MPRA

Munich Personal RePEc Archive

Financial Access, Financial Depth, and Economic Growth in Nigeria

Adenuga, Adeniyi O. and Omotosho, Babatunde S.

Central Bank of Nigeria

2013

FINANCIAL DEPTH, FINANCIAL ACCESS AND ECONOMIC GROWTH IN NIGERIA

Adeniyi O. Adenuga and Babatunde S. Omotosho[1]

Abstract

Financial sector development is increasingly recognised as critically important to the micro-foundations of wealth creation and economic development of nations. An increasingly relevant component in this relationship relates to the issue of financial access. This paper contributes to the growing debate on the relationship between financial development indicators and output growth by investigating the long run relationship between financial depth, financial access and economic growth in Nigeria. The research question is: how growth propelling is an inclusive financial system in Nigeria? This question is of significant policy relevance, as Nigeria recently launched a financial inclusion programme as a strategy for wealth creation and poverty alleviation for her citizens. By setting up an error correction model, this paper showed that increased financial depth (measured either as ratio of broad money supply to output or as ratio of credit to private sector to output) propelled output growth in Nigeria during 1975 – 2012. However, population per bank branch conferred significant negative effect on economic growth, implying that financial access matters for growth in Nigeria. Therefore, the study strongly endorses the current financial inclusion programme of the Central Bank of Nigeria as a way of promoting growth in the country. Also, the authors call for the inclusion of financial access questions in the General Household Survey (GHS) questionnaire of the National Bureau of Statistics (NBS) as a way forward. This is based on the author's belief that the first step to improving financial access is measuring it. It is hoped that this effort would trigger further analysis that will help policy makers identify the real constraints to financial access in Nigeria.

---

[1] *Adeniyi O. Adenuga is an Assistant Director in the Research Department of the Central Bank of Nigeria, while Babatunde S. Omotosho is a Senior Statistician in the Statistics Department of the Bank. The opinions expressed in this paper are those of the authors and should not be interpreted to represent the views or policies of the Central Bank of Nigeria, its Board of Directors or its Management. The authors thank the anonymous reviewers for helpful comments*

INTRODUCTION

The role of finance and financial access as important factors in growth equations is increasingly being recognized. In economic literature, the broad consensus is that finance contributes to growth. Many recent empirical studies have found a strong causal relationship between the depth of the financial system (as measured, for example, by the supply of private credit or stock market capitalization) on the one hand and investment, growth, poverty, total factor productivity, and similar indicators on the other hand. Also, many empirical cross-country tests have shown initial financial development to be one of the few robust determinants of a country's subsequent growth. Examples of these studies are Demirguc-Kunt and Maksimovic (1998), Rajan and Zingales (1998), Beck*et al*(2000). World Bank (2001) also found that a doubling of private sector credit to GDP is associated with a 2 percentage point increase in the rate of GDP growth.

Beyond growth, recent evidence has also shown that a more developed financial system can enhance wealth creation by reducing poverty and income inequality. The empirical evidence is robust and available at the country, sector, and individual firm and household levels using various statistical techniques. For example, Claessens (2006) found that finance can help individuals smoothen their income, insure against risks, and broaden investment opportunities. Demirguc-Kunt and Levine (2001) and World Bank (2001) identified some mechanisms through which finance impacts growth. They argued that finance can positively influence growth by raising and pooling funds, allowing more and more risky investments to be undertaken; allocating resources to their most productive use; monitoring the use of funds; and by providing instruments for risk mitigation.

What is financial access? Demirguc-Kunt and Levine (2008) defined financial access as the "absence of price and non-price barriers" to finance. In a similar but more detailed definition, Claessens (2006) described financial access as "availability of a supply of reasonable quality financial services at reasonable costs, where reasonable quality and reasonable cost have to be defined relative to some objective standard, with costs reflecting all pecuniary and non-pecuniary costs". Implied by these definitions is the absence of obstacles to potential bank users in their quest to enjoying banking services. In his popular work, Sarma (2008) identified three dimensions of an inclusive financial system. These are banking penetration (number of bank accounts as proportion of total population), availability of banking services (number of bank branches per 1000 population) and usage dimension (bank credit and bank deposit as percentage of GDP). Generally, policy makers develop financial inclusion programmes as a means of improving economic performance through the participation of more adults in the financial system.

According to Kumar *et al* (2005), improved access to financial services has both private and social benefits. The private benefits include: increased consumption possibilities, choices between consumption now or later, safe storage and wealth accumulation as well as expanded production (working capital or investment). The social benefits are increased national savings and expanded production possibility frontier. As a matter of fact, studies such as Claessens and Feijen (2007) have argued that financial access remains an effective tool for achieving the different Millennium Development Goals. World Bank (2008) and Beck et al (2004) have also noted that access to finance and inclusive financial system, which includes all groups of people, poor and middle class as well, has the ability to reduce inequalities and poverty in developing countries.

In Nigeria, studies have been conducted to investigate the relationship between financial depth (measured as ratio of money supply to gross domestic product) and economic growth. For instance, Nnanna (2004) used a single equation econometric model to explore the response of output to Nigeria's financial sector development while a more recent attempt was also made by Odeniran and Udeaja (2010). However, while Nnanna (2004) found no positive significant relationship, Odeniran and Udeaja (2010) argued otherwise. Thus, there is no consensus yet amongst researchers on the exact relationship between financial depth and economic growth in Nigeria. Another area of concern relates to the question of what proportion of the population in the country has access to financial services. This question becomes very paramount in view of the linkage between financial inclusion, wealth creation and economic development. While many researchers have focused on the relationship between financial depth and economic growth in Nigeria, less attention has been devoted to financial inclusiveness and this has implications for policy designs towards enhancing direct access to formal financial services by individual firms and households.

In order to bridge the existing gap in literature with regards to the relationship between financial access and economic growth in Nigeria as well as to contribute to the debate on the impact of financial development on economic growth, this study seeks to investigate the long run relationship between financial development, financial access and output growth in Nigeria during the period 1975 – 2012.This empirical investigation is crucial in view of the growing global awareness of the role of financial access in wealth creation as well as the recent CBN's drive towards financial inclusion in Nigeria.

To achieve its objective and for ease of exposition, the paper is organized into five sections. Following this introductory section, Section 2 reviews relevant conceptual and empirical literature on the linkage between financial sector development, financial access and economic growth. In section 3, the methodology used for the study is

presented while model findings are discussed in section. Section five provides some recommendations and concluding remarks.

CONCEPTUAL AND LITERATURE REVIEW

The Concept of Financial Inclusion/Exclusion

Financial inclusion means making available at an affordable price a wide range of financial services to meet people's diverse financial service needs, particularly poor, low-income and vulnerable households and micro and small enterprises, including "household firms". These financial services include four major areas, namely: transaction banking, savings, credit and insurance. Though all of these four are important, transaction banking is the key to access other financial services such as credit or savings.

On the other hand financial exclusion is a term used to refer to individuals who have no or limited access to mainstream financial services, such as bank accounts. The European Commission (2008) also defines financial exclusion as a situation whereby people encounter difficulties accessing and/or using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong. Causes of financial exclusion may be understood based on the difficulties relating to conditions, prices, or marketing of financial services, or from self-exclusion by marginalized populations, often in response to negative experiences or perception. Thus, a financially excluded person has either no access to financial services or is underserved. However, the poorer segments of society are usually identified as having disproportionately low access to financial services, and the poor can be defined not only in terms of income but also in terms of wealth and assets.

Financial exclusion can impose significant costs, not only on individuals and their families, but also on the wider community and society as a whole. For example, households that operate without mainstream banking services may pay higher charges for basic financial transactions such as accessing cash or paying utility bills and are more vulnerable to loss or theft through lack of security; and may face additional barriers to employment.
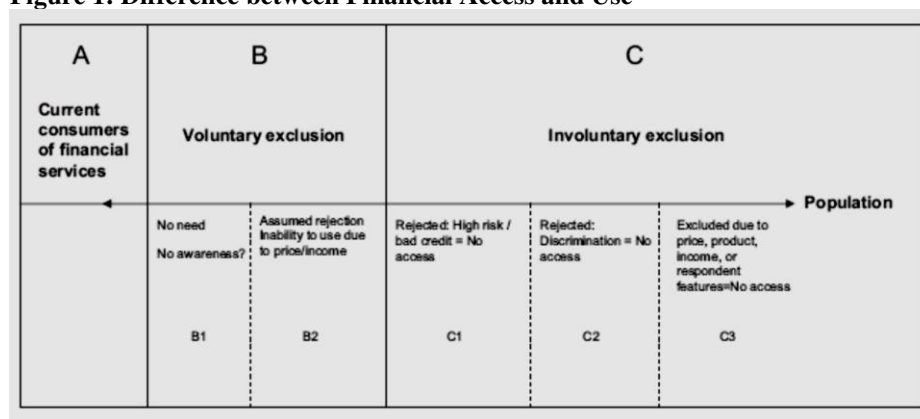
Access versus Usage of Financial Services

Access to finance is not the same as use of financial services. According to Claessens (2006), access refers to the availability of a supply of reasonable quality of financial services at reasonable costs, where reasonable quality and reasonable cost have to be

defined relative to some objective standard, with costs reflecting all pecuniary and non-pecuniary costs. On the other hand, use refers to the actual consumption of financial services.

He used the standard demand and supply framework to analyze the difference between access to and use of financial services. According to him, access refers to supply, whereas use is the intersection of the supply and demand schedules. Hence, those who use financial services (A) clearly have access (see figure 1).

Figure 1: Difference between Financial Access and Use

Source: Claessens (2006).

From Figure 1, access is equal to segments A + B. Those who use financial services (A) clearly have access. Voluntary exclusion (B) by people does not necessarily reflect unavailability of financial services for them. Claessens noted that the demand and supply schedules may be such that some households or firms have access to financial services but decide not to use them because they have no need, have no savings, rely on non-financial means of transacting (barter), or decide the prices are too high.

A decline in the relative prices of financial services compared with the prices of other goods may prompt some of those who voluntarily excluded themselves to demand financial services. The supply and demand schedules may however fail to intersect, in which case there will be lack of access, and so that some households or firms are involuntarily exclude (C). Reasons for involuntarily exclusion may include the fact that the costs of accessing formal financial system are too high or consumers do not have a credit record. It is also noteworthy that some households have no access to financial services because there are no financial institutions in their location.

Financial Development, Financial Access and Economic Growth

Improved access to finance and financial services has been identified as critical pillars supporting poverty alleviation, wealth creation and economic growth. This is because the financial sector provides a framework for people across income groups to access liquidity, have a safe place to store money, transfer money electronically to and from family members and creditors and decrease their risk. For the economy, widespread access to financial services portends both private and social benefits. For instance, ownership of bank accounts confers on the account holder the ability to save and to build financial buffers against adversity. Such access also reduces the cost of making payments. Social benefits (i. e. benefits for society as a whole) also include reduction of theft, improved mechanisms for social transfers and other remittances (including tax and benefit remittances) and improved economic linkages to rural and deprived communities. In view of its potential role in growth equations, many researchers have attempted to study the exact relationship between financial development, financial access and economic growth.

For instance, Beck *et al* (2004), in their cross-country studies on the link between finance and changes in inequality and poverty, found that financial development causes less income inequality. In a similar finding, Clarke*et al* (2003) concluded that the level of inequality decreases as finance develops. Other evidence such as Morduch and Hayley (2002) showed that microfinance reduce poverty by alleviating credit constraints, thus reducing child labor and increasing education, and by insuring against shocks.

McKinsey (1998) in a study of Brazil found that the financial system of Brazil contributed to the reduction of poverty and inequality? He also showed that in Brazil, deep and efficient financial markets promote investment and total factor productivity growth through their role in selecting and monitoring projects; diversifying risks; reducing asymmetries of information; improving resource allocation; and encouraging the optimization of scale, time frame, and technology. It is therefore increasingly been accepted that greater financial system depth and soundness contribute to broad-based economic growth with poverty reduction. More generally, with a few exceptions, it is arguable that direct access of people to financial services can strongly affect their wealth creating ability as well as promote economic growth.

In his work on Nigeria, Nnanna (2004) used a single equation econometric model to investigate the impact of the Nigerian financial sector on economic growth and found no significant positive impact during the period 1981 - 2002. He identified factors such as under-developed financial markets, policy inconsistencies and inadequate financial instruments as being responsible. This view was also supported by Nzotta and Okereke (2009), which was based on data for the period 1986 – 2007. However, Odeniran and

125

Udeaja (2010), using granger causality tests in a VAR framework found that financial sector development variables granger cause output. Thus, for Nigeria, the debate on the relationship between financial sector development and economic growth is still ongoing. This study seeks to contribute to this debate. Akinlo and Egbetunde (2010) also examined the long run and causal relationship between financial development and economic growth for ten sub-Saharan African countries. Based on the vector error correction model (VECM) approach, the study found that financial development is cointegrated with economic growth in the selected ten countries. The granger causality results showed that financial development Granger caused economic growth in those countries, Nigeria inclusive.

On access to financial services, the relationship between average per capita income and the existence of bank branches has also been documented in literature. Studies have shown that there is a broad positive association between bank services and GDP per capita, whether measured in terms of bank numbers, branch density per capita, or branch density per unit of geographic area. Rutherford (2000) in his contribution argues that the poor need access to financial services much more than the rich simply because the poor have little money. Such services help the poor manage their risks, smoothen consumption, take advantage of profitable economic opportunities, build income earning and other assets, and improve their standards of living. This view was also supported by African Development Bank(2005), Helms (2006) and United Nations (2006).

Rajan and Zingales (2004) agreed that limited access to finance severely reduces the choices citizens have in determining the way they work and live. They added that without broader access to finance; only the rich and connected people are able to take advantage of economic opportunities. Thus, access to financial services plays an important role in inclusive development by enhancing the wealth creating ability of economic actors. Broader access makes it possible for low-income households to not only make use of economic opportunities but also improve their health, education, and other social indicators thus significantly improving their socioeconomic well-being. Lack of access to financial services from formal and semiformal sources may thus be a contributory factor to why majority of the population in most developing countries remain in poverty.

METHODOLOGY AND DATA

Methodology

Following the works of Wadud (2009) and Akinlo and Egbetunde (2010), this study adopted the cointegration and error correction approach to investigate the relationship between financial depth, financial access and economic growth in Nigeria. On the right hand side of the equation, two financial development variables were considered, namely: log of the ratio of broad money to GDP and the log of ratio of credit to private sector to GDP. These two variables were used interchangeably in two different models to examine the sensitivity of output to the alternative definition of financial development. For model robustness, the log of gross fixed capital formation was also included as a control variable. Sarma (2008) defined three dimensions of an inclusive financial system. These are banking penetration (number of bank accounts as proportion of total population), availability of banking services (number of bank branches per 1000 population) and usage dimension (bank credit and bank deposit as percentage of GDP). For the purpose of this study and due to data constraints, the availability dimension was used. These selected variables were used to explain output growth in Nigeria during 1975 – 2012.

Thus, the functional forms of the models as well as the expected signs of the regressors (in parenthesis) are specified as:

$$LRGDP_t = f\ (LGFCF_t, LM2GDP_t, LBANKDEN_t,\ \varepsilon_t \text{---------------------- (1)}$$
$$\quad\quad (+) \quad\quad (+) \quad\quad (-)$$

$$LRGDP_t = f\ (LGFCF_t, LCPSGDP_t, LBANKDEN_t,\ \varepsilon_t \text{-------------------- (2)}$$
$$\quad\quad (+) \quad\quad (+) \quad\quad (-)$$

Where,

$LM2GDP$	=	Log of Real Gross Domestic Product (GDP)
$LCPSGDP$	=	Log of the Ratio of Credit to Private Sector to GDP
$LGFCF$ =		Log of Gross Fixed Capital Formation
$LBANKDEN$	=	Log of Ratio of Population to Bank Branches
εt	=	is the random error.

Since the variables enter the model in their logarithm forms, the estimated parameters are interpreted as elasticities and they measure the response of output to unit changes in the right hand side variables. As noted earlier, both equations 1and 2 will be estimated based on cointegration and error correction methodology. This concept

provides a formal framework for testing for and estimating long-run (equilibrium) relationships among the included variables. According to this approach, a dependent variable Y_t and exogenous variables $X_{i,t}$ form a long-term relationship as specified in equation 3 if all the variables are integrated of the same order and their residuals $\mathcal{E}_t$ are stationary.

$$Y_t = \beta_0 + \sum_{i=1}^{n} \beta_i X_{i,t} + \varepsilon_t \qquad (3)$$

Where Y_t is the dependent variable (i.e. LRGDP as stated above), $X_{i,t}$ is a vector of regressors (i.e. the relevant right hand side variables in equation1), β_i is the vector of coefficients, β_o is the intercept and $\mathcal{E}_t$ is the random disturbance term. In order to test for cointegration, the Augmented Dickey-Fuller (ADF) unit root test is applied on the regression residuals $\mathcal{E}_t$ of equation (3) based on special critical values provided in MacKinon (1996). This is popularly known as the Engle and Granger (1987)[2] cointegration test and it helps to ascertain that the linear combinations of the variables in equation (3) exhibit stable properties in the long run. To further test for cointegration and establish the number of cointegrating vectors, the Johansen's (1995) approach is used. As cited in Omotosho and Wambai (2012), when there is more than one cointegration relationships, Gonzalo (1994) recommend estimating with Johansen maximum likelihood procedure. In a similar argument, Hargreaves (1994) noted that the Johansen procedure only works better than OLS if one can be sure there is more than one cointegrating relationship. Smallwood and Norrbin (2004) also cautioned that the Johansen technique relies heavily on the presence of unit roots in the variables. Thus, when there are near unit roots (which because of the lack of power of unit root test will not be detected) the Johansen maximum likelihood methodology can produce very misleading results.

However, before delving into the issues of estimation, the variables in equations 1 and 2 are subjected to stationarity test in order to ascertain their correct order of integration and avoid the spurious regression problem. In this regard, the ADF unit root test is employed and the non-stationary series are purged by appropriately differencing them. If only one cointegrating relationship is found, the study shall adopt the Engle and Granger (1987) two-step approach and estimate an error correction model specified below.

$$\Delta Y_t = \alpha_0 + \sum_{i=0}^{s} \beta_i \Delta X_{t-i} + \sum_{j=1}^{q} \gamma_j \Delta Y_{t-j} + \rho \varepsilon_{t-1} + \mu_t \qquad (4)$$

---

[2]*The Granger's representation theorem described in Engle and Granger (1987) implies that if there exists cointegration amongst a group of variables, there must also exist an error correction representation.*

Where Δ denotes the first difference operator, $\mathcal{E}_t$ is the estimated residual from equation (2), s and q are the number of lag lengths[3], Y_t is the dependent variable (LRGDP) while X_t is the vector of exogenous variables. If the system is stable, the coefficient ρ will be negative and statistically significant. Moreover, the value of ρ measures the speed of adjustment of the dependent variable to the value implied by the long run equilibrium relationship. The study uses annual data for the period 1975 – 2012, which were sourced from various issues of the Central Bank of Nigeria (CBN) Statistical Bulletin and Annual Report.

RESULTS

Tests for Unit Root and Cointegration

Table 1 presents the results of the ADF unit root test conducted on the included variables with the lag structure automatically determined based on the Schwarz criterion. The results revealed that all the variables are non-stationary at level but integrated of order one, implying the need to difference them once.

Table 1: Results of Augmented Dickey-Fuller Unit Root Test

Variables	Levels		First Difference	
	ADF^c	ADF^{ct}	ADF^c	ADF^{ct}
LRGDP	-1.7552	-2.4044	-6.1452	-6.1796
LGFCF	1.0920	-3.0564	-4.0479	-2.5756
LM2GDP	-2.0082	-1.9792	-5.5216	-5.4350
LCPSGDP	-1.6883	-1.8130	-5.1935	-5.1192
LBANKDEN	-2.0026	-1.4826	-5.4309	-6.4659

ADF^c and ADF^c represent unit root test with constant and constant with trend, respectively

*MacKinnon (1996) critical values with constant are -3.6219 (1%), -2.9434 (5%) and -2.6103 (10%)

*MacKinnon (1996) critical values with constant and trend are -4.2268 (1%), -3.5366 (5%) and -3.2003 (10%)

Tables 2 and 3 present the results of the Johansen (1995) cointegration tests for the variables specified in equations 1 and 2. The maximum eigenvalue unrestricted cointegration rank test confirmed the presence of at most one cointegrating vector for the each of the two equations.

---

[3]*We included only two period lag which was based on the result of the lag order selection criteria result, using Schwarz information criterion*

Table 2: Results of Cointegration Test for Variables in Equation 1

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.645986	36.34468	27.58434	0.0029
At most 1	0.369396	16.13769	21.13162	0.2169
At most 2	0.243621	9.772431	14.26460	0.2273
At most 3	0.012123	0.426912	3.841466	0.5135

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

Table 3: Results of Cointegration Test for Variables in Equation 2

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.661813	37.94547	27.58434	0.0017
At most 1	0.351954	15.18276	21.13162	0.2763
At most 2	0.231604	9.220770	14.26460	0.2682
At most 3	0.010019	0.352451	3.841466	0.5527

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

In a further confirmation, the results of the Engle and Granger residual test confirmed the existence of a highly significant cointegration among the variables as their linear combination was found to be I(0) at 1 per cent significance level. The results for equations 1 and 2 are presented in tables 4 and 5, respectively.

Table 4: Result of Unit Root Test on the Residuals of the Static Model (Equation 1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.945434	0.0003
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

Table 5: Result of Unit Root Test on the Residuals of the Static Model (Equation 2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.103447	0.0002
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

*MacKinnon (1996) one-sided p-values.

The results in tables 4 and 5 show that the linear combinations of the variables included in equations 1 and 2 individually exhibit stable properties in the long run.

Long Run Model

Table 6 presents the results of the estimated long-run models based on equations 1 and 2. The results confirmed a-priori expectations confirming the positive relationship between financial sector development (measured either as LM2GDP or LCPSGDP) and output. On the other hand, financial exclusion (measured based on availability of banking services) impacts negatively on output. In other words, the higher the bank density, the lower the output growth.

Table 6: Results of the Long Run Static Models

Variable	Model 1 (Equation 1)	Model 2 (Equation2)
LGFCF	0.1448*	0.1372*
LM2GDP	0.7906*	-
LCPSGDP	-	0.5615*
LBANKDEN	-0.2358*	-0.2310*
C	34.0232*	37.1187*
R-squared	0.9212	0.9229
Adjusted R-squared	0.8783	0.8808
Durbin-Watson stat	1.6745	1.7141

*, ** and *** means significant at 1%, 5% and 10% levels, respectively while [ns] stands for not significant

Error Correction Model

Table 7 presents the results of the error correction models fitted to equations 1 and 2. The models confirm the positive role of capital (proxied by Gross fixed capital formation) in promoting economic growth, even though the parameters were statistically insignificant. Irrespective of the measure used as proxy for financial development, the response of output remains positive. However, at 0.5331, the elasticity of output to financial development (measured by log of ratio of broad money to GDP) is higher. Overall, these results confirm significant positive relationship between financial development and economic growth in Nigeria. This is in line with the findings of Odeniran and Udeaja (2010). In terms of financial access, a negative response of output to population per bank branch was found negative. In other words, the models support the view that a more inclusive financial system (defined by availability of more bank branches) propels growth in Nigeria. These findings are in conformity with previous efforts in other countries, which confirmed the role of financial access in promoting economic growth. This implies that bank branch expansion drive and its associated reduction in population per branch is a potent tool for enhancing the growth prospects of the country. In the two models, the error correction parameters were significant and negative, implying a stable system.

Table 7: Results of the Error Correction Models

Variable	Model 1 (Equation 1)	Model 2 (Equation2)
DLRGDP(-1)	0.2719***	0.2547^{ns}
DLGFCF	0.1401^{ns}	0.1062^{ns}
DLM2GDP	0.5331*	-
DLCPSGDP	-	0.3642***
DLBANKDEN	-0.1182**	-0.1043**
ERROR CORRECTION TERM	-0.7994*	-0.7832*
C	0.0166^{ns}	0.0252^{ns}
R-squared	0.4489	0.4263
Adjusted R-squared	0.3505	0.3239

*, ** and *** means significant at 1%, 5% and 10% levels, respectively while ^{ns} stands for not significant*

RECOMMENDATIONS AND CONCLUDING REMARKS

Recommendations

The principal message emerging from this study is that financial depth and financial access matter for economic growth in Nigeria. The challenge therefore is that of building a more inclusive financial system, especially to cater for the needs of the rural poor. Based on the findings of the study, the following recommendations are made:

1. ***Continuation of the ongoing Financial Inclusion Programme of the Central Bank of Nigeria (CBN):*** The National Financial Inclusion Strategy for Nigeria was launched on the 23rd October 2012 by the CBN with the aim of reducing the percentage of adult Nigerians excluded from financial services from 46.3 percent as at 2010 to 20 percent by 2020. In effect, these previous excluded adults would be enabled to have access to financial services, engage in economic activities and contribute to the development of the country. In view of the obvious benefits of an inclusive financial system, including improved access to finance, enhanced income generating ability, poverty alleviation and output growth, this study strongly supports the Financial Inclusion Strategy for Nigeria.

2. ***Increased Government Infrastructural Support for Financial Access Initiatives:*** Relevant government agencies in Nigeria need to continue to provide support the current financial inclusion programme in the country. For instance, infrastructural support in the areas of electronic networks for payments system and power will substantially help in reducing the cost borne by banks in their branch expansion efforts.

3. ***Financial access is crucial for successful financial intermediation and it needs to be measured conscientiously***: Empirical research on financial access has been constrained by lack of systematic information on access, not only in Nigeria but globally. There is therefore an urgent need for improved data on access to financial services in Nigeria, especially for effective monitoring of the Financial Inclusion Strategy of the CBN. Financial access data is crucial because it helps financial service providers to design better ways of delivering better services more profitably and on a larger scale. It also assists policymakers in the financial sector to assess the effectiveness of their interventions in achieving wider public policy goals. They seek to know who does and does not have access to financial services and at what price, as well as which services are of most value, especially to low-income households. This convergence of information needs between public and private interests confirms the significance of more data collection in this area.

The annual General Household Survey (GHS) of the National Bureau of Statistics (NBS) provides a very robust platform for obtaining financial access data in Nigeria. This study therefore recommends the integration of financial access questions into the GHS questionnaire, as it is cheaper compared to the conduct of independent surveys. Information collected from the survey will help to improve Nigeria's financial access data as well as assist policy makers to identify the real factors constraining access to financial services in the country. With regards to financial access data, the following recommendations are made:

i.   In view of the importance of financial access data to financial services providers, financial sector regulators and the government at large, the NBS can call on these stakeholders to collaborate in the conduct of the survey, especially in terms of funding. In this regards, there is the need for the NBS to properly analyse and package the data emanating from the survey in such a way that the users would find them readily usable.

ii.   International organizations such as the International Monetary Fund, the Organization for Economic Cooperation and Development and the United Nations are usually keenly interested in financial access statistics for the purpose of cross-country comparison. It is therefore important to ensure that statistics emanating from the financial access survey should be compiled in an impartial and credible manner, be free from political interference and be accessible for everyone under equal conditions.

iii.   Finally, there is need for a clear conceptual framework for the conduct of the data collection exercise. This is to enable it be of lasting value and take its place alongside other important international data collection exercises. Nigeria's efforts in the survey will be of lasting and greater impact if it is done to approximate a common internationally accepted framework. Therefore, concepts and definitions used in the survey must be in line with international benchmarks.

CONCLUSION

Financial exclusion reduces the potential welfare of individuals and the productivity of enterprises in an economy. Effective participation in financial markets and other factor markets is a precondition for effective participation in the economy. Access of disadvantaged groups to financial markets is therefore of strategic importance for social and economic development and social inclusion. The improvement of access to financial services should help both consumers and producers to raise their welfare and productivity. For instance, individuals can insure themselves against periods of low income or unexpected fluctuations in income, and maintain their consumption standards through the use of financial services. In this regard, the authors call for the sustenance of the ongoing Financial Inclusion Strategy for Nigeria.

This study is constrained by household level data on financial access. It is noted that aggregate measures of the supply of financial services (such as population per bank branch or financial deepening indicators) do not provide an answer to the question of who has access to financial services. This is because even if a financial institution exists in a given location, it is not clear (without a more disaggregated data) who the clients of such an institution are, and what their socio-economic characteristics may be. In this regards, routine household surveys is a useful tool for describing an individual's patterns of access to financial services and potential demand; exploring perceptions of constraints to access; examining factors which explain access as well as assessing the role of policy directions adopted over the period in the expansion of access.

It is therefore important that financial access is effectively measured, especially at the level of the households. By measuring financial access and having better understanding of the reasons for and nature of exclusion, policy makers will be able to enhance access. It is, however, also important to note that even if we have a credible measure of the penetration of financial services as a proportion of the population, it would not satisfy the requirements for effective policy making towards expanding access. There is need for household-based surveys to know how many people (especially the poor) have access; explore different types of each service and ask about the price at which they are available to different classes of people as well as identify the constraints to access.

In view of the benefits of improving access to financial services in Nigeria, the study suggested the need for improved data collection efforts in that direction. This will provide for better strategic planning and priority setting in the entire financial system especially within the context of the agenda of the federal government on wealth creation. Data emanating from the financial access survey will also be of help to banks, their customers and international organizations. The added value of this effort is that it will trigger further studies that will help policy makers identify the real constraints to financial access in Nigeria.

REFERENCES

ADB.(2005). "The Changing Face of the Microfinance Industry: Building Financial Systems for the Poor."Theme Paper. No. 14. Manila: ADB.

Akinlo, A. E. and Egbetunde, T. (2010). "Financial Development and Economic Growth: TheExperience of 10 Sub-Saharan African Countries Revisited" The Review of Finance and BankingVolume 02, Issue 1

Beck, T., Demirguc-Kunt A., and Levine, R. (2004). "Finance, Inequality and Poverty: Cross-Country Evidence." Policy Research Working Paper. No. 3338. World Bank, Washington, D.C

Beck, T., Levine, R., and Loayza, N. (2000). "Finance and the Sources of Growth." Journal of Financial Economics. Vol. 58. No. 1,2 pp. 261 – 300.

Claessens, S. (2006). "Access to Financial Services: A Review of the Issues and Public Policy Objectives". OxfordUniversity Press

Claessens, S. and Feijen, E. H. B. (2007). "Financial Sector Development and the Millennium Development Goals". Washington DC, World Bank available at SSRN: http://ssrn.com/abstract=950269.

Clarke, G.,Xu, L. C., and Zou, H.(2003). "Finance and Income Inequality: Test of Alternative Theories." Policy Research Working Paper.No. 2984.World Bank, Washington, D.C.

Demirguc-Kunt, A. and Levine, R. (2001). "Financial Strctures and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development." MIT Press, Cambridge, MA.

Demirguc-Kunt, A. and Levine, R. (2008). "Finance, Financial Sector Policies and Long-Run Growth". Washington DC, Commission on Growth and Development, World Bank.

Demirguc-Kunt, A. and Maksimovic, V. (1998). "Law, Finance and Firm Growth."Journal of Finance, Vol. 53. No. 6 pp. 2107 – 2137

Engle, R. and Granger, C. (1987). "Co-Integration and Error-Correction: Representation, Estimation and Testing." Econometrica No. 55, pp 251-76

European Commission (2008). "Financial Services Provision and Prevention of Financial Exclusion.

Gonzalo, J. (1994). "Five Alternative Methods of Estimating Lon-run Equilibrium Relationships." Journal of Econometrics, pp 203- 233

Hargreaves, C. P. (1994). "A Review of Methods of Estimating Cointegrating Relationships." In Hargreaves, C. P. (ed) Nonstationary Time series Analysis and Cointegration. Oxford: Oxford University Press, 87-132

Helms, B.(2006). "Access for All: Building Inclusive Financial Systems."Washington, DC: World Bank.

Johansen, S. (1995). "Likelihood-Based Inference in Cointegrated Vector Autoregressive Models." Oxford: Oxford University Press

Kumar, A., Beck, T., Campos, C., and Chattopadhyay, Y. (2005). "Assessing Financial Access in Brazil."World Bank Working Paper. No. 50.

Mackinnon, J. G. (1996). "Numerical Distribution Functions for Unit Root and Cointegration Tests." Journal of Applied Econometrics, No. 11, pp 601-618

McKinsey B. (1998). "Productivity: The Key to an Accelerated Development Path for Brazil." Mimeo

Morduch, J. and Hayley, B. (2002). "Analysis of the Effects of Microfinance on Poverty Reduction." NYU Wagner Working Paper. No.1014. New York University, New York.

Nnanna, O. J. (2004). "Financial Sector Development and Economic Growth in Nigeria: An Empirical Investigation"CBN Economic and Financial Review Vol. 42 No. 3

Nzotta, S. M. and Okereke, E. J. (2009). "Financial Deepening and Economic Development in Nigeria: An Empirical Investigation". African Journal of Accounting, Economics, Finance and Banking Research

Odeniran, S. O. and Udeaja, E. A. (2010). "Financial Sector Development and Economic Growth: Empirical Evidence from Nigeria"CBN Economic and Financial Review Vol. 48

Omotosho, B. S. and Wambai, M. U. (2012). "Is the Naira – US Dollar Real Exchange Rate Misaligned?"CBN Economic and Financial Review

Rajan, R. and Zingales, L.(1998). "Financial Development and Growth." The American Economic Review 88(3): 559–86.

Rajan, R. and Zingales, L. (2004). "Saving Capitalism from the Capitalists". New Jersey: PrincetonUniversity Press.

Rutherford, S.(2000). The Poor and their Money. New Delhi: Oxford University Press.

Sarma, M. (2008). "Index of Financial Inclusion". New Delhi, India, Indian Council for Research on International Economic Relations

Smallwood, A. D. and Norrbin, S. C. (2004). "Estimating Cointegration Vectors Using Near Unit Root Variables." Applied Economic Letters, No. 11, pp 781-4

United Nations. (2006). "Building Inclusive Financial Sectors for Development."New York: United Nations.

Wadud, M. A. (2009). "Financial Development and Economic Growth: A Cointegration and Error-Correction Modeling Approach for South Asian Countries". Available at http://ideas.repec.org/a/ebl/ecbull/eb-09-00283.html

World Bank. (2001). "Finance for Growth, Policy Choices in a Volatile World."New York: OxfordUniversity Press.

World Bank (2008). "Finance for All? Policies and Pitfalls in Expanding Access". Washington DC, World Bank.