



FINANCIAL INCLUSION AND ECONOMIC GROWTH IN NIGERIA

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Abstract

This study empirically examined the impact of financial inclusion on economic growth in Nigerian from 2006 to 2020. The time series data were estimated using the ordinary least square method through the instrumentality of Econometric Views version 9.0. The estimated result depicts positive and significant relationship between the financial inclusion and the proposed variables. Data for the study was sourced from the World Bank's Development Indicators, International Monetary Fund Report (2020), and the CBN Statistical Bulletin (2020). Findings emanating from the study revealed that having controlled for both deposit interest rate and inflation rate, both Broad money supply (BMS) and Loan to the Private Sector (LPS) exerted positive significant impact on economic growth in Nigeria. The study recommended that, effort should be made by the monetary authority to enlighten and encourage the unbanked populace on how they can conveniently open account with banks as this will enhance the level of financial inclusiveness which in turn will increase the growth of the Nigerian economy. Also, loan to private sector should be given adequate attention since it has significant consequence on economic growth in Nigeria.

Keywords: Financial inclusion, economic growth, OLS, Central Bank of Nigeria.

Introduction

The Nigerian economy is one of the largest in Africa and is currently experiencing rapid economic growth. A key factor in this growth is the increasing access to financial services, which is allowing individuals, small and medium-sized enterprises (SMEs) and large businesses to access funds for investments. This has

led to an increase in the economic activity in the country. Financial inclusion, which is defined as the provision of financial services to people and businesses, regardless of their income, has been seen in recent years to be a major driver of economic growth in Nigeria. Indeed, access to financial services is widely acknowledged as capable of promoting credit creation and enhancing capital accumulation thereby raising the level of investment and economic activity (Wokabi & Fatoki, 2019).

Katoroogo (2016) conceptualize financial inclusion as a situation which necessitate the unbanked and financially excluded economic agents to have access to useful and affordable financial products and services (deposits, withdrawals and credit facilities) that meet their needs. He termed it an all-inclusive finance. In other words, financial inclusion refers to efforts to make financial products and services such as point of sales (POS), mobile banking and insurance to all economic agents irrespective of their social, political, and economic position. Hence, financial inclusion offers a platform for both low and high income earners to be integrated in the financial system for an all-inclusive growth strategy. However, such financial services should be devoid of institutional and regulatory bottlenecks so as to achieve a meaningful and sustainable financial inclusion programme (Agyekum, 2017; Arun & Kamath, 2015; Sahoo, 2017).

Nwidobie (2019) argued that, financial inclusion brings into the Gross Domestic Product (GDP) "basket" excluded economic agents (individuals and small businesses) hitherto excluded from the calculation of a country's economic growth. The identification and inclusion of economic units in the informal financial sector into the formal financial sector, and provision of financial empowerment to them increases the production of goods and services, employment, income and economic growth. Conversely, the exclusion of some economic units from the formal financial system excluded the counting of their contribution to economic growth. This suggests that, as more economic agents become financially included in an economic system, there is every tendency that the level of investment in productive or real economic activities will increase which in turn will lead to higher levels of national output, national income and by extension economic growth and development. Thus, inclusive engagement of economic agents in productive activities has the capacity to sustain an economy. According to Sethy (2016), financial inclusion is a promising tool for improving economic growth, poverty reduction and income inequality as it mobilizes savings and provides the urban and rural poor, and micro businesses improved access to finance for capacity enhancement and business growth. He noted that

financial inclusion is a “key enabler of economic and social development”, but acknowledged that the development of an encompassing financial inclusion seems not to have been achieved. For financial inclusion to positively affect economic activities, the indices need to be identified and used by economic planners.

As enunciated by Nwidobie (2019), Nigeria with its diversities in development across states and geopolitical zones needs a multivariate financial inclusion to reflect the multi-levels and states of financial penetration in the country. Thus, the identification of these indices will aid development planners in developing potent policies at increasing economic development through improved financial inclusion. In other words, it will serve as an effective means for transmission of financial inclusion programmes of the Central and Deposit money banks (DMBs), which in turn improves financial education, access to formal credit, increased economic production and growth.

With high level of poverty, out of school children and stunted development in Nigeria, many people do not have access to financial services in Nigeria. Financial services at affordable rate is a big problem in Nigeria. With positive impact on economic growth, financial inclusion becomes an important component of financial development and a global agenda, this research focusing on the financial inclusion and its determining factors in the Nigerian context is germane. Against this background, the thrust of the study therefore is to investigate empirically the impact of financial inclusion on the growth of the Nigeria economy.

In recent times, there appears to be a surging interest on the concept of financial inclusion, especially among policymakers and financial sector key players. However, there is limited research on the impact of financial inclusion on economic growth in the Nigeria couple with the fact that financial inclusion has been identified as a major driver of economic growth in Nigeria. However, despite the significant policy efforts and increased presence of formal financial service providers, the Nigerian economy still bears low levels of financial inclusion, especially in the rural areas wherein most persons are financially excluded. The identification of this research gap drives this research work as it seeks to find answers to the big question that defines inclusion: thus; ‘Is finance available, accessible, and most importantly affordable to all active and productive agents of the economy? This remains a conceptual and empirical issue which the present studies tries to fill by explicitly determining the impact of financial inclusion on economic growth in Nigeria.

Based on the foregoing, the objective of the study is to empirically examine the impact of financial inclusion on the growth of the Nigeria economy. The study

used secondary time-series data spanning from 2006 to 2020 (15 years interval) and sourced from the World Bank's Development Indicators, International Monetary Fund Report (2020), CBN statistical Bulletin Statistical Bulletin (2020) with a view to investigate the subject matter in retrospect. The paper is structured into five sections. Following the introductory section is section two which provides the literature review. Section three discusses the methodology while section four presents the empirical results and discussion. Section five is the conclusion and policy recommendations.

Literature Review

This section allows for deeper understanding of the impact of financial inclusion. Specifically, it focuses on the conceptual issues which revolve around the subject-matter, the theoretical foundation which underpins the study, as well as the empirical studies which relate to the subject matter. The essence of all these, is to bridge the gap in existing body of knowledge.

Conceptual Review

The term "financial inclusion" was first coined in British vocabulary when it was found that over 7 million people did not have a bank account. Although, scholars have made subsequent attempt to give an all-encompassing explanation on the construct, still there is no generally acceptable definition of the construct. Demirgüç-Kunt and Klapper (2012) conceptualized financial inclusion as the access to basic financial services. Sarma (2012) modified the definition of financial inclusion as the process that ensures the ease of access, availability and usage of the formal financial system for all members of the economy. However, financial inclusion is intended to connect people with banks for consequential benefits. This allows the formal financial systems to play its original role of promoting economic growth which is a major difficulty of most developing countries. In other words, financial inclusion refers to efforts to make financial products and services such as point of sales (POS), mobile banking and insurance to all economic agents irrespective of their social, political, and economic position. Hence, financial inclusion offers a platform for both low and high income earners to be integrated in the financial system for an all-inclusive growth strategy (Kama, & Adigun, 2013).

The role finance inclusion play in enabling the transformation of the lives of the low income segments in developing countries like Nigeria cannot be overemphasized. Nevertheless, it has been argued that financial inclusion leads to many opportunities which include the integration of economically and socially

excluded people into the formal economy. This enables them to contribute to economic development and protect themselves against economic shocks (Nalini & Mariappan, 2012). It is in this regard that the informal finance providers are regarded as the major threat to financial inclusion, but unfortunately, many people in developing economies are not comfortable with the formal financial providers. The reasons were difficulty in understanding language, various documents and other conditions that come with financial services (Nalini & Mariappan, 2012).

Theoretical Review

For the purpose of this study, the economic theories (neoclassical economic theory and new-Keynesian theory), and the interdisciplinary theories (behavioural economics, political-economy theories, poverty and community-based analyses, geographic spatial analyses, and household economy) were reviewed.

Economic Theories

Under economic theories, financial inclusion can be examined using both the neoclassical economic theory and new-Keynesian theory. The neo-classical theory concentrates on economic agents and places the state in secondary role. The primary economic agents are firms and consumers whose behaviour are assumed to be rationally self-interested, well-informed and competitive. With these assumptions, it concludes that financial exclusion is the result of consumer choice and/or mistaken government policy. As far as consumer choice is concerned, it is possible when they opt to use informal financial services instead of mainstream markets due to economic costs which lead to access limitations. It is also possible that government policy for example a usury ceiling creates distortions in credit markets that further lead to exclusion of dis-favoured segment. On the other hand, New-Keynesian analysis emphasizes on the market distortions embedded in the micro-economy, for instance information asymmetries. In relation to financial exclusion, it relates to the notion of credit constraints. Stiglitz & Weiss (1981) provide a compelling explanation on this issue by shedding lights on the effect of imperfect information about borrowers on credit exclusion, whereby creditors tend to depress interest rates and restrict credit in order to avoid risky borrowers.

Interdisciplinary Theories

Bearing in mind that financial inclusion is interdisciplinary in nature, a number of approaches can be applied to understand this topic of interest. An interdisciplinary theory is one that is learned by insights from more than one

discipline which include institutional theory, political economy and poverty-and-community analyses (Buckland, 2012). Each of these theories has been influenced by more than one discipline, consisting of economics, sociology, psychology as well as geography.

Under behavioural economics, the questions on the consumer side (i.e., behaviour of low-income people) of financial exclusion can be unfolded by relaxing the assumption about human rationality and using experimental methods. However, its scope is not as broad as that of some other disciplinary approaches such as institutional analyses (Buckland, 2012) as it does not take into account the institutional barriers of financial exclusion.

Political-economy theories are also useful theories for understanding financial exclusion. These theories refer to the examination of the social world, cognizant of social, state and political structures (Buckland, 2012). This political-economy framework to financial exclusion is important in apprehending the role of bank bifurcation and financialization in segmentizing the most marginal customers in the least advantage services (i.e., with high and complicated fees) (Aitken, 2006; Buckland, 2012).

Other interdisciplinary theories are poverty and community-based analyses, geographic spatial analyses and household economy. Community-based analyses highlight the realities and experiences of the financially excluded by understanding the structures that reinforce inequality and poverty. Results show that low-income consumers usually behave in highly rational ways according to the relative costs and benefits of the variety types of financial services (Buckland, 2012). With respect to household economy, it allows unpacking of the household especially on its decision making, resource allocation and gender relations.

Empirical Studies

A number of empirical studies have been conducted to examine the impact of financial inclusion on economic growth in Nigeria. For example, a study by Cicchiello, Kazemikhasragh, Monferrá, and Girón (2021) investigated the relationship between the financial inclusion and development variables in the least developed countries in Asia and Africa by using annual data of 42 countries for the period 2000–2019. The pooled panel regression and panel data analysis technique are used to explore this relationship. The empirical finding indicates that economic growth leads to financial inclusion. Enueshike and Okpebru (2020) in their study, using the auto-regressive distribution lag model, examined the impact of financial inclusion on economic growth in Nigeria from 2000 to 2018. The study indicated that loan to small and medium enterprise (LSME), rural bank

deposit (RBD) and inflation (INF) has a significant impact on economic growth in Nigeria. Ali, Kaneez and Ahmed (2020) investigated the impact of financial inclusion on growth of economy in Pakistan from 1985-2017. Financial liberalization is measured by using the principal component analysis (PCA). The study was patterned after the Autoregressive Distribution Lag (ARDL) methodology. It was found that economic growth and Financial Inclusion (private sector credits, Number of bank branches (NBB) per 100,000 adults, total depositor's accounts (DA), total account's deposit (AD) percentage to GDP and total advances by borrowers) have positive impact on economic growth in the short and long run.

Ansaful (2019) examined the determinants of financial inclusion in Ghana. The researcher adopted the Ghana living standard survey round six (6) data and probit model. The study revealed that majority of the respondents: were excluded from the banking sector were as a result of poverty or financial difficulties and less than 2 % are involuntarily excluded from formal banking services.

Nwafor and Yomi (2018) examined the nexus between financial inclusion and economic growth in Nigeria. Archival data spanning from 2001 to 2016 were obtained. The data were subjected to statistical analysis using a two staged least square regression method. Findings from regression result show that broad money supply to GDP, bank credit to GDP, commercial banks deposit from rural areas and commercial banks loans to rural areas have as significant impact on economic growth. Results also indicate that commercial bank loans to deposit ratio and commercial bank loan to small and medium scale enterprises have significant impact on economic growth.

Okeke (2017) found that access to financial services had a significant positive impact on economic growth in the country. The study found that a 1 percent increase in the access to financial services led to a 0.8 percent increase in GDP. The study also found that the impact of financial inclusion was higher in rural areas than in urban areas. Okoye, Adetiloye and Modebe (2017) investigated the impact of financial inclusion on economic growth and development in Nigeria over the period 1986-2015 using the Ordinary Least Squares technique. The study showed that credit delivery to the private sector has not significantly supported economic growth in Nigeria. Also, that financial inclusion has promoted poverty alleviation in Nigeria through rural credit delivery.

Olaniyi and Babatunde (2016) sought to ascertain the determinants of financial inclusion in Africa for the period 2005 to 2014, using the dynamic panel data approach. The study finds that per capita income, broad money (% of GDP),

literacy, internet access and Islamic banking presence and activity are significant factors explaining the level of financial inclusion in Africa. Domestic credit provided by financial sector (% of GDP), deposit interest rates, inflation and population have insignificant impact on financial inclusion. Onaolapo (2015) examined the impact of financial inclusion on the economic growth of Nigeria for the period of 1982 to 2012. The Ordinary Least Square (OLS) method revealed that financial inclusion greatly influenced poverty reduction, but marginally determined national economic growth and Financial Intermediation.

Methodology

Theoretical Framework

In the light of literature review, it is concluded that financial inclusion/exclusion is an essential factor for low income and high income economies. Financial inclusion requires a strong financial system to facilitate the society especially for low-class income group of the country. However, this research is underpinned to the interdisciplinary theories having it in mind that financial inclusion is interdisciplinary in nature and that there are a number of approaches can be applied to understand this topic of interest. In furtherance, an interdisciplinary theory is one that is learned by insights from more than one discipline which include institutional theory, political economy and poverty-and-community analyses (Buckland, 2012).

Data Analysis Techniques

The statistical techniques used for this study is the ordinary least square regression analysis framework. This method was adopted because its estimates satisfy the statistical Best Linear Unbiased Estimate (BLUE) properties. More so, it is used to analyze the short run relationship between multiple independent variables whose values are known to predict the values of a single unknown dependent variable. To ensure that the regression result is meaningful and scientifically valid, we subjected the model to various diagnostic tests.

Model Specification

The model specification uses the linear function to examine the relationship between the dependent variable (economic growth) and the independent variable (financial inclusion). Hence, the model for the study can be expressed thus:

$$RGDP = f(BMS, LPS, BDR, BNE, DER, INF) \text{-----eqn 1}$$

Where RGDP is Real gross domestic product; BMS is Broad money supply; LPS is Loan to the Private Sector; BDR is Bank Deposit of the Rural Area; BNE is Bank Branch Network Expansion; DER is Deposit interest rate (control variable); INF is Inflation rate (control variable).

Econometrically, the model is re-specified as:

$$RGDP = \beta_0 + \beta_1 BMS + \beta_2 LPS + \beta_3 BDR + \beta_4 BNE + \beta_5 DER + \beta_6 INF + \epsilon_{it}$$

-----eqn 2

Where

β_0 is Intercept; $\beta_1 - \beta_6$ are the parameter estimates; ϵ_{it} is Stochastic Error Term

Apriori Expectation require that $\beta_{1, 2, 3}$ and $4 > 0$, $\beta_{5, 6} < 0$

Results and Discussion of Findings

Table 4.1: Descriptive Statistics of all Target Variables

	RGDP	BMS	LPS	BNE	BDR	DER	INF
Mean	57569.16	21.24067	17.54067	5246.000	10672.66	7.835333	16.19200
Median	59929.89	22.29000	18.59000	5454.000	7723.720	7.730000	16.69000
Maximum	74694.00	24.90000	22.75000	5809.000	40775.90	12.63000	18.99000
Minimum	39577.34	12.50000	7.540000	3233.000	3337.500	3.220000	11.40000
Std. Dev.	11510.01	3.391979	3.866997	675.9137	9159.706	2.596417	1.808548
Observations	15	15	15	15	15	15	15

Source: Econometric Views Version 9.0 (2022)

As shown in Table 4.1, it is evidenced that Real Gross Domestic Product (RGDP) reported an average value of ₦57569.16 billion and a standard deviation value of ₦11510.01 billion. More so, it reported a minimum and maximum value estimated at ₦39577.34 billion and ₦74694.00 billion respectively.

Broad money supply as denoted by BMS reported an average and a standard deviation value of 21.24% and 3.39% respectively. Further, the descriptive statistics reported a maximum and minimum value estimated at 24.99% and 12.5% respectively.

Loan to Private Sector as denoted by (LPS) reported an average and a standard deviation value of 17.54067% and 3.866997% respectively. Further, the descriptive statistics reported a maximum and minimum value estimated at 7.54% and 22.75% respectively.

Branch network expansion (BNE) had an average and standard deviation value of ₦5246 million and ₦675.9137 million respectively. Meanwhile, it has a minimum and maximum value of ₦3233 million and ₦5809 million.

Bank Deposit to Rural Areas (BDR) reported an average and a standard deviation value of ₦10672.66 billion and ₦ 9159.706 billion respectively. The descriptive statistics reported a maximum and minimum value estimated at ₦3337.500 billion and ₦40775.90 billion respectively.

Deposit Interest Rate (DER) reported an average and standard deviation value of 7.835333% and 2.596417% respectively. Meanwhile, it has a minimum and maximum value of 3.22% and 12.63%. On the overall, one can comfortably conclude that deposit interest rate did not exhibit any form of outliers.

Inflation Rate (INFR) reported an average and a standard deviation value of 16.192% and 1.808548% respectively. Further, the descriptive statistics reported a minimum and maximum value estimated at 18.99% and 11.4% respectively.

Correlation Matrix

The correlation matrix is used to determine the extent to which the dependent variable relate with the independent variable. Basically, this test evaluates if the variables under study determine each other or move in the same direction. More so, this test is used to determine whether the independent variables exhibit some form of multi-collinearity problem being a situation whereby an insignificant variable become significant by increasing its standard error. By rule of thumb, the cut-off level of 0.8 is used to detect the presence of multi-collinearity. Accordingly, the result is presented:

Table 4.2: Summary of Correlation Matrix for all Study Variables

	RGDP	BMS	LPS	BNE	BDR	DER	INF
RGDP	1.000000						
BMS	0.768097	1.000000					
LPS	0.634602	0.479106	1.000000				
BNE	0.471747	0.575260	0.554202	1.000000			
BDR	-0.245013	-0.554011	-0.545208	-0.359250	1.000000		
DER	-0.567296	-0.215483	0.073047	-0.225767	0.094615	1.000000	
INF	-0.473229	-0.300932	-0.009761	-0.099647	0.212120	0.629755	1.000000

Source: Econometric Views Version 9.0 (2022)

The results presented in Table 4.2 show that the correlation coefficients of each of the independent variables are less than 0.8. This suggests that Numbers of Bank Branches is devoid of multi-collinearity problem. However, the individual results as shown depicts that the Pearson correlation result reported that RGDP

has a positive coefficient value of 0.768097 suggesting that BMS is positively correlated with economic growth of Nigeria over the study period. More so, in terms of degree of correlation, it exhibited strong correlation. LPS has a positive coefficient value of 0.634602 suggesting that LPS is positively correlated with economic growth of Nigeria over the study period. More so, in terms of degree of correlation, it exhibited strong correlation. Bank Branch Network Expansion (BNE) has a positive coefficient value of 0.471747 suggesting that BNE is positively correlated with economic growth of Nigeria over the study period. More so, in terms of degree of correlation, it exhibited moderate correlation. Bank Deposit to Rural Areas (BDR) has a negative coefficient value of -0.245013 suggesting that BDR is negatively correlated with economic growth of Nigeria over the study period. More so, in terms of degree of correlation, it exhibited weak correlation.

Deposit Interest Rate (DER) reported coefficient value of -0.567296 which suggest that deposit interest rate has a negative yet moderate correlation with economic growth of Nigeria over the study period. Inflation Rate (INF) reported coefficient value of -0.473229 which suggest that inflation rate has a negative yet moderate correlation with economic growth of Nigeria over the study period.

Model Diagnostic Test

To ensure that the model is not spurious, Homoskedastic, well-specified, normally distributed and stable, we conducted series of diagnostic test. It is therefore presented in the foregoing sub-section:

Table 4.3: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.276200	Prob. F(6,8)	0.9329
Obs*R-squared	2.574035	Prob. Chi-Square(6)	0.8601
Scaled explained SS	0.380479	Prob. Chi-Square(6)	0.9990

Source: Econometric Views Version 9.0. (2022)

The white Heteroskedasticity clearly revealed that the model is Homoskedastic. This is because it p-value is greater than 5% significant level. Hence, we can conveniently conclude that the results are credible.

Table 4.4: Ramsey RESET Test

Equation: UNTITLED

Specification: FINC C GDPPC PSC_GDP M2_GDP NBRA ADEPR DEIR INFR

Omitted Variables: Squares of fitted values

	Value	Df	Probability		
t-statistic	1.601947	6	0.1603		
F-statistic	2.566235	(1, 6)	0.1603		
Likelihood ratio	5.341033	1	0.0208		

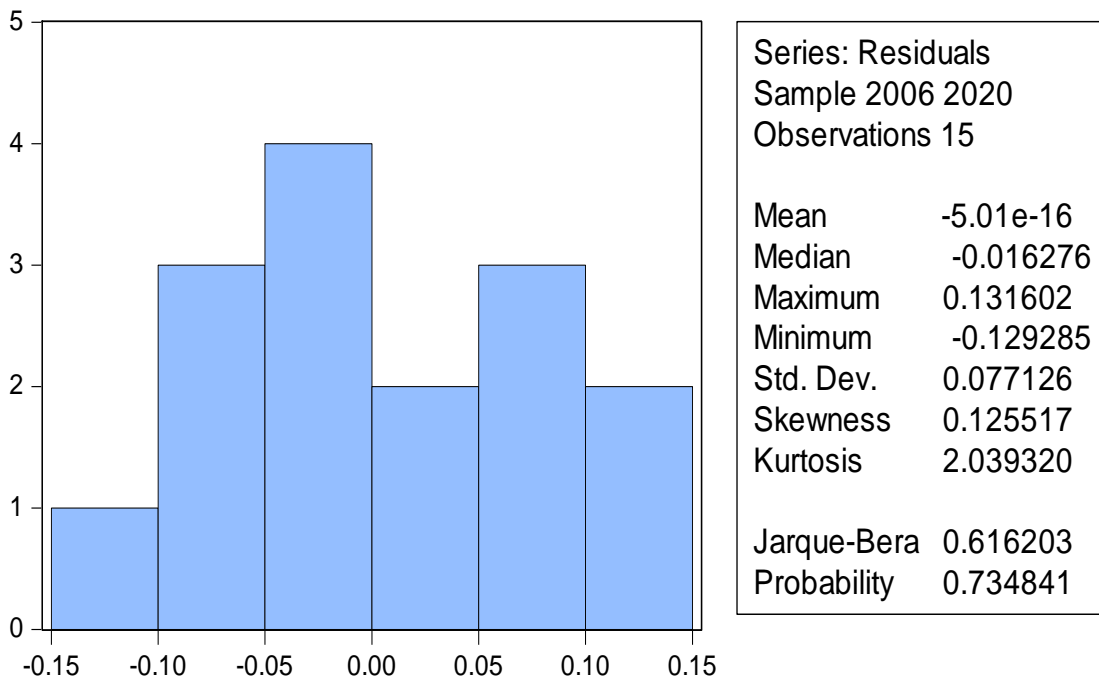
F-test summary:

	Sum of Sq.	Df	Mean Squares
Test SSR	119.3873	1	119.3873
Restricted SSR	398.5216	7	56.93166
Unrestricted SSR	279.1343	6	46.52238
LR test summary:			
	Value	Df	
Restricted LogL	-45.88191	7	
Unrestricted LogL	-43.21140	6	

Source: *Econometric Views Version 9.0. (2022)*

The Ramsey RESET Test clearly revealed that the model is well specified. This is because its p-value is greater than 5% significant level. Hence, we can conveniently conclude that the model is fit for prediction.

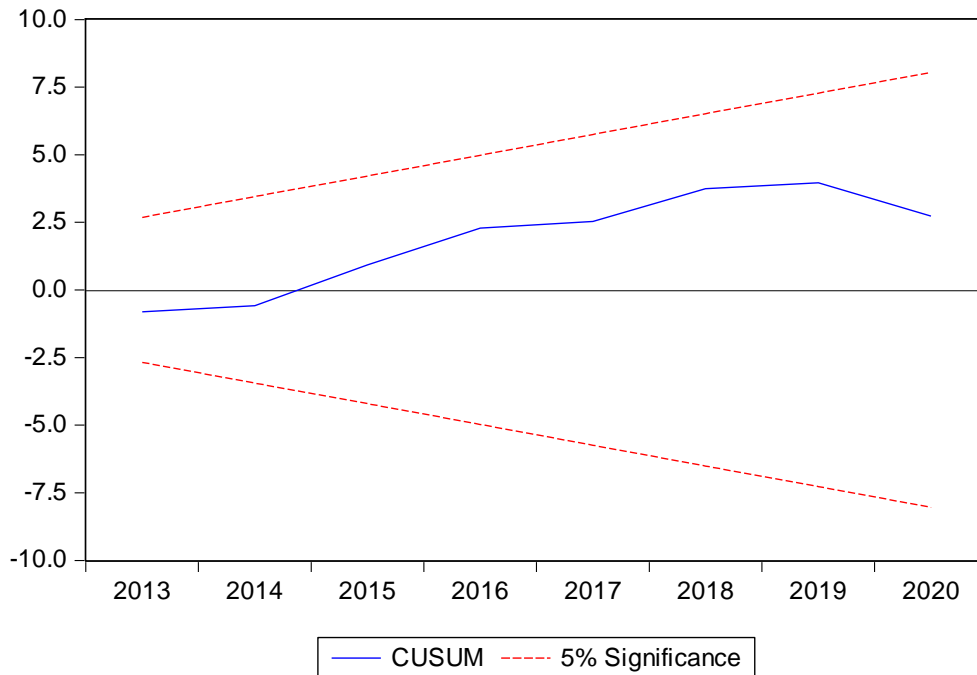
Figure 4.1: Normality Test



Source: *Econometric Views Version 9.0. (2022)*

The outcome of the diagnostic tests as shown above is satisfactory. Under the null hypothesis that the residuals are normally distributed, the JB test for residual normality assumption is not disrupted. The table also shows that the error process could be pronounced as normal for the relationship between economic growth and financial inclusion.

Figure 4.2: CUSUM-of-Squares Test Plot



Source: *Econometric Views Version 9.0. (2022)*

The stability test for the model was done with the aid of cumulative sum of squares (CUSUM-of-Squares) test developed by Brown, Durbin and Evans (1975). Accordingly, figure 4.2 above indicated that the variables were stable since the plots of residual largely stay within critical values lines. It is therefore safe to conclude that financial inclusion model is stable and that it can be used for policy formulation.

Sequel to the foregoing, the OLS estimate is presented in table 4.5:

Table 4.5: Summary of Ordinary Least Square Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.599665	4.041081	0.643309	0.5380
LOG(BMS)	0.610215	0.211504	2.885126	0.0204
LOG(LPS)	0.815547	0.353373	2.307895	0.0499
LOG(BNE)	0.592797	0.596370	0.994010	0.3493
LOG(BDR)	-0.086471	0.056990	-1.517317	0.1677
LOG(DER)	0.112488	0.121640	0.924767	0.3821
LOG(INF)	-0.044207	0.389049	-0.113629	0.9123
R-squared	0.867043	Mean dependent var		10.94065
Adjusted R-squared	0.767325	S.D. dependent var		0.211516

S.E. of regression	0.102028	Akaike info criterion	-1.422416
Sum squared resid	0.083278	Schwarz criterion	-1.091993
Log likelihood	17.66812	Hannan-Quinn criter.	-1.425936
F-statistic	8.694953	Durbin-Watson stat	1.804033
Prob(F-statistic)	0.003746		

Source: *Econometric Views Version 9.0. (2022)*

The regression result in table 4.5 above revealed that the coefficient of determination (R-squared) of the model is 0.867043. This means that over the studied period, broad money supply, loan to the private sector, bank deposit of the rural area, and bank branch network expansion, deposit interest rate, and inflation rate jointly accounted for 86.70% of the total variation in economic growth (RGDP) in Nigeria. This is corroborated by the DW statistics of 1.804033 (which is approximately 2); indicating that there is no first order serial autocorrelation. Additionally, the indicator of the statistical significance of the entire model (the Fisher's ratio) signaled that the model is statistically significant. This further indicates that the model is fit and the explanatory variables are properly selected, combined and used.

Discussion of Results

Having tested the research hypotheses, this section covered the discussion of the regression results alongside the policy implication of each finding:

The ratio of broad money supply to GDP which is a measure of financial development has a positive significant consequence on economic growth. This was indicated by the positive coefficient value of 0.610215 and a p-value of 0.0204 which is below the 5% threshold of significance. By implication, the higher the level of broad money supplies to GDP, the higher the financial inclusion level inherent in the country which in turn increases the growth of the Nigerian economy. This result is in supports the findings of Cicchiello, Kazemikhasragh, Monferrá, and Girón (2021); David, Oluseyi and Emmanuel (2018); Maune (2018) have high impact on economic growth.

Loan to the Private Sector (LPS) which captures the proportion of credit allocated to real sector activity posed that the variable exerted a positive significant impact on economic growth in Nigeria. This is indicative of the fact that, the coefficient of LPS is 0.815547 while its p-value is 0.0499 which is below the 5% tolerable level of significance. This goes to say that credit to the private sector stimulate both financial inclusion and economic growth in Nigeria. This is due to the fact that the more banks give out loans to the private sector, the more the level of

financial inclusiveness. This in turn increases the growth of the Nigerian economy since the private sector just like the public sector contributes immensely to the growth of the Nigerian economy. This follows closely the findings of Thatsarani, Wei, and Samaraweera (2021); Gbalam and Dumani (2020); Gebregziabher and Daniel (2019); Ansaful (2019); and David, et al. (2018) in terms of statistical significance.

Bank branch network expansion (NBR) which captures the spread of bank branches indicated that the spread exert a positive insignificant impact on economic growth. This is indicative of the fact that, the coefficient of bank branch network reported a positive coefficient value of 0.592797 and the p-value of 0.3493 is above the 5% bearable level of significance. This implies that the spread of bank branches and the financial services they render stimulate financial access at an insignificant rate. It is expedient to note that there are few bank branch networks in rural areas which constitute a large number of Nigeria's population and constitute a large number of the universe of the unbanked in Nigeria. This result supports the findings of Gbalam and Dumani (2020) but contradict the findings of Ali, Kaneez and Ahmed (2020); Makina and Walle (2019) and Ong'eta (2019).

Bank deposits to the rural areas which capture the volumes of bank deposits to the rural areas exert a negative but insignificant impact on economic growth in Nigeria. This is informed by the fact that the coefficient of BDR has a positive coefficient value of -0.086471 and a p-value of 0.1677 which is greater than 5% significant level. By implication, though the volumes of bank deposits to the rural areas are minimal but also have an adverse impact on the growth of the Nigerian economy. This further reveals that, this parameter is not a major financial inclusion in Nigeria as at this moment. The possible reason for this is that banks are not willing to place more attention on the rural areas since they do not generate much profit from branches in rural areas compared to branches located in cities. This result conformed to the findings of Onaolapo (2015) but drifted from the findings of Gbalam and Dumani (2020); Asuming, et'al (2019) Gebregziabher and Daniel (2019), and Makina and Walle (2019).

Conclusion and Recommendations

This study empirically examined the impact of financial inclusion on the growth of the Nigerian economy from 2006 to 2020. As proposed in the model, real gross domestic product served as a function of broad money supply, loan to the private sector, bank deposit of the rural area, and bank branch network expansion, deposit interest rate and inflation rate. The time series data were estimated using

the ordinary least square method through the instrumentality of Econometric Views version 9.0. The estimated result depicts positive and significant relationship between the financial inclusion and the proposed variables. Accordingly, findings emanating from the study revealed that having controlled for both deposit interest rate and inflation rate, both Broad money supply (BMS) and Loan to the Private Sector (LPS) exerted positive significant impact on economic growth in Nigeria. However, bank branch network expansion (NBR) had a positive insignificance impact on the growth of the Nigerian economy. Hence, the study concludes that Broad money supply (BMS) and Loan to the Private Sector (LPS) are the most critical financial inclusion parameters which are instrumental to the growth of the Nigerian economy.

In line with the major findings of this study alongside the conclusion drawn from the study, effort should be made by the monetary authority to enlighten and encourage the unbanked populace on how they can conveniently open account with banks. This will enhance the level of financial inclusiveness which in turn will increase the growth of the Nigerian economy. Loan to private sector should be giving more attention since it had significant consequence on economic growth in Nigeria. Nigerian banks should spread their operations to rural areas in order to propagate banking habits, and thus integrate the rural populace into the formal financial sector. Nigerian banks should be encouraged to increase the volumes of their deposit base to the rural areas since it has the potential to improve the growth of the Nigerian economy. Nigerian banks should ensure their products and services are enticing as this will help to increase savings culture of the Nigerian populace. Anti-inflationary policies such as multiple taxation should be discouraged.

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