

Financial Intermediaries and Economic Growth: The Nigerian Evidence

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Abstract: This study seeks to examine the role of financial intermediaries and to find out whether financial intermediaries impact on economic growth in Nigeria. The study adopts the Harrod-Domar growth model which states that economic growth will proceed at the rate which society can mobilize domestic savings resources coupled with the productivity of the investment. The study employed the use of secondary data for the period 1981 to 2011 which were sourced from the CBN statistical bulletin. Nigerian banks being the dominant financial intermediaries, loans credits and advances from banks were used as proxy for the independent variable. Gross domestic product (GDP) was used as proxy for economic growth. Using the technique of correlation analysis in determining the association between loan credits and advances, and the GDP, the study reveals a relatively high positive correlation between financial intermediaries and economic growth in the Nigerian economy. The study recommends that Nigerian banks should lend higher proportion of their loanable funds to small and medium enterprises (SMEs) and should invest in information technology and human capital.

Keywords: Financial intermediaries; economic growth; Gross domestic product; correlation analysis

JEL Classification: O47

1. Introduction

Financial intermediaries, all over the world play crucial roles in the development and growth of the economy. An economy is made up of fund raisers and fund suppliers. Financial intermediaries are those institutions in the financial market that mediate between the fund raisers and the fund suppliers. They carry out intermediation between surplus and deficit units of the economy.

The role of financial intermediaries in intermediating between fund raisers and fund suppliers has been exemplified in various finance literature. Several studies have dwelt on the role of financial intermediaries (Benston & Smith, Jr., 1975; Holmstrom & Tirole, 1998; Gromb & Vayanos, 2010; Araiyo & Minetti, 2007). Some studies concentrate on the impact of financial intermediation on the financial

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system (Anad and Subrahmanyam, 2008). Other studies focus on the impact of financial intermediation on economic growth, and the impact of economic growth on financial intermediation (Nieh et al. 2009; Odhiambo, 2011). However the main focus of this paper is on the relationship between financial intermediaries and economic growth. This paper would concentrate on banks because Ikhide (1997) asserts that the financial system in Nigeria is mostly dominated by the banking sector.

The basic question that this paper would answer is: Do better functioning financial intermediaries exert a causal influence on economic growth? What is the Nigerian evidence?

The remainder of this paper is structured as follows: Section 2 focuses on literature review; section 3 is research methodology; section four is the presentation and analysis of results; and section five is discussion and conclusion.

2. Review of Related Literature

Role of Financial Intermediaries

Fund suppliers cannot loan money directly to fund raisers, nor can fund raisers borrow money directly from fund suppliers. These transactions had to be done conveniently through financial intermediaries. They facilitate the exchange of funds between fund surplus units and fund deficit units. According to Thompson (1982) financial intermediaries help to bridge the gap between borrowers and lenders by creating a market in two types of security, one for the lender and the other for the borrower. Financial intermediaries, through financial intermediation, allow funds to be channeled from those that might not put them to use to those that would put them to productive use. The general name for the services supplied by financial intermediaries is financial intermediation. This implies that financial intermediaries are middle participants in the exchange of financial assets.

There are various types of financial intermediaries. These consist of depository intermediaries, contractual intermediaries, and Investment intermediaries. Depository intermediaries consist of commercial banks, thrifts, mutual savings banks, savings and loan associations, and credit union. Investment intermediaries are made up of investment companies and finance companies. They specialize in both money and capital market funds, which include treasury bills, commercial bank certificates of deposit, long term loans (debentures), and stocks. Contractual intermediaries consist of insurance companies and pension funds. They create instruments that form a contractual relationship with the buyer. These instruments consist of insurance plan, savings, annuity, pension, and loan privileges.

Gershenkron (1962) stated that banks are the largest financial intermediaries that effectively finance industrial expansion in developing countries. Banks are the largest financial intermediaries in the Nigerian economy. According to Schumpeter (1911) bank financial intermediation does not only entail creation of a pool of investible funds, it also involves allocating funds effectively.

Financial intermediaries perform five functions:

1. Pooling the resources of small savers: banks for example, pool many deposits and use these to make large items. Insurance companies collect and invest many small premiums in order to pay fewer large claims. Mutual funds accept small investment amounts and pool them to buy large stock and bond portfolios.
2. Providing safekeeping, accounting, and payment mechanisms for resources: Banks are obvious example for the safekeeping of money in accounts, keep records of payments, deposits and withdrawals and the use of debit / ATM cards and cheques as payment mechanisms.
3. Providing liquidity: Financial intermediaries can easily and cheaply convert an asset to payment. They make it easy to transform various assets into a means of payment through ATMs, cheques, debit cards etc.
4. Diversifying risk: Financial intermediaries assist investors diversify in ways they would be unable to do on their own. Banks for instance spread depositors' funds over many types of loans, so that the default of any one loan does not put depositors' funds in jeopardy.
5. Collecting and processing information: Financial intermediaries are experts at collecting and processing information in order to accurately gauge the risks of various investments and to price them accordingly. The need to collect and process information comes from a fundamental asymmetric information problem inherent in financial markets.

Financial Intermediaries and Asymmetric Information

Financial markets have a lot of asymmetric information. Borrowers and debt / stock issuers know much more about their likelihood of success than potential lenders and investors. Asymmetric information causes one group with better information to use this advantage at the expense of the less-informed group. Asymmetric information can cause financial markets to function inefficiently or even break down completely. However financial intermediaries use their size and expertise to minimize them.

Asymmetric information can be of two types. It can be due to adverse selection and moral hazard. The problem of adverse selection arises before a financial asset is bought or sold. The worst candidates (adverse) are more likely to be selected for the transaction. People who are bad credit risks are more likely to try to get a loan than those who are good credit risks. Banks are however, experts at assessing credit risk and distinguishing the good from the bad. The problem of moral hazard arises after the loan is made. The risk that the borrower of a loan may misuse the loan (immoral) and be unable to pay is known as moral hazard. Banks are experts in monitoring and enforcing lending contracts in order to minimize the moral hazard problem.

Previous Studies on the Role of Financial Intermediaries

Several theoretical models posit that financial intermediaries mitigate the costs associated with information acquisition and the conduct of financial transactions (Benston and Smith, Jr., 1975). Other studies show that financial intermediaries make provision for insurances and risk sharing (Allen and Gale, 1997, 2004), stimulates the funding of liquidity needs through credit lines (Holmstrom and Tirole, 1998), and aid the creation of specialized products (Benston and Smith, Jr. 1975). Several studies have dwelt on the significance of financial intermediation. However there are mixed feelings about it. Some argue that it facilitates the efficiency of the financial system (Gromb and Vayanos, 2010; Anad and Subrahmanyam, 2008), others argue that it is a means of carrying out monetary policy (Benston and Smith, Jr. 1975). Still others argue that financial intermediaries through financial intermediation stimulate the restructuring and liquidation of distressed firms (Araujo and Minetti, 2007).

Financial Intermediaries and Economic Growth

King and Levine (1993), citing Schumpeter (1911), state that, “the services provided by financial intermediaries – mobilizing savings, evaluating projects, managing risks, monitoring managers, and facilitating transactions – are essential for technological innovations and economy”. This statement motivated King and Levine to empirically test the logic behind this statement. This statement also motivated others into studying the relationship between finance and economic growth.

King and Levine (1993) conducted a pooled cross-country time series survey of eighty countries for the period 1960-1989 with a view to establishing the relationship between financial development and economic growth. Four variables were used as proxy for financial development: financial depth; relative importance of specific financial institutions; proportion of credit allocated to the private sector, and the ratio of claims on the non-financial private sector. On the other hand four

variables were used as proxy for economic growth: long-run real per capital GDP; the rate of physical capital accumulation, the ratio of domestic investment to GDP; and residual measure of improvement in the efficiency of physical capital allocation. This study showed that the four indicators of financial development were positively and statistically related to growth and other indicators of growth.

Odedokun (1998), using a cross-country data analysis of 71 less developed countries (LDCs) for the period 1960 to 1980, found that, even though financial intermediation promotes economic growth, the growth-promoting effects were more pronounced in the low-income countries. Two models were developed for this study, with growth as the dependent variable, while the independent variables include: labour force growth; Investment-GDP ratio; real export growth; and financial depth. Using ordinary least squares (OLS) and Generalized Least Squares (GLS) techniques, the study showed a strong positive relationship between financial intermediation and economic growth.

Hao (2006) carried out a study to establish the association between financial intermediation and economic growth, using a country-specific data from China, over the period 1985 to 1999, and post 1978 reform period. The study employed the use of linear model which expressed economic growth as a function of lagged economic growth, and financial development indicators (banks, savings, and loan-budget ratio). The study finds that financial intermediation has a causal effect and positive impact on growth through the channels of households' savings mobilization and substitution of loans for state budget appropriations.

3. Research Methodology

Model Specification and description of variables

This paper examines the impact of loanable funds on the Nigerian economy by applying the Keynesian principle of economic growth, specifically, the Harrod-Domar principle. The Harrod-Domar growth model states that economic growth will proceed at the rate which society can mobilize domestic savings resources coupled with the productivity of the investment (Somoye, 2002).

Harrod-Domar growth model

$$Y = f(K) \text{ (Output is a function of the capital stock)}$$

$$Y = \text{Output}$$

$$K = \text{Capital}$$

The following model was specified for this study:

$$Y = f(X)$$

Where,

Y = Gross domestic product (GDP) at current basic prices. This was used as proxy for economic growth (the dependent variable).

X = The ratio of bank loans and advances to GDP. This was used as proxy for financial intermediaries (the independent variable).

Data

Data for this study are purely secondary data. Data for the variables were gathered from CBN Statistical Bulletin for the period 1981 to 2011.

Hypothesis

The following hypothesis stated in the null form was tested in this study.

H₀: There is no significant relationship between the value of deposit money bank loans and advances and Gross domestic product (GDP)

Statistical Analysis

This study employed the technique of correlation analysis to test the relationship between bank credit and advances, and the GDP. The strength of the relationship is always measured by the coefficient of correlation, r, whose values range from -1 to +1; -1 is indicative of a strong inverse relationship while +1 is indicative of a strong positive relationship. The formula for the calculation of coefficient of correlation is shown below:

$$r = \frac{\sum xy - \frac{(\sum x)(\sum y)}{n}}{\sqrt{\left[\sum x^2 - \frac{(\sum x)^2}{n}\right] \left[\sum y^2 - \frac{(\sum y)^2}{n}\right]}}$$

4. Data Presentation and Analysis

This section presents the data and carries out a statistical analysis of the data.

Table 1. Data of commercial bank credit (banks' loans and advances, and GDP)

Year	Loans and Advances (N' million)	GDP (N' million)	Loan to GDP rat. X%
1981	8582.9	47619.66	18.02
1982	10275.3	49069.28	20.94
1983	11093.9	53107.38	20.89
1984	11503.6	59622.53	19.29
1985	12170.2	67908.55	17.92
1986	15701.6	69146.99	22.71
1987	17531	105222.84	16.66
1988	19561.2	139085.3	14.06
1989	22008	216797.54	10.15
1990	26000.1	267549.99	9.72
1991	31306.2	312139.74	10.03
1992	42736.8	532613.83	8.02
1993	65665.3	683869.79	9.6
1994	94183.9	899863.22	10.46
1995	144569.6	1933211.55	7.48
1996	169437.1	2702719.13	6.27
1997	385550.5	2801972.58	13.76
1998	272895.5	2708430.86	10.08
1999	322764.9	3194014.97	10.11
2000	508302.2	4582127.99	11.09
2001	796164.8	4725086	16.85
2002	954628.8	6912381.25	13.81
2003	1210033.1	8487031.57	14.26
2004	1519242.7	11411066.91	13.31
2005	1976711.2	14572239.12	13.56
2006	2524297.9	18564594.73	13.59
2007	4813488.8	26657317.67	23.3
2008	7799400.1	24296329.29	32.1
2009	8602867.5	24794238.66	34.7
2010	8848081.7	33984754.13	26.0
2011	7400028.3	37543654.7	19.7

Source: CBN Statistical Bulletin, 2011

Table 2. Data Computation

X	Y	X ²	Y ²	XY
18.02	47619.66	324.7204	2267632018.52	858106.27
20.94	49069.28	438.4836	2407794239.72	1027510.72
20.89	53107.38	436.3921	2820393810.46	1109413.17
19.29	59622.53	372.1041	3554846083.60	1150118.60
17.92	67908.55	321.1264	4611571163.10	1216921.22
22.71	69146.99	515.7441	4781306226.06	1570328.14
16.66	105222.84	277.5556	11071846057.67	1753012.51
14.06	139085.3	197.6836	19344720676.09	1955539.32
10.15	216797.54	103.0225	47001173350.05	2200495.03
9.72	267549.99	94.4784	71582997149.00	2600585.90
10.03	312139.74	100.6009	97431217287.27	3130761.59
8.02	532613.83	64.3204	283677491907.27	4271562.92
9.6	683869.79	92.16	467677889674.64	6565149.98
10.46	899863.22	109.4116	809753814708.77	9412569.28
7.48	1933211.6	55.9504	3737306897053.40	14460422.39
6.27	2702719.1	39.3129	7304690695667.96	16946048.95
13.76	2801972.6	189.3376	7851050339071.86	38555142.70
10.08	2708430.9	101.6064	7335597723400.34	27300983.07
10.11	3194015	102.2121	10201731628584.10	32291491.35
11.09	4582128	122.9881	20995896916741.40	50815799.41
16.85	4725086	283.9225	22326437707396.00	79617699.10
13.81	6912381.3	190.7161	47781014545351.60	95459985.06
14.26	8487031.6	203.3476	72029704870176.70	121025070.20
13.31	11411067	177.1561	130212448024497.00	151881300.60
13.56	14572239	183.8736	212350152970458.00	197599562.50
13.59	18564595	184.6881	344644177489144.00	252292842.40
23.3	20657318	542.89	426724773319294.00	481315501.70
32.1	24296329	1030.41	590311616968112.00	779912170.20
34.7	24794239	1204.09	614754270729039.00	860360081.50
26	33984754	676	1154963513276550.00	883603607.40
19.7	37543655	388.09	1409526008232830.00	739609997.60
488.44	227374788	9124.3952	5084878377027720.00	4861869781.00

Computation of r

$$r = \frac{4861869781 - \frac{(488.44)(227374787.8)}{31}}{\sqrt{\left[9124.3952 - \frac{(488.44)^2}{31}\right]\left[5084878377027720 - \frac{(227374787.8)^2}{31}\right]}}$$

$$r = 0.57904$$

Results

The coefficient of correlation is 0.579. This indicates that there is a positive correlation between deposit money bank loans and advances and GDP. In other words, the relationship between the variables is relatively high. The study rejects the null hypothesis that there is no significant relationship between the value of deposit money bank loans and advances and GDP in the Nigerian economy. This implies that financial intermediaries, specifically banks, impact on the economic growth in Nigeria.

5. Discussion and Conclusion

This paper looked into the relationship between financial intermediaries and the growth of the Nigerian economy. The paper looked into various studies on the role of financial intermediaries and its relationship to economic growth. The result of the statistical analysis shows a fairly high positive coefficient of correlation between **loans and advances** by banks to the economy and the **GDP**. The implication of this is that a rise in bank loans and advances would be associated with a rise in GDP.

This study is consistent with the findings of King & Levine (1993) who concluded that, “The data are consistent with the view that financial services stimulate economic growth by increasing the rate of capital accumulation and improving the efficiency with which economies use that capital” (p. 735). However this study is not consistent with the findings of DeGregorio & Guidotti (1992). They found negative correlations between finance development and economic growth, when they restricted their sample to Latin American countries. Their result is not surprising because banks in Latin America, although active lenders were not prudent in lending. Many banks became vulnerable and fragile and consequently suffered corporate collapse (DeGregorio & Guidotti, 1992). These factors of vulnerability and fragility were not captured in the variables used by King & Levine (1993).

One important question that this study needs to address is: Do bank loans and advances really cause economic growth in Nigeria? However we cannot really infer causality because there may be other factors (omitted variables) driving both financial development and economic growth. The propensity of households in the economy to save may actually be the factor affecting long term economic growth. Also the level of credit may trigger anticipation of a future economic growth which may actually be an indicator of economic growth but not the cause of it. To interpret the positive correlation between our variables we need to identify the mechanism through which financial intermediaries (bank loans and advances) affect economic growth. Rajan and Zingales (1998) were able to identify the mechanism through which financial intermediaries affect economic growth. By facilitating the reallocation of funds from fund surplus units to fund shortage units who need such funds for investment opportunities, financial intermediaries are able to reduce the transaction costs of saving and investing. This in turn lowers the overall cost of capital in the economy. Financial intermediaries also help to mitigate the problem of moral hazard and adverse selection. However for financial intermediaries (Banks) to contribute more positively to economic growth, they should give attention not only to the quantity of their loans and advances but also to the level of their financial efficiency. Nigerian banks should therefore be repositioned to meet the competitiveness in the 21st century. To this end the paper recommends the following:

1. Banks should be made to lend a higher proportion of their loanable funds to small and medium enterprises (SMEs)
2. The need for strong corporate governance
3. The Central Bank of Nigeria (CBN) should enforce regulatory policies to discourage unorthodox practices by some banks
4. Banks should invest more in both information technology and human capital to meet the ever growing competitive environment.

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