenyan economy. Their exploratory study indicated that financial inclusion is a prerequisite for economic growth and development in Kenya because various financial inclusion programmes have had impact on Kenya's financial stability. The study recommends that the government should intensify its financial inclusion strategies so that more people would have access to financial services, especially people in the informal sector.

Oriavwote and Eshenake (2012) findings on the role of financial development on economic growth in Nigeria showed that financial sector development significantly improved the level of economic growth in Nigeria. Osuji and Chigbu (2009) investigated the impact of financial development variables on economic growth in

Nigeria, and showed that money supply and credit to private sector had a positive impact on economic growth in Nigeria. Corroborating Osuji and Chigbu's (2009) findings, Adelakun (2010) examined empirically the financial sector development and economic growth in Nigeria and found a bi-directional relationship between financial development and economic growth. The result showed that financial sector development significantly and positively influenced economic growth in Nigeria. However, Fowowe and Abidoye (2010) found that for Sub-Saharan Africa, financial development did not significantly impinge on growth, proxied by poverty. They concluded that controlled variables such as low inflation and trade openness reduced the level of poverty in SSA.

## 3. Methodology

## 3.1 Data and Empirical Model

The finance-led growth hypothesis assumes a "supply-leading" relationship between the financial sector and economic growth. In contrast, the "growth-led finance" hypothesis states that a high economic growth may create demand for some financial instruments and arrangements, which may invariably lead to changes (growth) in the financial system. Thus, the "growth-led finance" hypothesis suggests a "demand following" relationship between financial sector channels and economic growth.

This study is longitudinal, as it employs time series data on selected variables from 1981 to 2017 to investigate the impact of financial inclusion on inclusive growth. This study has modified and adapted some variables from previous studies. The data were sourced from Central Bank of Nigeria (CBN) statistical bulletin 2018 and the World Development Indicators (WDI) 2018. Using the Econometrics Views statistical software, multiple regression analysis with Auto-Regressive Distributed Lag (ARDL) was employed. ARDL provides consistent and good estimates of short run and long run coefficients that satisfy the properties of the classical regression method. The study adopted Augmented Dickey- Fuller (ADF) test to obtain the unit root to ascertain the stationarity of the data on Gross Domestic Product per capita, money supply, and credit to the private sector, interest rate and Government expenditure. Financial inclusion was adopted as the independent variables, whereas economic growth is represented by the dependent variable. To adequately capture the research objectives, GDP per capita adopted as dependent variable for the model is proxy for inclusive growth. Inclusive growth is economic growth that raises standards of livings for broad swaths of a population while GDP per capita shows a country's GDP divided by its total population.

## 3.2 Model Specification

The model specified in this paper work follows Ndubuisi (2017), modified to reflect the Nigerian economy. This study focuses on per capita gross domestic product (GDPC), credit to private sector (CPS), money supply (MS), Interest rate (INT) and Government Expenditure (TGE). The estimated model is specified as:

## $GDPPC_t = \alpha_0 + \alpha_1 MSt + \alpha_2 CPSt + \alpha_3 INT_t + a_4 GEt + \mu_t$

Where:  $GDPPC_t = Per capita GDP in year t$   $CPS_t = Credit/loans to the private sector in year t$   $MS_t = Volume of money supplied in the country in year t$   $INT_t = Interest rate in year t$   $GE_t = Total government expenditure in year t$   $a_0-a_4 = parameter coefficients$  $\mu_t = error term in year t$ 

The above equation is written in the natural log form as follows:

## $lnGDPPC_{t} = \alpha_{0} + \alpha_{1}lnCPS_{t} + \alpha_{2}lnMSt + \alpha_{3}INTt + \alpha_{4}lnGE_{t} + \mu_{t} \dots \dots \dots \dots (1)$

The ARDL model for the study is specified in Equation (2) below.

$$\Delta (lnGDPPC)_{t} = \delta_{0} + \delta_{1} (lnGDPPC)_{t-1} + \delta_{2} (lnCPS)_{t-1} + \delta_{3} lnMS + \delta_{4} lnt_{t-1} + \delta_{5} lnGE_{t-1} + \sum_{j=1}^{l} \tau_{1j} \Delta (lnGDPPC)_{t-j} + \sum_{j=0}^{m} \tau_{2j} \Delta lnCPS_{t-1} + \sum_{j=0}^{n} \tau_{3j} \Delta lnMS_{t-1} + \sum_{j=0}^{o} \tau_{4j} \Delta lNT_{t-1} + \sum_{j=0}^{p} \tau_{5j} \Delta lnGE_{t-1}$$
(2)

### 4. Result and Discussion

### 4.1 Unit Root Test

The study conducted the unit root test, namely the Augmented Dickey Fuller test. The test result in Table 1 shows that all the variables are stationary at first difference, except INT, which is stationary at levels. Since most variables are nonstationary at levels, using the OLS method of estimation will lead to a spurious regression, which requires the time series to be stationary for the analysis to be used for forecasting.

Table 1: Unit Root Test at Levels and at First Difference

Level	1 <sup>st</sup> Differ	ence			
Variables	<i>T</i> -	5% Critical	<i>T</i> -	5% Critical	Remarks
	statistics	values	statistics	values	
InGDPPC	-2.437103	-3.544284	-3.353006	-2.948404	Stationary at 1 <sup>st</sup> difference
	(0.3554)		(0.0199)		
InMS	-1.329623	-3.544284	-3.643444	-2.948404	Stationary at 1 <sup>st</sup> difference
	(0.8636)		(0.0097)		
InCPS	-1.643202	-3.540328	-4.412662	-2.948404	Stationary at 1 <sup>st</sup> difference
	(0.7553)		(0.0013)		
INT	-4.956647	-3.562882	-5.904200	-2.951125	Stationary at levels
	(0.0019)		(0.0000)		
InGE	-0.449924	-3.544284	-7.349066	-2.948404	Stationary at 1 <sup>st</sup> difference
	(0.9814)		(0.0000)		
Note: Value	a in nononthod	$i_{\alpha} \wedge a_{\alpha} + b_{\alpha} + b_{\alpha} + b_{\alpha}$	1100		

**Note:** Values in parenthesis () are the *p* values

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The series are integrated in different orders, that is, a combination of both level and first difference stationarity. Thus, co-integration test is necessary to establish a long-run relationship. However, the use of Johansen co-integration test is no longer valid. Hence, we specify an Autoregressive Distributed Lag (ARDL) because none of the variables are integrated in order 2 (stationary at 2<sup>nd</sup> difference).

## 4.2 Lag Structure

The appropriate lag structure for the model is lag 2, which was used in the estimation of the long run relationship. The lag structure used was selected by the AIC criterion, which is in conformity with the lag length criterion in Table 2.

La	ag LogL	LR	FPE	AIC	SC	HQ	
0	49.75653	NA	0.004546	-2.557516	-2.335324	-2.480815	
1	69.54546	32.79308	0.001556	-3.631169	-3.364538	-3.539128	
<b>2</b>	76.72214	11.48269*	0.001096*	-3.984123*	-3.673053*	-3.876741*	

**Table 2: Lag Length Results** 

### 4.3 ARDL Bounds Tests

The value of the F-statistic were used for examining the long-run relationship among the variables used in the study (Table 3). The Wald restriction imposed on both Equation (2) is that: $\delta_1 = \delta_2 = \delta_3 = \delta_4 = 0$ . This restriction signifies the nonexistence of a long run relationship among the variables. The value of the Fstatistic obtained is compared with the upper and lower critical values which are given by Pesaran *et al.* (2001). According to this co-integration test, if the calculated F-statistics is more than the upper critical value, we reject the null hypothesis of no co-integration. This implies that the long run relationship holds. On the other hand, if the calculated F-statistics is less than the lower critical value, a long run relationship does not hold. An inconclusive scenario holds when the value of the calculated F-statistic falls between the lower and upper critical values. The ARDL bounds test approach is preferred over other co-integration tests, such as Johansen co-integration test and Engle and Ganger co-integration test, as it provides an opportunity for combing variables with different orders of integration.

Table 3:	Bounds	<b>Test Results</b>

Test Statistic	Value	k
F-statistic	8.232783	4
Critical Value Bo	ounds	
Significance	$I_0 Bound$	$I_1$ Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Based on the result of the bounds test, there is co-integration and there is long run relationship, since the F-statistic is greater than the upper bound at all levels of significance.

### 4.4 Regression Results

This study analyses the relationship between inclusive growth (where the Gross Domestic Product per capita is used as proxy) and financial inclusion (where Credit to Private Sector, Money Supply and Interest rate are used as proxy). Table 4 presents the regression results. In the short run, an increase in the credit tends to the private sector reduces GDP per capita, which does not conform to a priori expectation. However in the long run, an increase in the credit to private sector increases GDP per capita, which conforms to a priori expectation and is significant at 5% level of significance. In the short run, money supply is statistically significant and shows that a 1% rise in money supply will lead to about a 0.16% rise in the gross domestic product per capita. In the long run, the study indicates a positive relationship, which, however, is not significant. Interest rate, indicates a positive and statistically significant relationship with the gross domestic product per capita in both the short run and the long run. This does not conform to a priori expectation.

	Coefficient	Standard Error
Long run estimation		
Constant	11.493***	0.043
LnCPS	0.007	0.103
LnM2	0.426***	0.133
Int	0.012***	0.004
LnGE	-0.361***	0.043
Short run estimation		
$\Delta \ln GDPPC(-1)$	0.520***	0.098
ΔlnCPS	-0.028	0.037
$\Delta \ln M2$	0.160***	0.045
$\Delta \ln M2(-1)$	-0.115***	0.040
$\Delta$ Int	0.003***	0.001
ΔlnGE	-0.070***	0.025
$\Delta \ln GE(-1)$	0.036	0.022
ECT(-1)	-0.473***	0.069
Diagnostic test		
R squared	0.748	
Adjusted R squared	0.682	
F statistics (Prob value	0.000	
JarqueBera normality test	2.553	
Durbin-Watson stat	1.763	

Table 4: Main Estimation, Dependent Variable: GDP per capita

Note: GDPPC is Gross Domestic Product per capita, CPS is Credit to Private Sector, M2 is Money supply (broad money), Int is Interest Rate, GE is Government Expenditure, Δ is difference operator. \* implies 10% level of significance, \*\* implies 5%, \*\*\* implies 1% level of significance. Jarque-Bera normality test is based on the F-statistic and the corresponding reported value is the probability value.

Government expenditure shows a statistically significant negative relationship, which also does not conform to a priori expectation in both the short run and the long run. In the short run, a 1% rise in government expenditure tend to decrease GDP per capita by 0.07%. In the long run, a 1% rise in government expenditure attend to decrease GDP per capita by 0.36%. These results do not conform to a priori expectations presumably because for Nigeria, which is one of the most corrupt countries in the world, the expenditure from government may not translate to growth and improvement in the standard of living of its people because in practice it may not be spent as earmarked. The intercept value of 11.49 mechanically interpreted means that if the values of credit to private sector, money supply, interest rate and government expenditure were fixed at zero, the mean GDP per capita will go up by 11.49%.

The error correction term (-0.473) here is negative and significant, which means there is a long run causality relationship between the independent variables and the dependent variable. It also implies a low speed of adjustment to equilibrium. According to Bannerje et al. (2003) as cited in Kiadanemarim (2014), the highly significant error correction term further confirms the existence of a stable long-run relationship. The coefficient of the error term (ECT-1) implies that the deviation from the long run equilibrium level of (dependent variable) of the current period is corrected by 47.50% in the next period to bring back equilibrium.

From the analysis carried out and presented in Table 4, it shows that R square (75%), the coefficient of determination, is very high. This means that about 75% of the total variation of ln(gdppc) is explained by credit to private sector, money supply, interest rate and government expenditure. The Durbin-Watson stat of 1.7 showed that the estimate from the regression model can be used for policy inference and there is no autocorrelation in the model.

## 4.5 Post Diagnostic Test

Furthermore, several diagnostic tests were conducted on the results of the study. These diagnostics tests indicated the goodness of fit of the estimated model. Tests conducted include, the Jarque-Bera test for normality (reported in Table4.4); Breusch-Godfrey (BG) test for serial correlation, and Autoregressive Conditional Heteroscedasticity (ARCH) test for heteroscedasticity.

## 4.5.1 Breusch-Godfrey Serial Correlation Test

## Table 5: Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.672265	Prob. F(2,21)	0.5212		
Obs*R-squared	2.106043	Prob. Chi-Square(2)	0.3489		

HO: E = 0 (There is no serial correlation)

 $H1: E \neq 0$  (There is serial correlation)

## Decision Rule Breusch-Godfrey Serial Correlation Test

Whenever the p-value is greater than the level of significant, we do not reject the null hypothesis. In addition, the model is stable as it lies within the boundary of 5%.

From the result obtained from Breusch-Godffery Serial correlation, the LM Test shows that the errors in the model are serially correlated. The F value of 0.5212 is greater than 0.05;thus,we cannot reject the null hypothesis. The model is not suffering from serial correlation.

### 4.5.2 Heteroskedasticity Test

Table 6: Heteroskedasticity Test: ARCH	
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F-statistic	0.512930	Prob. F(2,30)	0.6039
Obs*R-squared	1.091134	Prob. Chi-Square(2)	0.5795

### Decision Rule of Heteroskedasticity Test

Whenever the p-value is greater than the level of significance, we do not reject the null hypothesis. The f-value of 0.6039 is greater than 0.05;hence, we do not reject the null hypothesis. The model is homoscedastic.

### 4.6 Granger Causality Test

Table 7: Pairwise Granger Causality Test Result

Null Hypothesis:	Obs	<b>F-Statistic</b>	Prob.
LCPS does not Granger Cause LGDPPC LGDPPC does not Granger Cause LCPS	35	$3.45041 \\ 0.55410$	$\begin{array}{c} 0.0448\\ 0.5804\end{array}$
INT does not Granger Cause LGDPPC LGDPPC does not Granger Cause INT	35	$0.64168 \\ 0.39699$	$0.5335 \\ 0.6758$
LGE does not Granger Cause LGDPPC LGDPPC does not Granger Cause LGE	35	2.09497 1.43228	$\begin{array}{c} 0.1407 \\ 0.2546 \end{array}$

### Decision Rule for Pairwise Granger Causality Tests

Reject HO if p-value < 0.05. From Table 4.8, LCPS granger cause LGDPPC, whereas LGDPPC does not granger cause LCPS. There is a uni-directional relationship between LCPS and LGDPPC. There is no causality between interest rate and LGDPPC. LTGE does not granger cause LGDPPC and LGDPPC does not granger cause LGE, which means that there is no causality between LGE and LGDPPC.

### 5. Summary and Conclusion

For an economy to experience rapid economic growth, financial inclusion is one of the key factors. Financial inclusion entails access of the populace to financial services to tackle poverty, improve welfare and general standard of living, which leads to economic growth. Using econometric techniques, this paper explored the long run relationship between financial inclusion and economic growth in Nigeria between 1981 and 2017. The specified regression model shows that money supply, interest rate, credits to the private sector and government expenditure are the major drivers of economic growth in Nigeria. The result of the ARDL show that financial inclusion increases the inclusive growth and makes easy access to loan for investment.

This empirical evidence corroborates the finance-led growth hypothesis, implying that Nigeria's financial system does impinge on economic growth. The results echo the findings of Azege, 2004; Ogiriki and Andabai, 2014; Adelakun, 2010; Oriavwote and Eshenake, 2012; Shittu, 2012. The study also investigates the causality among the variables. Moreover, our results validate the official stand of World Bank (World Bank, 2001), that finance causes growth.

### **Policy Recommendation**

For equitable growth to be achieved and sustained, policies that can enhance financial inclusion of greater proportion of the country's population have to be handled carefully. Access to finance by the poor is a requirement for poverty reduction and inclusive growth. This study has established that there is a strong need to strengthened policy approach for financing business activities in Nigeria as it has a positive impact on inclusive growth.

The government should provide enabling business environment and create financial awareness that can engender more public trust in the country's financial system, so that the financial exclusive public can partner with the financial sector in enhancing savings and investment.

The role of deposit money banks in contributing to growth will remain an illusion if banks continue to pursue trade in foreign exchange, invest in government treasury bills and directly fund the importation of goods (Onwioduokit and Adamu, 2005) at the expense of promoting viable and efficient investment in the real sector of the economy. It is therefore recommended that effective means of improving credit channels and liquidity to private firms by banks should be encouraged by CBN.

The long run relationship between financial inclusion and inclusive growth shows that the former is significant in promoting real income. Hence, policies should be directed towards promoting a more competitive environment that enhances service delivery among financial institutions.

Poor performance of financial reforms has been attributed to improper sequencing of the reform agenda, coupled with frequent policy reversals and reintroduction (Ikhide and Alawode, (2002). Government should therefore implement reforms that will enhance financial intermediation through stable and sustainable real positive interest rates, followed by sound macroeconomic, monetary and fiscal policies targeted at low and sustainable inflation rates.

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