FINANCIAL SECTOR DEVELOPMENT AND ECONOMIC GROWTH IN NIGERIA

By

O.F. OLANIRAN-AKINYELE

DEPT. OF GENERAL STUDIES, SCHOOL OF MANAGEMENT STUDIES, THE FEDERAL POLYTECHNIC ILARO.

PRESENTED AT THE GENERAL STUDIES DEPARTMENTAL SEMINAR

MAY, 2018

INTRODUCTION

The role of financial sector and financial services on economic growth and development dates back to the work of Schumpeter (1912), McKinnon and Shaw (1973) amongst others. The financial repression argument presented by McKinnon and Shaw seeks to explain how the

restriction of banks' activities, interest rates, reserve requirements and direction of credit all undermines economic growth.

Financial liberalization, therefore, seeks to reverse financial repression and support economic growth and development. Furthermore, in a perfect world characterized by an Arrow-Debreu economy, there is no role for the financial services sector and intermediation and transactions cost are absent making the role of financial intermediation irrelevant.

The Nigerian financial system can be broadly divided into two sub-sectors namely the informal and the formal sectors. While the informal sectors comprising of the local money lenders, the thrifts and savings association are poorly developed, limited in reach and not integrated into the formal financial system, the formal financial system on the other hand can be sub divided into capital and money market institutions made up of the banks and non-banks financial institutions. The financial system comprises of the central bank, money deposit banks, mortgage banks, mutual funds, brokerage houses, discount houses, stock exchange amongst others. These institutions trade in currencies, bonds, stocks and in the process mobilise funds from the surplus spending units (surplus savers) to the deficit spending units (deficit spenders).

THEORETICAL LITERATURE

Theoretically, there exist some form of linkage between financial sector development and economic growth. While Schumpeter (1912) posits that financial development is paramount for economic growth, Robinson (1952) argues that economic growth promotes financial development. Theoretically, the linkage between financial development and economic growth may take different forms Aye (2015). Patrick (1966) presents the notion of the supply-leading role of financial development which states that the financial development causes real economic

growth as well as an opposite view referred to as the demand-following hypothesis which purports that real economic growth leads financial sector development. Schumpeter (1912) in his vision for a well-developed capitalist financial system emphasized the importance of the banking system in economic growth.

Patrick (1966), Goldsmith (1969), McKinnon (1973), Shaw (1973), Levine (1991), King and Levine (1993) reveal that financial revolution has motivated people to invest in a multitude of instruments catering to every possible profile of risk and return and share risks across the world. Their studies also revealed that there has been a profound impact upon financial development giving rise to a group of closely intertwined international markets on which banks corporations, inter countries' trade ties or government agencies trade on an increasing amount of assets such as bonds, shares or currencies.

Levine (1997, 2005) posits that in our modern day cutting edge technological world, transaction cost of accessing external funds has shrunk considerably which can facilitate investment and market's free entry and exit. In a market oriented economy, the financial sector has a special role as it mobilizes resources both domestic and foreign sources in the form of foreign direct investment and allocates them to those investments that are capable of generating highest returns on capital. In this light, a lot of industrialized countries especially the "Asian Tigers" have over the years achieved significant economic growth rates. However, growth has not been sustainable with the emergence of the Asian Financial Crisis of 1997 as a clear cut evidence and the credit crunch that engulfed the United States Housing market and its accompanied global financial meltdown which exposed the weaknesses of the respective nation's financial systems during the period (Kargbo, Ding & Kabia 2015).

The inadequacies drew researchers to examine the source of economic growth and development and the importance of financial sector development and stability to sustain economic growth. Furthermore, least developed countries inclusive of sub-Sahara countries reveals major deficiencies that have hindered the realization of their economic growth potentials which makes it imperative to have a robust, efficient, flexible and stable financial system that can rekindle growth and development in order to save weak economies from collapsing and accelerate the rate of growth of their economies.

EMPIRICAL LITERATURE

Empirically, a number of studies have examined the relationship between financial sector development and growth. However, the few studies that have that have examined this link in Nigeria investigated the relationship without considering the issue of causality. It is widely accepted that the existence of a relationship does not necessarily imply causality. Arestis and Demetriades (2012) purport that financial liberalization can stimulate investment and growth using the Barro growth regression econometric model.

Aye (2015) observes that the causal connection between finance and growth has typically been investigated with standard Granger causality tests and noted that the method suffers from a number of limitations as the test results are sensitive to the functional form in which the vector auto-regression or vector error correcting mechanism is specified. This paper, therefore, seeks to re-examine the causal link between financial sector development and economic growth in Nigeria.

METHODOLOGY

An annual time series data which covers the period from 1980 to 2015 was used with economic growth measured as gross domestic product(GDP) taken as the explained variable while financial sector development index proxied by broad money (M2) and inflation(INF) were taken as the regressors. The lagged values of GDP and inflation were also included in the regression equation. The stationarity of the data was determined using the Augmented Dickey Fuller test. Furthermore, broad money and GDP were transformed into natural logarithm, the Auto-Regressive Distributed lag (ARDL) model was constructed and employed in estimating the coefficients of the parameters of the regression equation. |

The functional form of the model for the study is presented as:

$\ln Y = \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \beta_4 \ln X_4 + \mu$, represented as

$\ln GDP = \beta_0 + \beta_1 \ln GDP^1 + \beta_2 \ln M2 + \beta_3 \ln INF + \beta_4 \ln INF^1 + \mu$

where;

lnGDP = natural logarithm of gross domestic product

lnMS = natural logarithm of money stock

lnINF = natural logarithm of inflation

$\ln GDP^1$ = natural logarithm of the lagged value of GDP

$\ln INF^1$ = natural logarithm of the lagged value of inflation

RESULTS

The results of the unit roots test employing the Augmented Dickey Fuller test are presented below:

Null Hypothesis: GDP has a unit root
Exogenous: Constant
Lag Length: 5 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		5.504923	1.0000
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

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

Null Hypothesis: D(INF) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.370111	0.0001
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

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

Null Hypothesis: INF has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.546224	0.1137
Test critical values:	1% level	-3.632900	
	5% level	-2.948404	
	10% level	-2.612874	

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

Null Hypothesis: INF has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.655076	0.2602
Test critical values:	1% level	-4.243644	
	5% level	-3.544284	
	10% level	-3.204699	

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

Null Hypothesis: D(M2) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.519060	0.0004
Test critical values:	1% level	-4.262735	
	5% level	-3.552973	
	10% level	-3.209642	

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

Null Hypothesis: D(M2) has a unit root
Exogenous: Constant
Lag Length: 8 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	3.634868	1.0000

Test critical values:	1% level	-3.711457
	5% level	-2.981038
	10% level	-2.629906

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

Null Hypothesis: M2 has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 9 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.355060	1.0000
Test critical values:	1% level	-4.356068	
	5% level	-3.595026	
	10% level	-3.233456	

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

Null Hypothesis: M2 has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 9 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.568817	0.1120
Test critical values:	1% level	-3.711457	
	5% level	-2.981038	
	10% level	-2.629906	

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

The result of the estimated model using the ARDL method is presented below:

Date: 05/14/18 Time: 18:47
Sample (adjusted): 1981 2015
Included observations: 35 after adjustments
Maximum dependent lags: 4 (Automatic selection)

Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): LM2 INF
Fixed regressors: C
Number of models evalulated: 100
Selected Model: ARDL(1, 0, 1)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	0.698955	0.104724	6.674257	0.0000
LM2	0.285435	0.098999	2.883220	0.0072
INF	0.001145	0.004766	0.240147	0.8118
INF(-1)	0.011125	0.004717	2.358431	0.0251
C	0.569717	0.218284	2.609981	0.0140

R-squared	0.995980	Mean dependent var	8.113369
Adjusted R-squared	0.995444	S.D. dependent var	2.314345
S.E. of regression	0.156222	Akaike info criterion	-0.743514
Sum squared resid	0.732159	Schwarz criterion	-0.521321
Log likelihood	18.01149	Hannan-Quinn criter.	-0.666813
F-statistic	1857.981	Durbin-Watson stat	1.958832
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

DISCUSSION OF RESULTS

From the output obtained using the Auto Regressive Distributed Lag, the regression equation can be re-written as follows;

$$\ln GDP = 0.570 + 0.699 \ln GDP^{1} + 0.285 \ln M2 + 0.001 \ln INF + 0.011 \ln INF^{1} + \mu$$

The explained variable GDP was stationary at level with both intercept and trend. Therefore, the null hypothesis that GDP possess unit root is rejected. Inflation on the other hand was not stationary at level but was stationary at first difference with trend and intercept coefficients. Money stock was also not stationary at level but stationary at first difference with trend and at only 5% and 10% levels of significance.

The result of the estimated Auto-Regressive Distributed Lag(ARDL) using the standard error test indicates that the coefficients of M2, lagged values of inflation and GDP are statistically

significant. However, it shows that the coefficient of inflation is not statistically significant while the p-value indicates only M2 and lagged value of GDP to be statistically significant.

CONCLUSION AND RECOMMENDATION

Although the relationship between financial sector development proxied by the level of money stock and growth is very strong, continuous increase in the general price level in the country resulting into a fall in the real income of the citizens and subsequently a fall in their standard of living as well as deterioration in their level of welfare has not made the contribution of the development of the sector to deepen economic growth.

However, it is recommended that government should continue to strengthen the financial institutions and market and discourage high interest rate as it curtails the amount of money available for investment, thereby, crowding out investment. Also, of utmost importance is that policies should be put in place to discourage interest rates disparity (the difference between the lending and savings rate) in the economy and ensure that stringent policies are embarked upon to curb the phenomenon of general and persistent rise in price levels without recording a high rate of unemployment in the economy. This will all things being equal result into an increase in the level of employment, an increase in the total value of goods and services available in an economy. Also, with substantial reduction in the incidences of poverty, unemployment and inequality, the country will also record sustained economic development.

REFERENCES

Arestis, P., Demetriades, P.O. & K. B. Luintel. "Financial Development and Economic Growth: Role of stock market" *Journal of Money, Credit and Banking 33 n. 1 (February 2001) 16 – 41*

Aye, G.C., "Causality between financial deepening, economic growth and poverty in Nigeria, " *Business and Management review* , vol.3 no 3, pp. 1-12, 2013

Demetriades, P.O. & K.A. Hussein. "Does Financial Development cause economic Growth? Time-series evidence from 16 countries" *Journal of Development Economics 51 (1996): 387 - 411*

Goldsmith. 1969. *Financial Structure and Development.* New Haven, Yale University Press

Goldstein, Morris & Philip Turner. 1996. "Banking Crises in Emerging Economies: Origins and Policy Options," *BIS Economic Papers*, No. 46, Basel: Bank of International Settlements, October.

Goldstein, Morris & Philip Turner. 2004. *Controlling Currency Mismatches in Emerging Markets*. Washington: Institute for International Economics.

Gujarat, D & Sangeetha. 2007. *Basic Econometrics*, 4th Edition, McGraw Hill, New York.

Robinson, J., "The generalization of the general theory, " *The Rate of Interest and other Essays*, Macmillan, London, pp. 1-180, 1952.

Kargbo A.A., Ding Y. & Kabia A.B., " A Situational Analysis Financial Deepening in Low Middle and High Income Economies, " *International Journal of Business Management and Economic Research*, vol. 6 no 2, pp. 143-157, 2015

Khan, M.S. & A.S. Senhadji "Financial Development and Economic Growth: An Overview" *IMF working paper, WP/00/209, (December 2000).*

King, R.G. & R Levine "Finance and Growth: Shumpeter Might be Right" *The Quarterly journal of Economics 108, no.3 (August 1993). 717 – 737*

Levine, R. (1997). Financial Development and Economic Growth: Views and Agenda. *Journal of economic Literature 35(2): 688 – 721*

Levine, R. & Zervos, S., (1998), Stock Markets, Banks and Economic Growth, *American Economic Review*,

Levine, R. , (1997), Financial Development and Economic Growth: Views and Agenda , *Journal of Economics Literature, Vol.35*

McKinnon, R.I. (1973). Money and Capital in Economic Development. Washington, D.C.: The Brookings Institute.

Ncube, M. (2007) Financial Services and Economic Development in Africa. *Journal of African Economies*, vol.16 pp.13-57, 2007

Patrick, H.T. (1996) "Financial Development and Economic Growth in Underdeveloped Countries," 1, *Economic Development and Cultural Change, Vol. 14 PP 174 – 189*

Shan, J. & Morris. " Does Financial Development 'lead' Economic growth?". *International Review of Applied Economics 16 no.2 (2002): 153 – 168*

Shaw, E.S. (1973), Financial Deepening in Economic Development, New York: Oxford University Press.

Shumpeter, J.A. (1911), The Theory of Economic Development, Harvard University Press, Cambridge, M. A.

Stiglitz, Joseph E. 2003. *Globalization and Its Discontents*. New York: Norton.