

## **Improvement in Institutional Quality and Financial Inclusion in Nigeria (1988-2015)**

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### **ABSTRACT**

This study examined the link between improvement in institutional quality and financial inclusion in Nigeria, using time series secondary data between the first quarter of 1988 and fourth quarter of 2015. The model used is the Autoregressive Distributed Lag Model (ARDL) and the technique of analysis adopted in this study is the ordinary least square regression method. Test for the reliability of the data was conducted using the Phillips-Perron (PP) unit root test and the bound test for co-integration. The study found evidence that institutional qualities have no significant impact on financial inclusion.

**Keywords:** Financial inclusion, Institutional Quality.

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### **INTRODUCTION**

Financial inclusion is defined as a process or situation which allows the unbanked; especially the dwellers in rural and semi-urban areas, easy access to loans and deposit mobilization by formal financial institutions, or availability of and usage of formal financial services by rural dwellers, (Oyewo and Oyewole,2014) [1]. It describes a process where all members of the economy do not have difficulty in opening bank account, can afford to access credit, and can conveniently, easily and consistently use financial system products and facilities without difficulty, (Plymouth City Council Financial Inclusion Strategy, 2009)[2]. In that regard, financial exclusion is the inability of individual, household or group to access particularly the formal financial products and services-in the form of loans and deposit mobilization.

An all encompassing financial services and growth is needed in an economy in order to share the benefits of economic growth more or less equally among all sections of people [3] which may not be feasible where majority are not part of the financial operations.

Inclusive growth in the economy can only be achieved when all the weaker sectors of the economy, including agriculture and small scale industries, are nurtured and made to beat the same level with other sections of the society in terms of economic development”.

That notwithstanding, 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 thereby increasing the level of economic growth. The financial sector is an engine of economic growth, and most literature confirmed this, especially (Nzotta and Okereke 2009) [4]. Research further has it that an inclusive financial system is of great benefit to low income and other disadvantaged groups as it enables them to have broad access to financial services, with-out price or non-price barriers to their use, (Fadun, 2014)[5]. This means that, without inclusive financial systems, low income and small enterprises must rely on their own limited savings and earnings to pursue promising growth opportunities.

In assessing the extent of financial system performance in Nigeria, it is imperative to note the importance of financial infrastructure in the country and the institutional arrangements organised to regulate the relationships between different components and segments of the financial system in Nigeria [6]. Thus, issues like governance, rule of law, regulation and supervision, payments systems as well as rules and standards governing risk taking and management which constitute major framework of the financial system infrastructure , should be properly guided in order not to destabilize the financial system. This reveals the role of institutional quality in enhancing financial system performance. According to [6] weak institutional factors such as weak corporate governance, corrupt and fraudulent practices and the likes can impede financial system performance. Thus, maintaining financial stability with sound institutional quality in any economy is expected to have a direct positive multiplier effect in enhancing financial inclusion and economic growth since countries with better developed financial

system are supposed to experience faster reductions in poverty levels with increased financial access (Yunus, 2007)[7].

### STATEMENT OF PROBLEM

A notable issue in financial inclusion policies in Nigeria is the issue of access to financial services and products by the financially excluded segment of the society. However, the developing nature of the Nigerian financial inclusion efforts has been a thing of worry, due to the feeble institutional framework. The inability of the institutions to perform its functions in providing for every segment of the society has further deteriorated the confidence of the financially excluded people participating fully in the system [4].

Thus, due to the vulnerability of systemic distress inherent in weak regulatory framework, poor judiciary system, rule of law, corruption and insecurity, it almost difficult for citizens to tap from the benefits inherent in financial inclusion [3]. Many investors in Nigeria, mostly micro-entrepreneurs have been subjected to unnecessary severe financial constraints, denying them the opportunity to participate fully in the financial inclusion policies [4]. For instance, following 2005 United Nation World Summit, it was recorded that 46.3 per cent of Nigeria's population is still financially excluded compared to South Africa, Kenya, and Botswana with 26 per cent, 32.7 per cent and 33 per cent, respectively [3].

In addition, due to the inept of the institutional framework in the enforcement of law and prosecution of the offenders, corruption becomes intensified in the country. Thus, there were societal institutions decayed to an unprecedented extent, as opportunities to access credit were colonized and hijacked by the few bourgeoisies with little or no collateral. This process was accompanied by the subversion of due process, the manipulation of existing rules and the destruction of the endured democratic values. Considering the insignificant contribution of the small scale businesses and the low income group in Nigeria, the federal government of Nigeria has grown much concern over the declined in the recent time. To this, many institutional reforms has been

initiated in order to improve transparency and accountability of public institutions, enforce strict regulations and prudential guide for financial services and products, business activities and combat corruption.

### **RESEARCH OBJECTIVES**

The main objective of the study is to investigate the impact of institutional quality on financial inclusion in Nigeria.

#### **Research Questions**

What is the impact of institutional quality on financial inclusion in Nigeria?

#### **Hypotheses**

H<sub>0</sub>: Improvements in institutional quality have no significant impact on financial inclusion in Nigeria.

#### **Scope of the study**

The study will focus on the financial sector of the Nigerian economy and will use aggregate rural commercial bank loans and deposits and number of bank branches (branch expansion) as proxy for financial inclusion, while institution is captured by regulatory quality, government effectiveness, political stability and absence of voice. Time series quarterly data from 1988 to 2015 is used. This will enable an efficient and robust time series regression analysis with observation of over 30 years period required for a time series regression.

### **REVIEW OF RELATED LITERATURE**

#### **THE RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND FINANCIAL INCLUSION**

A developed financial sector entails more people having access to formal financial services by means of financial inclusion. However, since financial inclusion ensure that the low income earners, illiterates and people living in rural areas can make deposits and obtain loan from financial institutions and also bring the services closer to them at an affordable cost, (Mohan 2006) [8]. As a result, financial development brings financial inclusion and the relationship between financial developments and economic growth models is concerned with the sense that financial market will raise savings, investments

and hence the growth rates. When more people have access to financial services, they will be enabled to partake in more productive services which enhance economic growth. The mechanisms through which financial markets influence economic growth are: efficient resource allocation and information channel, used in monitoring of managerial performance. Based on the relationship between Finance, Growth and Development, this study examined the determinants of economic growth and financial inclusion. The relationship between financial inclusion and economic growth is enhanced by the following variables: interest rate, inflation and exchange rate.

## **THEORETICAL LITERATURE**

### **FINANCIAL INTERMEDIATION THEORY**

In the literature, it was the seminal works of works of [6] and [4] that provided the foundational intellectual framework for financial system reforms in developing countries in the 1980s. The Mckinnon-Shaw thesis argued strongly that (a) the financial sector is critical and necessary for the growth of the economy (b) the government's interference and imposition of extensive controls on the financial sector militates against the contribution of the sector to growth and development by preventing financial deepening process.

### **EMPIRICAL REVIEW**

Studies have empirically investigated the effect of bank expansion on improving loans and deposits to the unbanked which impact on economic growth. [5], investigated the effects of policy consolidation on the stability of the financial system in Nigeria from 1986 to 2004 using the chow test. The study found that consolidations had a negative effect on ROA, which indicates that consolidations led to inefficiencies, and that this dominated the effect of increased market power, if any such increase occurred.

Osinubi (2006),[9] studied the effects of recapitalization on financial performance in selected banks 2001-2005 in Nigeria. He found that the asset quality of the Nigerian banking industry does not depend on its capital base. The study calculated the CAMEL ratios for each of the selected banks and relates these to their capital base. Data was

collected on shareholders' fund, which constitutes the bank's capital base; data was also collected on the total asset, classified loans, Earning before interest Taxes (EBIT) and Gross Loans and Advances. Using the CAMEL indicators, the study found that the asset quality of the Nigerian banking industry does not depend on its capital base. However, the study shows that the more the capital base the higher the liquidity and capital adequacy of the banking industry. The return on assets also increases as the firm's capital base increases.

Mbutor and Uba (2013) [10], present a simple model showing the impact of financial inclusion on monetary policy in Nigeria between 1980 and 2012. Their result supports the notion that growing financial inclusion would improve the effectiveness of monetary policy. However, in their result the coefficient of the number of bank branches has the wrong sign and which they explained by saying that, in opening branches, banks mainly pursue profits but not financial inclusion which is a policy objective, so that there are clusters of branches which are under-utilized while numerous locations which are considered not favourable for balance sheets are under-branched.

Oyewo and Oyewole (2014),[1] studied financial system, financial inclusion and economic development in Nigeria. They used a 16 year period data (from 1992-2007) which makes their analysis biased. Economic development was measured using the Gross Domestic Product (GDP), financial inclusion was measured using three variables namely-deposits attracted by rural branches of Commercial Banks, loans and advances of rural branches of Commercial Banks and Commercial Banks Loans to Small Scale Enterprises respectively for a 16-year period of 1992 to 2007. Correlation and time-series regression model were used for quantitative analyses, with the aid of a statistical package. They used a secondary data which was sourced from Central Bank of Nigeria (CBN) statistical bulletin.

**METHODOLOGY AND DATA**

In this study, ex post facto design shall be adopted in obtaining, analyzing and interpreting data relating to the objectives of the study. The choice of this type of design will allow the researcher the privilege of observing variables over a long period of time. For this reason, both the dependent and independent variables will be observed over the period, 1988 first quarter to 2015 fourth quarter. Data collected was analyzed and the hypothesis tested using the ARDL (Autoregressive Distributed Lag) model to determine the effect of the independent variables - financial inclusion (proxied by bank branch expansion, loans and deposits with rural branches of commercial banks) on the dependent variable - institutional factors proxied by regulatory quality and political stability as measured by World Government Indicators, [11].

The study employed secondary data collected from the following sources: [6], [7], [11].

**MODEL SPECIFICATION**

Based on the theoretical reasoning above, the modified model used by Oyewo and Oyewole (2014) [1], the specification of the model which relates to financial inclusion and institutions is specified as follows;

**FINC = f(INS, EXCH, FD).....1**

Equation one implies that the increase or decrease in financial inclusion is a function of, institutional factors, exchange rate, and financial depth (represented by ratio of private sector credit from banks to gross domestic product). The study used loans from rural branches of commercial banks as an indicator of financial inclusion-due to lack of data in Nigeria.

Equation 1 is the mathematical specification for model 1 which is transformed to incorporate time series property as shown below. The ARDL model is specified as follows:

$$\Delta(\text{FINC})_t = \alpha_0 + \alpha_1 \sum_{i=1}^p \Delta \text{FINC}_{t-i} + \alpha_2 \sum_{i=1}^p \Delta \text{INST}_{t-i} + \alpha_3 \sum_{i=1}^p \Delta \text{EXCH}_{t-i} + \sum_{i=1}^p \alpha_4 \Delta \text{FD}_{t-j} + \alpha_5 \text{ECM} + \mu_t \dots\dots\dots 2$$

An ordinary least squares technique is used to estimate equations 2. The problems of multi-collinearity were considered when deciding the combinations of the predictors for the various models. Since the study is that of the effect of institutions on financial inclusion in Nigeria, equation for analysis will depend on short-term analyses, which require that the variables in the model need to follow the same long-run trends, implying that they must co-integrate. If the variables are not co-integrated, then the independent variables might drift above or below the dependent variable in the long-run. The modelling procedures adopted are as follows: Running a co-integration regression which is obtained from the normalized coefficient of the model generated from the co-integration result. And should co-integration exist the error correction model is estimated where the speed of transmission will be determined.

#### DESCRIPTION OF VARIABLES

All variables used in this study are national aggregate data of commercial banks and other financial system indicators. The meaning of the variables used in the study is;

**FINC** = Financial inclusion-which represents loans and advances of rural branch of commercial banks in Nigeria.

**FD (financial depth)** = ratio of commercial bank private sector credit to GDP -this serves as a control variable.

**INTR** = Interest rate (used to represent the CBN monetary policy).

**INST** = Institutional Qualities. Following [7] and [11], Political stability and absence of violence measure the intent to destabilize or overthrown government by unconstitutional or violent means, including politically motivated violence and terrorism. Government effectiveness captures the degree of its independence from political pressures and the credibility of the government's commitment to policy formulation. In view of the above proxies, institution is captured by regulatory quality, government effectiveness, and political stability. The data for institutional indicators were generated from World Government Indicators (WGI) produced by Kaufmann et.al (2010)[11].

## DATA PRESENTATION AND ANALYSIS

Unit root tests and the order of integration.

Tables 1 presents the summaries of the unit root test results for the series in levels and in first

differences. The tables represent the Phillips-perron unit root test results. Furthermore, the results in Table 1 indicate that three of the variables become stationary at first difference while interest rate is stationary at levels which necessitated the use of ARDL model.

**Table 1 Phillips-Perron Unit root test results**

<b>Phillips-Perron (PP) Unit Roots Test</b>					
<b>Variables</b>	PP Test stat at level	Crit. value at 5%	PP Test stat at first difference	Crit. value at 5%	Order of Integration
<b>FINC</b>	-2.161162	-3.450807	-10.49594	-3.451184	I(1)
<b>FIND</b>	-2.663972	-3.450807	-4.821102	-3.451184	I(1)
<b>INST</b>	-2.221958	-3.450807	-4.836705	-3.451184	I(1)
<b>INTR</b>	-3.519835	-3.450807			I(0)

The Phillips-Perron (PP) test was conducted on variables in order to determine their stationary nature and those found non stationary were differenced to get rid of the stochastic trend, a phenomenon associated with time series data. The results of the Phillips-Perron (PP) unit root test show that one of the variables was stationary at levels and the other three were differenced, and they became stationary at first difference. Thus, none of the tests have the variables stationary at second difference and this necessitated the use of the ARDL model.

### BOUND TEST

The calculated F-statistics are reported in Table 2 when each variable is considered as a dependent variable (normalized) in the ARDL-OLS regressions. From these results, it is clear that there is a long run relationship amongst the variables when Log(FINC) is the dependent variable because its F-statistic (4.3927) is higher than the upper-bound

critical value (3.39) at the 5% level. This implies that the null hypothesis of no cointegration among the variables is rejected.

**Table 2 Bound test for the estimation with De facto Financial Openness Variable**

Test -Statistic	5 % Critical Value Bounds		Remark
	Lower Bound	Upper Bound	
<b>F-Statistics</b>			
<b>4.392715</b>	2.22	3.39	

Thus, as the value of our F-statistic exceeds the upper bound at the 5% significance level, we can conclude that there is evidence of a long-run relationship among the variables in the series.

### Estimated Results

**Table 3: The ARDL -ECM Short-run (3, 1, 0, 0)**

Dependent Variable Log(FINC)				
Variables	Coefficient	Std. Error	T-statistics	Probability
<b>DLOG(FINC(-1))</b>	0.229110	0.105738	2.166776	0.0333
<b>DLOG(FINC(-2))</b>	0.023145	0.098257	0.235558	0.8144
<b>DLOG(FINC(-3))</b>	0.169526	0.086857	1.951772	0.0546
<b>D(FIND)</b>	0.283308	0.102862	2.754252	0.0073
<b>D(FIND(-1))</b>	-0.165331	0.063708	-2.595128	0.0113
<b>D(INST)</b>	-0.258926	0.275334	-0.940407	0.3499
<b>D(INTR)</b>	1.324548	0.661586	2.002080	0.0488
<b>(ECM(-1))</b>	-0.360157	0.135174	-2.664401	0.0094

### INTERPRETATION OF SHORT RUN RESULT

The objective of the study is to estimate the impact of institutional quality on financial inclusion which give rise to the two hypotheses stated below;

Ho: Improvement in institutional quality has no significant positive impact on financial inclusion in Nigeria.

From table 3 above, since the coefficient of institutional quality is negative and probability value 0.3449 which is greater than the 0.05 probability level of significance, the null hypothesis that institutional quality has no significant positive impact on financial inclusion in Nigeria is not rejected in the short term period.

Notice that the coefficient of the error-correction term,  $r_{t-1}$ , is negative and very significant. This is what we'd expect if there is co-integration between log (FINC) and other repressors. The magnitude of this coefficient implies that nearly 36% of any

disequilibrium between  $\log(\text{FINC})$  and other variables is corrected within one period (one year).

### **DISCUSSION OF FINDINGS**

The study found that institutional qualities have no significant impact on financial inclusion in the short-run, but institutional qualities have a significant impact on financial inclusion in the long-run in Nigeria. This result agrees with that of [6] who studied the relationship between institutional quality and financial development in 19 Sub-Saharan Africa countries for the periods of 1984 to 2007. It also agrees with that of [9] who found that performance of commercial banks is influenced by a host of institutional, regulatory, macroeconomic, and legal factors. They conclude that increasing the ratio of total deposits to total assets by the banks means increasing the funds available to use by the banks in different profitable ways such as investments and lending activities.

### **SUMMARY OF THE FINDINGS**

The study tries to shed light on institutional quality and financial inclusion in Nigeria. The study found evidence that institutional qualities have no significant impact on financial inclusion in the short run period but has significant impact on financial inclusion in the long run period.

### **CONCLUSION**

Most studies reviewed asserted that perhaps some of the reasons why financial developments experienced by some countries have not effectively translated to their growths are poor institutional qualities. It has been shown that in countries with low levels of institutional qualities households and small firms resort to informal financial services and these can be counter-productive. In the light of this, many economies have come to recognize the potential of institutional qualities which are now becoming an important political issue to financial markets regulators and operators. The Nigerian financial sector has witnessed significant developments in recent years as both the

government and private operators in the sector have instituted policies and strategies for its expansion. Although many of these efforts have always been targeted at financial improving institutional qualities, what remains however is for the impact of the country's financial sector development to reflect in the growth of the real sector. Empirical evidence from this study has support strong linkages between financial inclusion, financial stability and institutional qualities. The evidence strongly indicates that, when effectively regulated and supervised, financial stability and institutional qualities spurs financial inclusion, reduces income inequality, and helps lift households out of poverty. Deep financial sectors are not necessarily inclusive ones, if financial stability and institutional qualities are not available.

### RECOMMENDATIONS

One of the findings which this study revealed institutional qualities impact on financial inclusion in the long run, perhaps this prompted the recapitalization and consolidation in Nigeria. The study recommends that much as the operators need to develop adequate and appropriate capacity to cope with the post consolidation challenges, regulators and supervisors themselves need also to shore up their capacity to bring in the institutional qualities in their supervising and management roles.

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