



Financial Inclusion and Economic Growth in Africa: Insight from Nigeria

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Abstract

Universally, all inclusive financial system indeed promotes economic growth. It is on the basis of this motivation that the study is primarily design to investigate the influence of financial inclusion on the growth of African economy, using Nigeria as a case study. Extrapolated time series financial inclusion data from Nigeria, covering the period of 1981 to 2013 were used in the analysis. The multiple regression models anchored on Ordinary Least Square technique is adopted in estimating the contributions of the variables. While controlling for other macroeconomic exogenous variables; the results show that financial inclusion has significant negative impact on the growth of Nigeria economy over the years. The researcher attributes the result to high level of financial exclusion of bankable adult citizens in Nigeria in particular and Africa in general. The researcher suggests more inclusive financial system in Nigeria (and Africa) with focus on the rural populace because 'growth is good, sustained high growth is better and sustained high growth with financial inclusiveness is best of all' especially in the developing economy.

Keywords: Financial inclusion, Financial exclusion, Economic growth, Nigeria

1. Introduction

Financial inclusion is a sub-set social inclusion policy. Financial inclusion as an integral aspect of social inclusion policy, has attracted universal attention in economic and finance discuss; perhaps because of the fact that globally, all inclusive financial system prop up economic growth. Essentially, not much consideration (research wise) has been given to financial inclusion in Africa vis-à-vis its principal role in African financial system and economic growth. In specific term, financial inclusion according to Aduda and Kalunda (2012:96) is the "process of availing an array of required financial services at fair price, at a right place, form and time without any form of discrimination to all members of the society". Financial inclusion is a purposeful effort to ensure access and availability of financial services such as loans, deposit service, insurance, pension and payments to the bankable citizens.

However, large number of bankable adult populations in Africa seems to have no financial access and usage. In other words, it appears that they are being financially excluded from the economy. As a matter of fact, most adult and bankable citizens in Africa are not fully financially integrated within the economy (World Bank, 2013). For instance, near three billion adults in the world are reported to have been financially excluded (Swamy, 2012). Further, World Bank, (2011) also reports that out of the 50% of banked adults, who have an individual or joint accounts at formal financial institutions, it is only 22% that have savings accounts.

In Africa, the recent global financial inclusion index shows that "less than a quarter of adults in Africa have an account with formal financial institutions (Demirguckunt and Klapper, 2012). This gives apparent irritating contemplation that majority of African adults in many African countries appear to be financially excluded and perhaps use informal method to save and borrow. They perhaps still save under the bed or in the local boxes).

In the Nigerian case, it is reported that about 84.7 million adult populations, a total of 39.2 million adult Nigerians, representing 46.3% Nigerian adults are financially excluded with regards to provision of banking and financial services. Simply put, it is only 31 million adult Nigerians out of 84.7 million adult populations are served with formal financial banking services (CBN, 2012; Berger, 2012). Comparatively, the Central Bank of Ghana (CBG, 2011) reported that out of 16 million adult population of Ghana, 40% of the extreme poor – those living below US\$1 per day, 29% of women and 27% of the youth have no access to banking and financial services. The rate of financial exclusion of adult population in Ghana is said to be greater in the remote areas particularly in the Northern and Upper Eastern region of the country; where 76% and 71% respectively have neither formal nor informal financial services (CBG, 2011).

Previous researches (World Bank, 2010, World Bank, 2011), have shown that many African countries and many small and medium businesses in Africa cite availability and accessibility to finance as major obstacle. Again, access and availability of bank line of credit and other financing sources such as equity market are not an exception. Basically, the key financial inclusion and exclusion indicator/variable in Africa are financial services accessibility, financial services availability; financial services usage (Kempson, Alkinson and Pilley, 2004). The



idea of these broad indicators of financial inclusion is on the premise that in Africa with particular reference to Nigeria, it is not enough to have bank account because the unbanked or under banked people despite having access to the formal financial institutions, most at times do not use the financial services due to remoteness of bank branch, unavailability of the cost attached to banking services among other reasons.

In Africa and particularly Nigeria, there is perhaps large variation in the key indicators of financial inclusion and exclusion. Kempson, Atkinson and Pilley (2004); Kempson, Whyley, and Collard (2000); Kempson and Whyley (1999a) all agreed that in Africa, many people who have bank account do not use them, adding that “financial services accessibility is good but the best inclusive financial economy is the one in which financial service are both adequately utilized and are adequately available”.

The worrisome reality is that most African economy including Nigeria are been run by the fraction of the citizen. As such, any economy where the majority of the citizens are financially excluded and unbanked, the implication perhaps would be a threat to the economy. For instance, according to the Central Bank of Nigeria (CBN, 2009), about 83.9% of the total money in circulation in the country is completely outside the banking system. In other words, it is abysmally 16.1% of the money in circulation that the banking sector accounts for. It is against this background, that this study is therefore motivated to examine the implication of financial inclusion in Africa using Nigeria as a case in point. The rest of the paper are arranged as follows: section two is the literature review, section three is the research methodology, section four highlights empirical result while section five concludes the study.

2. Review of Related Literature

As earlier stated, this section highlights both the conceptual review of financial inclusion and financial exclusion as they are opposed to each other. It also summarizes the empirical review of prior studies on the subject matter.

2.1 The Concept Of Financial Inclusion

Evidence from available literature tends to show that there are different views on the concept of financial inclusion. Meanwhile, the Indian committee on financial inclusion led by Rangarajan defines financial inclusion as the “process of ensuring access to financial services timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at affordable cost” (Rangarajan Committee, 2008:1). Hannig and Jansen (2011:4) posit that financial inclusion is the “absence of price or non-price barriers in the use of financial services”. In their argument, they maintain firmly that the sole aim of financial inclusion is improvement in access of financial services that basically involve improving the degree to which financial services are available to all at a fair price. Hannig and Jansen (2011) really perceive financial inclusion from the affordability point of view without bordering on the desired group or target groups of the economy. Consequently, financial inclusion is defined as “access for individuals to appropriate financial products and services (as cited by Hayton, Percy and Latimer, 2007 from Scottish Executive, 2005). While according to Throat (2009:8) financial inclusion is the “provision of affordable financial services namely- access to payments and remittance facilities, savings, loans and insurance services by the formal financial system to those who tend to be excluded”. Similarly, Central Bank of Nigeria (CBN, 2011:2) maintains that:

Financial inclusion or inclusive financing is the delivery of financial services at affordable cost to sections of disadvantaged and low income segment of society. It is the provision of broad range of high quality financial products, such as credit, savings, insurance, payments and provisions which are relevant, appropriate and affordable for the entire adult population especially low income segment.

Emphatically, the issues raised by the Nigerian apex bank that points to the extreme are that financial inclusion should encompass-ease of access to financial services at affordable cost, broad range of financial products and services that meet the desires of the people. Furthermore, in the opinion of Reyes, Canote, and Mazer (2005:15), financial inclusion means “that the majority of the populations have broad access to a portfolio of quality financial products and services which include loan, deposit services, insurance, provisions and payment system as well as financial education and consumer protection mechanism”. Aduda and Kalunda (2005) made a more generalized view on financial inclusion when they linked it to banking and financial sector outreach. In their views, they maintain that financial inclusion is the “process of availing an array of required financial services, at a fair price, at right place, form and time and without any form of discrimination to all members of the society by the service providers”. The central meaning of the various definitions of financial inclusion remains the same to a reasonable extent irrespective of variations in the wordings. There is no controversy/disagreement among the authors about the concept of financial inclusion; the researcher rather observed that the conceptualizations are “context-specific and country specific”. However, for the purpose of this study, the researcher aligned himself with Sarma (2012)



by adopting his definition of financial inclusion as a working definition in this study. He maintains that financial inclusion is the process that ensures the ease of access, availability and usage of the formal financial system for all members of the economy. The essence of adopting Sarma's definition as the researchers working definition is because it duly emphasized on the core indicators (measurable variables) of financial inclusion. These indicators include financial service accessibility, availability and usage of financial/banking services and system. The combination of these indicators with bank serving as the gateway no doubt brings about inclusive financial system. In this study, bank is being used as analogous to financial inclusion. As earlier stated in the introductory part of this paper, these core indicators are operationally defined as follow:

1) Accessibility of financial services: this is measured by banking penetration (i.e. the proportion of adult people having bank account with official financial institutions). The proportion of deposit account is also a proxy for bankable adults; because an inclusive financial system should penetrate widely amongst its users to increasing the size of the banked population. 2) Availability of financial services- measured by the number of bank outlets or branches and number of functional ATMs per 100,000 adult people; believing that an inclusive financial system should have banking services that are easily available to the users (Sarma, 2012). Accordingly, Sarma believed that number of bank employees per customer can also be used as financial service. But keeping in mind the fact that growing trends in electronic banking, no availability and inconsistent data on number of bank employees, we decide to step it down. 3) Users of financial services – measured by the volume of credit and deposit by adult population as a percentage of GDP.

2.2 Financial Exclusion

Financial exclusion is the direct opposite of financial inclusion. It originated from social exclusion policy. In a more concrete term, Sinclair (2001:2) defines financial exclusion as the "inability to access necessary financial services in an appropriate form and time". He adds that financial exclusion can be possible as a result of difficulties with access, conditions, prices or marketing or sect exclusion in response to negative perception or experiences. Leyshon and Thrift (1995) also maintain that financial inclusion refers to those "process that serve to prevent certain social groups and individuals from gaining access to the formal financial system; while (Mohan cited in Swamg 2010:11) argues that financial exclusion "implies the lack of access by some segment of the society to suitable low – cost, fair and secure financial products and services from mainstream providers". Thus this paper posits that financial exclusion is an unpremeditated process where the poor but bankable adults are denied all sort of financial services in the society.

2.3 Empirical Review

Sarma (2012) evaluated the level of financial inclusion for 94 countries across the world between 2004 and 2010 using index of financial inclusion (IFI) approach which he constructed in line with UNDD within the 94 countries of study. Very few African countries were in the list without even Nigeria and Ghana, though his choice of country was based on data availability in financial access survey (FAS) data base of IMF. Findings in the study indicate that in the year 2009, out of 91 countries finally measured, Chad with IFI value as low as 0.016 was the lowest financially inclusive country while Cyprus with IFI value of 0.996 ranked highest as the most financially inclusive country. Then, in 2010, Afghanistan ranked lowest with IFI value of 0.052 while Luxembourg with IFI value of 0.996 ranked highest. The study concludes from their findings that different countries around the world are at different levels of financial inclusion and exclusion. He recommended for consistent use of multidimensional approach to monitor the level of financial inclusion and exclusion in various countries since it is a good indicator of economic growth.

Onaolapo and Odetayo (2012) in their own study on financial inclusion and micro finance banks in Nigeria disclose that access to finance via micro finance strategy especially by poor and vulnerable groups is a prerequisite for poverty reduction, employment creation, social cohesion and overall economic development for Nigerian nation. While using survey approach in their study, their findings also shows that the commonest reasons for saving with micro finance bank in Nigeria were consumption, investment in education and to start a business; whereas those with better education save more money for investment than the less educated once. They concluded that microfinance institution is inevitable in a globally competitive environment like Nigeria. In line with prior studies, the conclusion of Onaolapo and Odelayo (2012) are in tandem with the result of Ellis, Lemma and Rad (2010) in Kenya who applied the same approach and discovered that reasonable number of people in Kenya save and borrow for household's investment, consumptions and day to day transaction.

Interestingly, Decanay, Nito and Buensuceso (2011) conducted an empirical investigation with international perspective on financial inclusion, microfinance and financial development for eighty countries. Using the index of financial inclusion developed by Sarma (2008); results indicate that: 1) microfinance outreach



has a significant positive relationship to financial inclusion, 2) there is a significant positive relationship between financial inclusion and financial development, 3) index of financial inclusion of micro financial industry has a moderate significant relationship with the financial development index and gross domestic products. Drawing their conclusion, they argue that there is a chain of relationship between microfinance, financial inclusion and financial development. They recommended for articulation of financial inclusion index for all countries to enable each country access the depth of their financial system.

Another study on financial inclusion in Bengal State in India by Chattopadhyay as cited in Aduda and Kalunda, 2012:21) reveals that even though:

...found to be noteworthy with only one out of eighteen districts having a high IFI value, using the three dimension and the rest of the districts belonging to the low level of IFI value; the supply and demand side factor are equally responsible for financial exclusion; there is persistence in use of informal institutions and money lender in Bengal state.

The study tells us nothing on the quality of services and products as this could be a factor for low IFI value result but rather raises the question of continued existence of money lenders despite their high interest rate and in an environment of financial inclusion initiatives. However, what made study of Chattopadhyay (2012) very interesting is the focus on some social-economic indicators like occupation, literacy, and land holding patterns in rural areas, rural indebtedness and people's opinions about banking services.

Other studies on financial inclusion abound. The researcher however summarized the empirical literature because of the limited space. For example, the study of Burgess and Pandey (2007) provides further evidence that financial inclusion by opening branches of commercial banks via state- led policies is associated with poverty reduction in the rural unbanked location of Ghana. Then, the work of Ruize and Porras (2008) shows that financial development is associated with market- based financial system, while the study on the role micro finance interventions in financial inclusion in a rural district by Barman, Mather and Karia (2009) indicates that as much as financial inclusion is seen as a very good strategy, it also leads to increased indebtedness to non institutional or informal sources.

3. Research Methodology and Description of Research Variables

The study adopted quantitative research design anchored on Ordinary Least Square multiple regression models. For the purpose of achieving the objectives of the study, the study made use of secondary data. The data were variously sourced from central Bank of Nigeria (CBN) statistical Bulletin of various years; Deposit Money Banks Annual Reports and Statement of Account of various years. In the same way, financial inclusion data were extracted from World Bank inclusive Data developed by Demurge-Kunt and Klapper; and the global Findex (index of financial inclusion, IFI) of various years.

Description of Research Variables: The research variables are generally grouped into dependent variable (the endogenous factor) and independent variables (the exogenous factor). The Nigerian economic growth formed the dependent variable of the study. It is measured in this study by Real Gross Domestic Product (Real GDP). The GDP is chosen as measure for economic growth in this study on the justification that GDP is conventionally adopted as a strong indicator of economic growth. On the other hand, the independent (exogenous) variables include the financial inclusion variables such as deposit of rural branches of deposit money banks, total loans and advances of rural branches of deposit money banks bank, Deposit Money Bank loans and advances to small scale enterprise among others. Other variables included in the study are the controlled variables such as inflation rate, and banking system development. The reason for controlling these exogenous variables is basically as a result of the research methodologies of prior researches and the roles of these variables in economic theories (Ezeoha, 2009).

(a). Deposit Money Banks loans to small scale enterprises. This is defined in this study as percentage of total loans to small scale enterprises and the banks' total credit to the enterprise. The essence of obtaining its percentage is to avoid use of the absolute figures in the analysis. The justification for including Deposit Money Banks total loans to small scale enterprise is also because it is one of the financial inclusion indicators in terms of financial usage and access. In term of financial services usage, these variables no doubt capture the percentage of small and medium scale enterprises that have an account with formal financial institutions in Nigeria. On the other hand, the loans obtained by these enterprises basically capture financial accessibility by the enterprise. The apriori expectations is that the more small scale enterprises in Nigeria access funds and use the services of financial and banking institutions; the more likely improved growth in the economy.

(b). Deposit of rural branches of deposit money banks- This variable is operationally defined as the ratio of total deposit of rural branches of deposit money banks in Nigeria. These deposits capture the level of financial service availability and usage by citizenry in Nigeria, bearing in mind that greater proportion of adult population who are



financially excluded are the rural dwellers. Their deposits in rural banks branches indicate their accessibility to financial institutions and banking services including the availability of financial institutions to use. The total deposits are in millions of naira and as a matter of fact, logarithm was taken on them to normalize the naira values with other values in ratio or percentage.

(c) Amount of loans of rural branches of deposit money banks in Nigeria. The loans are defined in this study as the logarithm of total loan advanced by deposit money bank rural branches to individual citizens in the rural areas. The loans are in absolute naira values, hence the reason for logging them as earlier explained above.

(d) Bank branches spread: Bank branches spread are defined in this study as the logarithm of the total number of bank branches in Nigeria both in the urban and rural areas. The justification for including banks branches of deposit money banks in the variables is because it measures the level of financial service availability in Nigeria; since the challenge is that most unbanked adults of Nigerian population suffer non-availability of banking services brought about by bank branches located in far distance (often the urban area).

(e) Banking system development: Banking system development is operationally defined in this study as the total value of domestic credit provided by the banking sector to the private sector divided by real GDP. The reason for adopting this definition instead of the rate of broad money supply M2 to GDP is captured in the words of Adenuga (2010) that “private credit is the most comprehensive indicator of the activities” of deposit money banks. It captures the amount of external resources channeled through the banking sector to private firms and it measures the activities of the banking sector in one of its main function. As a matter of fact, the researcher expects the banking sector to have a positive sign.

(f) Inflation rate: This is a controlled variable. Inflation was controlled for in the model as a macroeconomic variable and because of its major role in an economy.

4. Research Model specification

Based on the explanation of both the endogenous and exogenous variables above, the study hypothetically states that economic growth in Nigeria is a function of the level of financial inclusion in Nigeria. In a functional relation, this statement can be express as thus: Economic growth in Nigeria = F (financial inclusion). Therefore, the regression estimation model from this functional relation is then written as thus:

$$Gdp = \beta_0 + \beta_1 Dlse_t + \beta_2 Drbc_t + \beta_3 Amtl_t + \beta_4 Bbsp_t + \beta_5 Bsdv_t + \beta_6 Infr + \epsilon_t, \dots, 1$$

Where: Gdp- represents real gross domestic product as proxy Nigeria economic growth,

Dlse -represents deposit money bank loans to small scale enterprise,

Drsc- represents deposit of rural banks branches,

Amtl- represents amount of loans by rural bank branches,

Bbsp- represents bank branch spread,

Bsdv - Banking system development,

Infr- inflation, ϵ -

error terms.

The regression equation 2 above is transformed into exponential equation to avoid additive model. It is expressed as follows:

$$\text{LogGdp} = \beta_0 + \beta_1 \text{logDlse}_t/\text{gdp} + \beta_2 \text{logDrbc}_t/\text{gdp} + \beta_3 \text{logAmtl}_t/\text{gdp} + \beta_4 \text{logBbsp}_t/\text{gdp} + \beta_5 \text{logBsdv}_t/\text{gdp} + \beta_6 \text{Inft} + \epsilon_t \dots \dots \dots 2$$

Where:

Log- represents logarithm, other variables remain as described above.

5. Results and Analysis

For the purpose of achieving valid empirical results, robustness and diagnostics check for accuracy and validity of the model were made. The results obtained are presented as follows:

5.1 Diagnostic Results

Unit Root Test: While using the augmented Dick-Fuller techniques (Dickey and Fuller, 1979), the results of the unit root test show that all the variables including the dependent variable are not stationary in the original nature of the variables. However, further test shows that all the time series variables proof stationary at their first differences. To confirm this, the ADF statistical values with zero lag are higher than the test critical value at the acceptable 1% percent, 5% percent and 10% percent level of significant; indicating that the variables are found to be stationary at the their first different and at the three levels of significance.



Autocorrelation: The presence of autocorrelation was checked to find out whether the relationship; between the values used in the model are separated from each other, arising from a described or specified time lag. The Durbin-Watson statistics was used in this regard. Essentially, the observed Durbin-Watson (D) value from the model = 2.046145. With this (D) value, coupled with the values Akaike criterion,

Schwarz criterion and Hannan-Quinn criterion showing approximately same value; the researcher no doubt infers that there is no statistical evidence of the presence of autocorrelation (or the likelihood of independent error terms influencing the dependent variables of the study).

Heteroskedasticity Result: The Breusch Pagan-Godfrey method of checking for heteroskedasticity was used in the study. The reason for heteroskedasticity test is to find if there is an association between the dependent and the independent variables of the study. It is a basic assumption in ordinary least square (OLS) technique, usually accomplished when the OLS coefficient estimates are best linear unbiased estimation (BLUE). Meanwhile, the white test is practically calculated by obtaining the product of R-square and the number of observations (N). Thus, the R-square value of the Breusch-Pagan Godfrey heteroskedasticity test is 0.204783. Therefore, the white test $\Rightarrow 0.204783 \times 32 = 6.553056$. Decision of heteroskedasticity test is stated thus: 'If white test > critical χ^2 then reject H_0 and conclude that heteroskedasticity exist,' but If white's test < critical χ^2 , then accept H_0 and conclude that there is no heteroskedasticity'. The critical chi-square value for 25 degree of freedom at 5% level of significance = 37.652. Since $6.553056 < 37.652$ the researcher concludes that there is no heteroskedasticity. See the table below.

Table1: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.072995	Prob. F(6,25)	0.4048
Obs*R-squared	6.553063	Prob. Chi-Square(6)	0.3642
Scaled explained SS	14.09533	Prob. Chi-Square(6)	0.0286

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Sample: 1981 2013

Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	700718.5	8965081.	0.078161	0.9383
LOGDLSE	-374614.1	345523.9	-1.084192	0.2886
LOGDRBB	-221.0328	176.6830	-1.251013	0.2225
LOGAMTL	-166.7846	121.6813	-1.370667	0.1827
LOGBBSP	6545.469	3459.716	1.891909	0.0701
LOGBSDV	-287271.8	443320.3	-0.648001	0.5229
INFR	-27285.40	121608.1	-0.224372	0.8243

R-squared	0.204783	Mean dependent var	3977719.
Adjusted R-squared	0.013931	S.D. dependent var	10729233
S.E. of regression	10654235	Akaike info criterion	35.39145
Sum squared resid	2.84E+15	Schwarz criterion	35.71208
Log likelihood	-559.2632	Hannan-Quinn criter.	35.49773



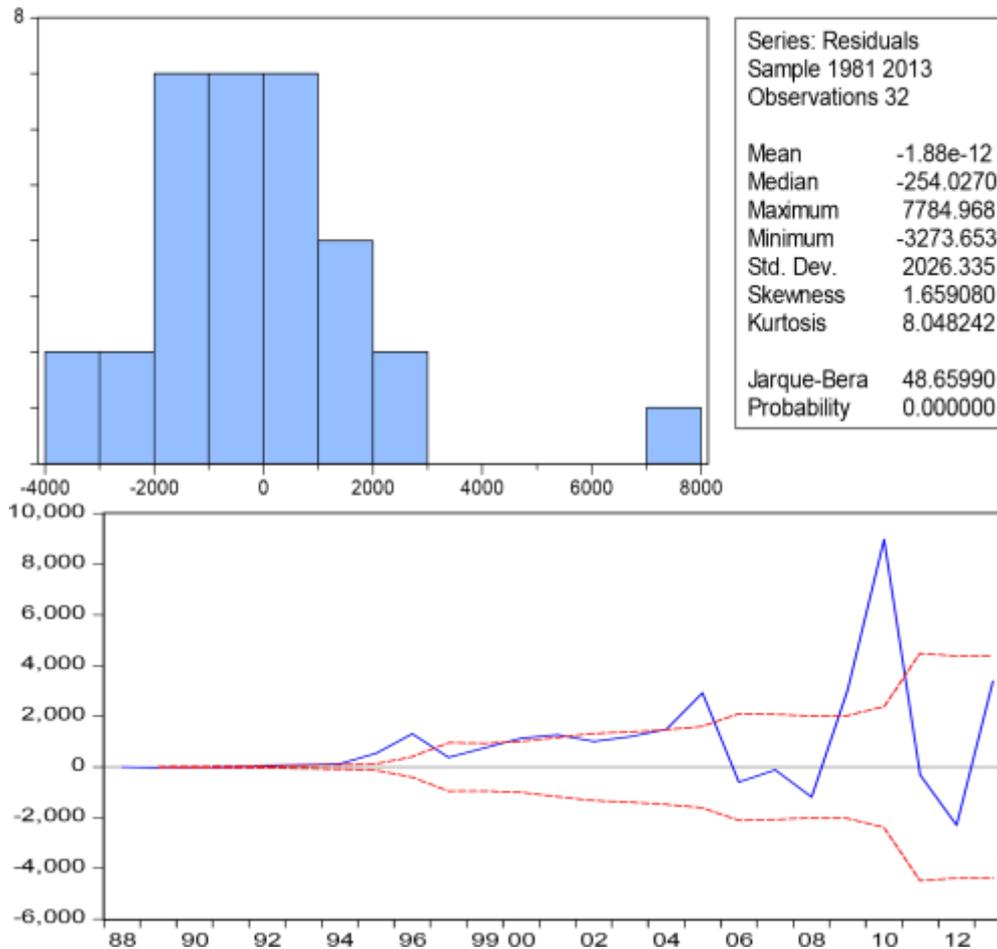
F-statistic	1.072995	Durbin-Watson stat	2.443285
Prob(F-statistic)	0.404776		

Source: EView Statistics

Normality Assumption: The Jarque-Bera technique was used to test normality assumption for the purpose of accomplishing basic assumption of OLS. The reason for using this method instead of other techniques is because Jarque-Bera method is specifically dedicated to OLS and it carries asymptotic test (Iyoha, 1998). However, from the result, the model is not well distributed, but the researcher ignored it because it has no effect on the outcome of the estimated equation. See for instance the table below.

Table

2:



Normality Test Results

- 7
- 6
- 5
- 4
- 3
- 2
- 1
- 0



6. Empirical Result and analysis

From the estimated equation result, the value of R-square is 97% approximately. This means that the model specification of the study explained about 97% of the total differences of endogenous variables. Therefore, the omitted variables in the model account only for 13% difference. The statistical proof from the study also shows that the R^2 (R-squared adjusted) of the endogenous variables jointly explained around 96% of the total difference in the dependent variables (GDP). The high percentage of R^2 adjusted confirms that the goodness of fit and suggest that disparity did not result from the use of various variables in the model. This is further confirmed by the contribution of F-statistics in the result. The table below shows the description of the static regression analysis where the endogenous variables (GDP) were regressed on the exogenous variables (DLSE, DRBB, AMTL, BBSP, BSDV and INFR).

Table 3: ESTIMATED EQUATION RESULTS
Dependent Variable: LOGGDP
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5679.633	1898.690	-2.991343	0.0062
LOGDLSE	-255.4062	73.17756	-3.490225	0.0018
LOGDRBB	-0.187942	0.037419	-5.022612	0.0000
LOGAMTL	0.142554	0.025771	5.531656	0.0000
LOGBBSP	5.669820	0.732724	7.738006	0.0000
LOGBSDV	272.0612	93.88957	2.897672	0.0077
INFR	-52.27531	25.75505	-2.029711	0.0532
R-squared	0.968667	Mean dependent var		8714.509
Adjusted R-squared	0.961147	S.D. dependent var		11447.54
S.E. of regression	2256.431	Akaike info criterion		18.47160
Sum squared resid	1.27E+08	Schwarz criterion		18.79223
Log likelihood	-288.5455	Hannan-Quinn criter.		18.57788
F-statistic	128.8146	Durbin-Watson stat		2.046145
Prob(F-statistic)	0.000000			

Source: EView Statistics

Note: Estimation is significant at 1%, 5% and 10%.

Similarly, the p-value of deposit money banks' loans to small scale industry/enterprise (DLSE) is 0.00% with t-statistic value of -3.490225. This implies that at about 99% level of confidence, there is a negative influence of the non usage or inaccessibility of loans of deposit money banks by small scale enterprises on the Nigerian economy. The result confirms that one percent level of financial exclusion of small scale industry in Nigeria, especially in the area of access to deposit money bank loans lead to high decrease in the growth of the Nigerian economy. The empirical fact derived from this study disclosed in strong term that in Nigeria, small scale industries are financially excluded, from using and accessing the loans from deposit money banks. This empirical result no doubt justifies the assertions of other prior researchers that the Nigerian economy is been run on selected sectors of the economy.

Again, the regression result shows that deposits of rural branches of deposit money banks has negative significant influence or impact on the Nigerian gross domestic product. Meaning that the financial exclusion of the greater proportion of adult Nigerian citizens in the rural areas in term of financial services availability and usage via the deposit money banks rural branches have significant negative impact on the growth of Nigerian economy. It suggests that one percent decrease in the level of financial inclusion in Nigeria reduces the growth of the Nigerian economy by 19%.

Further, the amount of loans of rural bank branches and the number of bank branches as a measure of financial services availability show significant positive influence on the growth Nigerian economy. Therefore, the higher the number of bank branches (especially in the rural areas) in the country, the higher and as well the higher number of bankable adult citizens that will be financially included in the economy. The implication is that Nigerian economy will perhaps improve; such that money that could have been save under the bed (due to inaccessibility

of bank services) will be saved in the bank through bank branches closer to the people in the rural areas or communities.

In addition, two controlled exogenous variables were employed in the study namely-banking sector development and inflation rate. The P-value for banking sector development according to the result is 0.007% with t-statistic value of 2.897672; suggesting that banking sector development contributes positive influence to the growth of Nigerian economy. The result further confirms that one percent increase in banking system development brings about increase in the level of economic growth in Nigeria by high percentage as can be seen from the regression result. On the other hands, there is a statistical proof that inflation rate has also negative significant influence on the growth of Nigerian (the sign was also expected).

7. Conclusion

In line with the methodology adopted in the study due to the subject matter, the ordinary least square was used in estimating the regression equation. The outcome shows that deposit money banks loans to small scale enterprise and the deposit of rural bank branches of deposit money banks have significant negative influence on the growth of Nigerian economy, while the amount of loan of rural bank branches and the number of bank branches spread in the country have significant positive influence on the growth and the development of Nigerian economy. Overall, that study concludes that non-availability of banking and financial services, non-accessibility of banking and financial services and under utilization of banking/financial services in Nigeria immensely distort the growth of Nigerian economy. Thus, the researcher attributes the dwindling growth of Nigerian economy partly to the challenges of financial inclusion in Nigeria.

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Appendix 1

Summary Data on Financial inclusion in Nigeria

Yr	GDP	DLSE	DRBC	AMTL	BBSP	BSDV	INFR
1981	47.6	2.45	0	0	362	9.1	0.9
1982	49.1	5.02	111.7	35.9	984	10.6	7.7
1983	53.1	5.23	131.2	44.2	1101	10.6	23.2
1984	59.6	12.41	276.6	58.2	1242	10.7	39.6
1985	67.1	17.34	311.4	114.9	1290	9.7	5.5
1986	69.1	16.23	873.5	373.6	1360	11.3	5.4
1987	105.2	18.11	1229.2	492.8	1476	10.9	10.2
1988	139.1	19	1378.4	659.9	1659	10.4	38.3
1989	216.8	19.04	5722	3721.1	1849	8	40.9
1990	267.5	21.12	8300.1	4730.8	1934	7.1	7.5
1991	312.1	27.22	10580.7	5962.1	2018	7.6	13
1992	532.6	27.04	4612.2	1895.3	2269	6.6	44.5
1993	683.9	17.41	19542.3	10910.4	2352	11.7	57.2
1994	899.9	14.32	4855.2	1602.2	2397	10.2	57
1995	1933.3	15.86	8807.1	8659.3	2362	6.2	72.8
1996	2702.7	16.6	12442	4411.2	2402	7.5	29.3
1997	2802	13.12	19047.6	11158.6	2402	7.5	8.5
1998	2708.4	11.53	18513.8	11852.7	2180	8.8	10
1999	3194	10.43	15860.5	7498.1	2180	9.2	6.6
2000	4582.1	7.58	20640.9	11150.3	2188	7.9	6.9
2001	4725.1	6.21	16875.9	12341	2188	11.1	18.9

2002	6912.4	8.68	14861.6	8942.2	3005	11.9	12.9
2003	8487	7.49	20551.8	11251.9	3242	11.1	14
2004	11411.1	3.62	64490	34118.5	3487	12.5	10.1
2005	14572.2	2.52	18461.9	16105.5	3422	12.6	11.5
2006	18564.6	0.99	3118.6	24274.6	3489	12.3	8.6
2007	20657.3	0.85	3082.3	27263.5	3521	17.8	6.6
2008	24296.3	0.17	13411.8	46521.5	3533	28.5	15.1
2009	24794.2	0.17	3296.2	15590.5	3547	36.7	12.1
2010	29205.8	0.14	20.7	16556	3582	18.7	11.8
2011	29842.2	1.65	94.7	71294.2	3812	16.9	11.8
2012	30795.5	0.59	80.5	90782	3812	20.6	9.1
2013	35883.8	1.86	96.2	89822.1	3820	19.7	9

Source: Compiled by the Researcher from various CBN Statistical Bulletin, CBN