Àgídìgbo: ABUAD Journal of the Humanities Vol. 3 No. 2, 2015 pp. 162-173

Imperatives of Financial Intermediation to Economic growth

Babalola O. Oladapo

Abstract

Inter-sectoral transfer of funds has not been quiet efficient in the country overtime to aid growth and development. This study, therefore, examined the nexus between financial intermediation and economic growth in Nigeria, using data sourced from Central Bank of Nigeria (CBN) and World Bank database for variables spanning thirty three (33) periods on real gross domestic product (RGDP), a proxy for economic growth, commercial bank deposits (CBD), commercial bank credit (CBC), inflation at consumer prices and interest rate as indicators for financial intermediation. The OLS regression method and granger causality test was adopted to show the relationship that exists among RGDP as a dependent variable and all other variables as independent. Result shows that CBC and CBD exert a significant and positive impact on the economic growth of Nigeria while interest rate (INT) and inflation (INFC), showed a negative relationship. The study, therefore, recommends that banks should reduce commissions and interests paid by customers on some bank transactions in order to encourage more patronage from them and as well endeavour that a major part of their credit is channeled to the important and productive sectors of the economy such as agriculture and manufacturing.

Keywords: Credit, Economic growth, Intermediation, OLS

Introduction

Financial intermediation can be described as a productive activity in which an institutional unit incurs liabilities on its own account for the purpose of acquiring financial assets by engaging in financial transactions on the market. According to classical and neo classical economics as well as mainstream economics, a financial intermediary is typically a bank that consolidates deposits and uses the funds to transform them into loans or in the form of mortgage. The major activity that financial institutions (banks) harness involves intermediating between the surplus

and deficit sectors of the economy. According to Shaw, (1972), the financial sector of an economy crucially matters in economic development and it can also assist in the break away from progressively slow repetition of restrained economic performance to accelerated growth. Financial intermediaries supply funds to deficit agents through the mobilisation of funds from surplus agents, activation of entrepreneurial talents and regulatory measures for the economy (Agu, 1998).

King and Levine (1993) posit that financial intermediaries provide managing risks, evaluating projects, mobilising savings, facilitating transactions and monitoring manager. They observe that all these are essential for technological innovation and economic growth. Financial intermediaries by providing these services to the economy, influence savings and allocation decisions in ways that could alter long-run growth rates. Banks play effective roles in the economic growth and development of a country.

The activity of financial intermediaries mainly involves channeling funds from surplus to deficit units of the economy, thus transforming bank deposits into loans or credits. There has been high recognition for the function of credit on economic growth as economic agents obtain credit to reach their operating expenses. For instance, manufacturers obtain credit to purchase machinery equipment. Car dealers obtain credit to buy cars and set up a location where they can sell those cars. Credits are made available through the help of the banking sector by mobilising funds from savers who have no instant use of such funds. Hence, the funds are channeled towards investors who have great ideas on how to create additional wealth in the economy, but lack the necessary capital to carry out such ideas. It should be instructively noted that the banking sector has stood out to be of prime importance in the financial sector because looking at many developing countries of the world, the sector is almost the only financial means of luring private savings on a large scale to enhance economic growth. Banks all over the world provide a wide range of services including financial intermediation to please the needs of their customers.

Odedokun (1998) emphasized that even though financial intermediation promotes economic growth, the growth-promoting effects are more pronounced in the low-income countries. He conducted a cross-country data analysis of seventy one (71) less developed countries (LDCs) for the period of 1960 to 1980. The study expanded the neo-classical one-sector aggregate production function with financial development as an input. Two models were derived with economic growth as the dependent variable, while the regressions include; labour force growth, investment-GDP ratio, real export growth, and financial depth. The models were estimated using the ordinary least squares (OLS) technique, as well as the Generalized Least Squares (GLS) technique. Besides the strong positive relationship that manifested between financial intermediation and economic growth, the study establishes that the impact of financial intermediation is at par with export growth and capital formation.

McCaig and Stengos (2005) used instrumental variables with a view to establishing a more robust empirical relationship between financial intermediation and economic growth. This study also uses a cross-country analysis of seventy one (71) countries for the period 1960 to 1995. The linear regression model described economic growth (proxy by GDP) as a function of financial intermediation and a set of conditioning variables, was estimated using the Generalized Method

of Moments (GMM). The instrumental variable introduced included; religious composition, years of independence, latitude, settler mortality, and ethnic fractionalization, with three conditioning variable were also used. These include simple sets (initial GDP, and level of education), the policy set (simple set, government size, inflation, black market premium, and ethnic diversity), and the full set (simple set, policy set, number of revolution/ coup, number of assassination per 1000 inhabitants, and trade openness). This study also supports the argument that a positive relationship exist between financial intermediation and economic growth. However, it emphasized that this will be true if financial intermediation is measured by liquid liabilities and private credit as a ratio of GDP, while it will be weaker if it is measured using the Commercial-Central Bank ratio.

Nazliogu, Kar, and Agir (2011) focused on developing countries and also introduced new indicators of financial development with a view to establishing the causal relationship between financial development and economic growth. Using countries, which constitute the Middle East and North Africa (MENA) for the period 1980 to 2007, the study uses a simple linear model. This model defines economic growth as a function of financial development. Six new indicators of financial development was introduced and these include; the ratio of narrow money to income, ratio of broad money to income, ratio of quasi money to income, ratio of deposit money bank liabilities to income, ratio of domestic credit to income, and ratio of private sector credit to income. On the other hand, the real income was employed as a proxy for economic growth. The Granger Causality test was employed to establish the causal relationship between financial development and economic growth. The study concludes that the direction of causality is bi-directional, but it is country or financial development indicator specific. This study, however, suggests that a strong link may exist between financial development and the real sector.

However, there are other scholars who believe that causality runs in both directions. The proponents of this view assume that there is a bi-directional relationship between financial development and economic growth. Demetriades and Andrianova (2004), discussed that if financial development causes growth, it is important that the financial system is well functioning. If so, they believe it will assist the real economy to fully exploit available new opportunities. When there is reverse causation, it is assumed that when the real economy grows, there will be more savings coming into the financial system which will allow it to extend new loans. This assertion could readily be applied to the Shan and Jianhong (2006) study of China economy where they found a two-way causality between finance and growth. Using five variables namely GDP, total credit to the economy, labour, investment and trade, the study observed that financial development was the second most important sector after the contribution from labour force growth in affecting economic growth. They also found out that strong economic growth in the last 20 years has significant impact on financial development by providing a solid credit base. The study concluded that causality for economic growth to financial development is stronger than the causality from finance to economic growth. Concluding, although evidence from empirical work support the fact that both finance and real output are positively related to each other, the relationship is country specific and one should not extrapolate one country's to another.

Problem Statement

Financial intermediation as earlier discussed is expected to drive the economic growth of any nation, Nigeria inclusive. The existence transfer of funds in the financial system has attracted a great deal of importance, as this medium provides connections for the different sectors of the economy and encourages economies of scale, expertise and high level of specialisation. Overtime, these linkages for the different sectors of the economy have not translated to virtually positive outcomes within the country.

Furthermore, there is the presence of financial repression which is constituted by government legislations and policies such as legal restrictions on activities and interest rate policies that distort the full operation of the market mechanism in fixing prices for financial resources. Also, there is the issue of poor banking habit among Nigerians which is due to losses most people have sustained in the past because of bank failures and distresses therefore discouraging people from saving, hence negatively affecting Nigeria's economic growth. In addition, the implementation of diverse economic policies of government aimed to achieve reform measures in the financial system, stability in exchange rate, balance of payment equilibrium and high employment opportunities have been neglected.

Again, there is detailed information about Nigerian banking history, but little information is available on the activities of the financial industry and how they affect the economy where they operate. Likewise, factors which motivate or drive growth within the economy relative to the industry are largely under researched. Given the intermediary role of commercial banks in economic growth and development, it is in the light above that this study intends to examine the extent to which financial intermediation serves as a catalyst for the economic growth of Nigeria.

Research Question

In view of the above, the following questions are asked

1. What is the impact of deposit mobilisation on the economic growth of Nigeria?
2. What is the impact of bank credit on the economic growth of Nigeria?

Research Purpose

The broad objective of this study is to know if financial intermediation has been able to impact significantly on economic growth in Nigeria. However, it is pertinent to know the impact of deposit mobilisation and bank credit on economic growth in Nigeria.

Hypothesis of Study

The following research hypotheses will be employed in this study:

Ho_A: Financial intermediation has a positive effect on Nigeria's economic growth.

Ho_B: Bank credit has a significant impact on Nigeria's economic growth.

Research Methodology

Secondary data sourced from Central Bank of Nigeria (CBN) Statistical Bulletin, World-bank databank were used to test for the hypothesis above: the ordinary least square (OLS)

method is used to evaluate the data. A simple Keynesian model of economic growth (Y: RGDP) at the macroeconomic levels are commercial bank deposit (CBD), commercial bank credit (CBC), inflation @ consumer prices and interest rate. Although there exists some variables which will affect economic growth which therefore are seen as the white noise (U_t).

The economic model theoretically is;

RGDP = *f* (CBD, CBC, INFC, INT)

The RGDP is therefore a function of commercial bank deposit, commercial bank credit, inflation @ consumer prices and interest rate.

Thus structural form of the above equation becomes;

$\mathbf{Y_t = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + U_t}$

Y = Economic Growth (RGDP as proxy)

$\mathbf{X_1}$ = Commercial Bank Deposit

$\mathbf{X_2}$ = Commercial Bank Credit

$\mathbf{X_3}$ = Inflation @ Consumer prices

$\mathbf{X_4}$ = Interest rate

$\mathbf{U_t}$ = white noise @time t

$\mathbf{b_0}$ = the expected rate of economic development when CBD, CBC, INFC and INT is zero

$\mathbf{b_1}$ = the impact of CBD on economic growth

$\mathbf{b_2}$ = the impact of CBC on economic development /growth

$\mathbf{b_3}$ =impact of Inflation on economic development /growth

$\mathbf{b_4}$ =impact of Interest on economic development /growth

A'PRORI EXPECTATION

$\mathbf{B_1 > 0, B_2 > 0, B_3 \gtrless 0, B_4 \gtrless 0}$

Table 1*: Presentation of Data*

YEAR	RGDP	CBD	CBC	INFC	INT
1981	247876.9	1.77E+18	1.77E+09	20.81282	8.916667
1982	238954.8	2.82E+18	2.82E+09	7.697747	9.5375
1983	221196.5	5.14E+18	5.14E+09	23.21233	9.976667
1984	211302.8	8.73E+18	8.73E+09	17.82053	10.24167
1985	223088.3	1.03E+19	1.03E+10	7.435345	9.433333
1986	198319.6	4.42E+18	4.42E+09	5.717151	9.959167
1987	172402.7	7.57E+18	7.57E+09	11.29032	13.96167
1988	180584.5	7.31E+18	7.31E+09	54.51122	16.61667
1989	187298.5	3.61E+18	3.61E+09	50.46669	20.44167
1990	205824.7	8.70E+18	8.7E+09	7.3644	25.3
1991	199405.9	6.81E+18	6.81E+09	13.00697	20.04167
1992	195279.5	4.86E+18	4.86E+09	44.58884	24.75833
1993	194427.8	2.79E+19	2.79E+10	57.16525	31.65
1994	191358.2	3.76E+19	3.76E+10	57.03171	20.48333
1995	186069	1.74E+19	1.74E+10	72.8355	20.23333
1996	190545.7	4.15E+19	4.15E+10	29.26829	19.83667
1997	191055.2	2.93E+19	2.93E+10	8.529874	17.795
1998	191397.7	3.65E+19	3.65E+10	9.996378	18.18417
1999	187546.1	1.48E+20	1.48E+11	6.618373	20.29
2000	192616.4	2.04E+20	2.04E+11	6.933292	21.27417
2001	196104.4	1.80E+20	1.80E+11	18.87365	23.43833
2002	198437.8	4.15E+20	4.15E+11	12.87658	24.77083
2003	213475.7	2.98E+20	2.98E+11	14.03178	20.71417
2004	278249	4.92E+20	4.92E+11	14.99803	19.18083
2005	280457.1	5.12E+20	5.12E+11	17.86349	17.94833
2006	295636.1	8.59E+20	8.59E+11	8.239527	16.9
2007	307593.6	1.71E+21	1.71E+12	5.382224	16.93917
2008	318307.7	1.42E+21	1.42E+12	11.57798	15.47983
2009	331407.7	1.37E+21	1.37E+12	11.53767	18.36167
2010	347934.4	1.55E+21	1.55E+12	13.7202	17.585
2011	355255	2.48E+21	2.48E+12	10.84079	16.01667
2012	360615.2	1.12E+21	1.12E+12	12.21701	16.7925
2013	370004.2	1.07E+13	-2.43E+11	8.475827	16.7225
2014	383023.4	1.39E+13	-1.61E+12	8.057383	16.54833

Source: World Bank Databank

Table 2: Data Estimation

The table below represents the result of the estimation of the model using the Ordinary Least Square (OLS).

Dependent Variable: RGDP
Method: Least Squares
Date: 05/19/16 Time: 15:45
Sample: 1981 2014
Included observations: 34

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	246894.8	23832.80	10.35946	0.0000
CBC	1.53E-08	3.19E-09	4.802272	0.0000
CBD	5.83E-17	1.06E-17	5.479052	0.0000
INFC	-283.5847	403.8022	-0.702286	0.4881
INT	-1867.450	1349.325	-1.383988	0.1769

R-squared	0.729942	Mean dependent var	242442.7
Adjusted R-squared	0.692693	S.D. dependent var	66230.23
S.E. of regression	36714.91	Akaike info criterion	23.99481
Sum squared resid	3.91E+10	Schwarz criterion	24.21927
Log likelihood	-402.9117	Hannan-Quinn criter.	24.07136
F-statistic	19.59612	Durbin-Watson stat	1.562117
Prob(F-statistic)	0.000000		

Source: Author's Computation from E-views 7.1, 2016

Regression model;

$$RGDP = 246894.8 + 1.53E^{-08}\,CBC + 5.83E^{-17}\,CBD - 283.5847INFC - 1867.450INT$$
$$(0.0000) \quad (0.0000) \quad (0.0000) \quad (0.4881) \quad (0.1769)$$

As shown above, a positive relationship exists between RGDP all variables except inflation (INFC) and interest rate (INT). From the a-priori expectation, the relationship between RGDP and INT (INFC) is actually expected to be ambiguous (i.e. positive or negative as the case may be). The coefficient of CBC has a positive sign which means that a 1% increase in CBC increases the RGDP by 1.53%, thus this confirms the significant effect of CBC on RGDP. Also, the coefficient of CBD is positive which means that a 1% increase in CBD increases the RGDP by 5.83%. Therefore, CBD has a significant and positive impact on the economic growth.

According to the result above, there is no positive relationship existing between RGDP and Interest rate (INT). Here, the interest rate is negative which means that a 1% increase in INT decreases the RGDP by 19%. This situation may be attributed to the concerted effort of government to mop-up excess flow of cash circulating in the economy by increasing the level of interest rate, which would discourage people from taking loans therefore making people to save more; hence a spur is witnessed in the economy through the transfer of such savings into investment. The coefficient of inflation at consumer prices (INFC) also has a negative relationship with RGDP, which means that a 1% increase in INFC decreases the RGDP by 28%.

In all, the value of R^2(0.729942) shows that the independent variables (CBC, CBD, INFC, INT), accounts for 73% variation in the dependent variable. The remaining 27% is accounted for by the error term. It is also found that the goodness of fit shows that the independent variables are sufficient for the analysis.

The Adjusted puts into consideration the number of independent variables employed in the course of the study. The value of adjusted is 0.692693. It is lesser than which shows that the independent variable accounts for 69% variation in a dependent variation which is still a good fit for the model. An F-statistics of 19.59612 also confirms the model is significant and reliable, as it is greater than 3.59. The value of the Durbin Watson is of 1.562117 and shows the absence of autocorrelation in the model.

Granger Causality Test

Here the decision rule is based on the relationship between the variables which is determined by the F-statistics and the probability value.

Table 3: Granger Causality Test Result

Pairwise Granger Causality Tests
Date: 05/19/16 Time: 15:53
Sample: 1981 2014
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
INT does not Granger Cause RGDP	32	1.41277	0.2609
RGDP does not Granger Cause INT	0.86196	0.4336	
CBC does not Granger Cause RGDP	32	2.56563	0.0955
RGDP does not Granger Cause CBC	0.93740	0.4040	
CBD does not Granger Cause RGDP	32	1.73915	0.1948
RGDP does not Granger Cause CBD	1.90229	0.1687	

INFC does not Granger Cause RGDP	32	0.31367	0.7334
RGDP does not Granger Cause INFC	1.43912	0.2548	
CBC does not Granger Cause INT	32	0.17191	0.8430
INT does not Granger Cause CBC	0.12712	0.8812	
CBD does not Granger Cause INT	32	0.24422	0.7850
INT does not Granger Cause CBD	0.05248	0.9490	
INFC does not Granger Cause INT	32	3.08344	0.0622
INT does not Granger Cause INFC	1.14763	0.3324	
CBD does not Granger Cause CBC	32	NA	NA
CBC does not Granger Cause CBD	NA	NA	
INFC does not Granger Cause CBC	32	0.10650	0.8994
CBC does not Granger Cause INFC	1.01711	0.3751	
INFC does not Granger Cause CBD	32	0.21325	0.8093
CBD does not Granger Cause INFC	1.00330	0.3799	

Source: Author's Computation from E-views 7.1, 2016

Here the direction of causality is shown as above. The decision rule is such that if the F-statistics value is greater than the probability value the null hypothesis is rejected (Reject H_0) and vice versa. Therefore, there is a bidirectional relationship between INT, CBC and CBD with RGDP as they both granger cause each other. But a unidirectional relationship exists between INFC and RGDP, which emanates from RGDP (RGDP granger causes INFC). There is a bi-directional relationship between CBC, CBD and INFC with INT as they both granger cause each other. Also a bidirectional relationship exists between CBD and CBC as they both granger cause each other. But a unidirectional relationship exists between CBC and CBD with INFC, which emanates from CBC and CBD (CBC granger causes INFC and CBD granger causes INFC).

Summary

The pertinence of this study is to discover the impact of financial intermediation on economic growth in Nigeria covering from 1981-2014. The impact of financial intermediation was portrayed by various macro-economic variables (CBC, CBD, INFC, and INT) which were used to carry out various significant tests. The tests showed that each of the variables except Interest rate (INT) and Inflation at consumer prices (INFC) have a positive relationship with economic growth which depicts that an increase in any of the variables will lead to an increase in the

economic growth of Nigeria. While the negative relationship between INFC and INT shown by the result of the tests depicts that an increase in these variables will lead to a decrease in the economic growth of Nigeria.

Conclusion

This paper inspected carefully the impact of financial intermediation on the economic growth of Nigeria. Though the results of the findings of this work shows that both commercial bank deposit (CBD) and commercial bank credit (CBC) have a positive and significant impact on Nigeria's economic growth within the period under this study, it also uncovered a lot of confrontations which influenced the intermediation activities of banks. Some of these include low interest rate accrued to depositors, channeling of funds to less priority sectors of the economy, high interest rates paid by borrowers which may be due to the government trying to mop-up excess flow of cash circulating in the economy, an unsteady rate of inflation such that if there was an increase in inflation, unemployment decreases which would cause an overflow in the circulation of money chasing fewer goods and if there was a decrease in inflation, unemployment will increase thereby creating incidences of social vices, fraud and forgeries amongst others.

Recommendation

Based on the prior discussions, conclusions and findings, this study recommends that the monetary authorities using their credit guidelines should direct and or mandate banks to channel their mobilised savings to priority sectors of the economy such as agriculture and manufacturing.

As portrayed in the results, interest rate exerts a negative relationship on economic growth, thus an improvement should be placed on the interest paid to depositors on their deposits with the deposit money banks (DMBs). In the same vein, commissions and interests paid by customers on some bank transactions should be reduced. These actions would encourage more people to save money with the DMBs which can then be diverted to investment purposes, when other customers come to borrow. Also there is the need to restore confidence in the financial intermediaries - a failure-proof system must be designed and sustained as bank failure has a contagious effect on the economy.

Concerted efforts should be made by government to encourage entrepreneurship and small business development through monetary policy regulation of the Central Bank of Nigeria encouraging DMBs to finance viable projects at no stringent conditions. This will encourage growth and development of the country.

Finally, the rural banking schemes should be encouraged such that commercial banks should be made by law to open branches in the rural areas of the country, while also strengthen Microfinance banks already existing in the locals . This will enable them mop-up savings from rural dwellers, extend credits to those who have investment opportunities and above all, help create banking habit among the rural populace.

References

Afolabi, L., (1998), Monetary Economics. Perry Barr Limited

Benston, G.J., and Smith Jr., C.W. (1976), A transactions Cost Approach to The Theory of Financial Intermediation, Journal of Finance 31, pp 215-231.

Diamond, D.W., and Rajan, R.G. (2000), A Theory of Bank Capital, Journal of Finance 55, pp 2431-2465.

Demirguc-Kunt, A & Makismovic. sV (1998), Law, Finance, and Firm Growth, Journal of Finance, Vol.53 (6), pp.2107-2137

Demetriades, P. and Andrianova, S (2004),, Finance and Growth: What We Know and What We Need to Know in C. Goodhart, (ed), Money, Finance and Growth, Routledge

Gurley, J. and Shaw, E. (1967), Financial Structure and Economic Development, Economic Development and Cultural Change. Vol. 15, No. 3, pp 257 – 268.

Greenwood, J. and Jovanovich, B., (1990), Financial Development, Growth and the Distribution of Income, Journal of Public Economy: Vol. 98, p. 1076-1107.

Holmström, B., and Tirole, J. (2001), LAPM: A Liquidity-Based Asset Pricing Model, Journal of Finance 56, pp 1837-1867.

Jhingan, M. L. (2006), The Economics of Development and Planning. Virinda Publications Ltd., New Delhi.

Kar. M, Nazlioglu. S, & Agir. H (2011), Financial Development and Economic Growth nexus in the MENA countries: Bootstrap Panel Granger Causality Analysis, Econometric Modelling, 28(1-2), 685-693.

King, R. G. and Levine, R. (1993), Finance and Growth Schumpeter Might Be Right, Quarterly Journal of Economics, pp 717-736.

Leland, H.E., and Pyle, D.H. (1977), Informational Asymmetries, Financial Structure, and Financial Intermediation, Journal of Finance 32, 371-387.

Mckinnon, R., (1973), Money and Capital in Economic Development, The Brookings Institute, Washington.

McCaig, B. and Stengos, T. (2005), Financial Intermediation: Some Robustness Results, Economic Letters, Vol. 88, Issue 3, pp 306-312

Nwanyanwu, O. J., (2010), An Analysis of Bank Credit on the Nigeria Economic Growth (1992-2008), Jos Journal of Economics, Vol. 4, pp. 43-58.

Nnanna, O. J., (2004), Financial Sector Development and Economic Growth in Nigeria: An Empirical Investigation, Economic and Financial Review Vol. 42, (3) pp. 1-17.

Odedokun. M (1998), Financial Intermediation and Economic Growth in Developing Countries, Journal of Economic Studies, Vol. 25 (2-3), pp.203-224

Oluitan, R. (2010)., "Bank Credit and Economic Growth: The Nigerian Experience". A Paper Presented at the AFE Conference in Greece

Onyedikachi, M., Nwaeze, C and Nwabekee C.E, (2014) Financial intermediation and Economic growth in Nigeria, The Macro-theme Review 3(6),

Patrick, H. T., (1996), Financial Development and Economic Growth in Underdevelopment Countries, Economic Development and Cultural Change, Vol. 14, pp. 174 – 189

Robbinson, J., (1952), The Generalization of the General Theory in the Rate of Interest and Other Essays. London: Macmillan, p. 67 – 146

Shan, J. and Jianhong, Q., (2006), Does Financial Development Lead to Economic Growth? The Case of China, Annals of Economics and Finance Vol. 1, p. 231 – 250.

Smith ,V. R. and Bencivenga, B. D., (1991), Financial Intermediation and Endogenous Growth, Review of Economics Studies. Vol. 58, p. 195-209.

Umar, A., (2013)., Financial intermediation: Key to economic growth, Vanguard news publication