

FINANCIAL INTERMEDIATION AND ECONOMIC GROWTH OF NIGERIA

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Abstract

This paper evaluates the relationship between financial intermediation and economic growth of Nigeria (1981-2016). Secondary data are sourced from CBN statistical bulletin and Bureau of Statistics. Hypotheses are formulated and tested using vector error correction model (VECM) and the test for stationarity proved that the variables are integrated in 1(1) order which implies that unit roots do not exist among the variables. There is also long-run equilibrium relationship between the variables and the result of VECM confirmed about 45 percent short-run adjustment speed from long-run disequilibrium. The coefficient of determination indicates that about 99 percent variations on economic growth are explained by the changes in financial intermediation variables in Nigeria. The result also shows that bank savings deposit, bank total credits and time deposit have significant impact on the economic growth of Nigeria. This paper therefore recommends that there should be a working regulatory framework that will enable and ensure that banks channel their resources to the most viable sector of the economy and also ensure or enforce total compliance that the funds so far advanced are used for the purpose in which they are approved for. Again, government should endeavour to provide the basic infrastructures/amenities like constant power supply, good accessible road and security. This will reduce the cost of production and thereby reducing the price of goods and services in Nigeria.

Keywords: Deposit Money Bank, Economic Growth, Financial Intermediation .

Introduction

In every economy, there exists economic units, which possess funds in excess of the amount they require. Also there exists some units that have need for more funds than they possess. In other words we have the surplus and deficit economic units in the system. This situation is referred to as financial disequilibrium.

The doctrines of financial disequilibrium and intermediation imply the financial concept of

lending and borrowing. What finance does is to resolve the disequilibrium and ensure intermediation to bring the deficit units and the surplus units together within an institutional framework and market mechanism to consummate the needed financial transaction (Ezirim 2005).

In any economy, the financial sector is the engine that drives economic growth through efficient allocation of resources to

productive units. According to the Central Bank of Nigeria (CBN) act of 1958, one of its primary roles is to foster liquidity, solvency, proper functioning and stable financial system. This legislated function essentially implies a stable and efficient financial system that underpins intermediation process for economic growth and development.

Availability of investible funds is a key factor in the growth process of any economy. Although not a sufficient condition, resources availability is certainly a necessary condition for output and employment growth. Indeed, evidence have shown that countries that have enjoyed or are enjoying economic prosperity have been linked with an efficient mechanism for mobilizing financial resources and allocating same for productive investment. Efficient financial intermediation contributes to higher levels of output, employment and income which invariably enhance the living standards of the population.

The banking sector remains at the centre of this process, even in economies with highly developed financial markets. Banks provide important positive externalities as mobilisers of savings, allocators of resources, and providers of liquidity and payment services, as well as fulcrum for monetary policy implementation.

Simply put, banks influence the savings-investment process in order to accelerate the rate of economic growth and poverty reduction. Towards this goal, the soundness of intermediation is as important as its volume, hence the need to have an efficient banking system.

One of the activities of financial institutions (such as banks) involves intermediation between the surplus and deficit sectors of the economy. According to Bencivenga

(1991), the basic activities of banks are acceptance of deposits and lending to a large number of agents, holding of liquid reserves against predicated withdrawal demand, issuing of liabilities that are more liquid than primary assets and eliminating or reducing the need for self-financing of investments. In particular, by providing liquidity, banks permit risk averse savers to hold bank deposits rather than liquid (but unproductive) assets. The funds obtained are then made available for investment in productive capital which leads to economic growth.

Financial intermediaries become an engine of growth and development by the process of financial intermediation. Okereke (2004) stressed that channeling of funds from surplus to deficit units of the economy will encourage productive innovation although it is also risky. Nzotta (2004) stated that, the financial system consists of various financial institutions that operate in an orderly manner to ensure the smooth flow of funds and thus accord the system it's character and uniqueness.

The banking sector helps to make these credits available by mobilizing funds from savers who have no immediate needs of such funds and thus channel such funds in form of credits to investors who have brilliant ideas on how to create additional wealth in the economy but lack the necessary capital to execute the ideas. It is instructive to note that the banking sector has stood out in the financial sector as of prime importance because in many developing countries of the world, the sector is virtually the only financial means of attracting private savings in a large scale to enhance economic growth (Afolabi, 1998).

Banks all over the world, as we have earlier noted, provide a wide range of services

including financial intermediation to suit the needs of their customers, be they individuals, corporate or government customers. In developing nations such as Nigeria, the majority of the people are poor, capital for investment is in short supply, and means of transport as well as basic infrastructures are underdeveloped. Banks, through their intermediation role and other services, aim at overcoming these obstacles and thus, promote economic growth of the nation.

Banks play major roles in economic development. Some of the roles of the banking and finance institutions include acting as financial intermediaries that pool funds from savers and channels to investors and productive sectors of the economy; they provide the payments system that facilitates trade and exchange and also provide the platform for working of government's monetary policy to provide macroeconomic stability for all economic agents (Adegbite,2005).

However, it is in doubt how effective Nigerian banking and financial institutions have been in contributing to the economic growth over the past decades. While the argument of whether the financial system should be at the forefront of the economic growth also known as 'supply leading' or following as in "demand following" financial system, it has been argued widely the Nigerian financial system is not contributing enough to the growth of the productive capacity of the economy (Adegbite,2005).

Problem Statement of the Study

It is in line with these considerations that this study examines the financial intermediation and economic growth in Nigeria. Recently, the impact of financial intermediation on the growth of an economy

has generated heated debate. While some studies opined that financial intermediation drives economic growth (see Odedokun; 1998, Nieh, et al; 2009, Islam and Osman; 2011), others have argued that economic growth drives financial intermediation. However, there are studies which have argued that a bi-directional causality exists between financial intermediation and economic literature by examining the relationship between financial intermediation and economic growth in Nigeria.

While the financial system cannot be solely blamed for all economic woes of Nigeria, the financial sector's inability to live up to its true creed of mobilizing funds from the surplus sector to productive sectors for capital formation have indeed accentuated the dire economic quagmire the country is currently in (Adegbite and Arasomwan,2016). Ojo (2010) described the inability of our financial system to positively impact on the economic system through operational and allocation efficiencies as "maladaption". High interest rate, inability of many entrepreneurs to access much needed funds from deposit money banks, pursuits of quick returns and short term approach to banking have all contributed to the killing of many businesses and local industries.

The issue of poor banking habit among Nigerians is a big problem. Despite the sophistication and robustness of the banking system, most Nigerians prefer to keep and save their monies in boxes, under their mattresses or in holes in their houses, to having any business to do with banks. According to Ngwu (2005), this may be as a result of illiteracy on their part and also as a result of the losses these people have sustained in the past due to bank failures and distresses in Nigeria.

The major issue is, can banks through their intermediation activities contribute to economic growth in Nigerian in the face of these challenges?

Objectives of the study

The main objective of this study is to find out the impact of financial intermediation on economic growth of Nigeria over the period, 1981-2016. The specific objectives include to;

1. Determine the impact of demand deposit on economic growth of Nigeria.
2. Determine the impact of time deposit on the growth of the Nigerian economy.
3. Investigate the impact of savings deposit on the economic growth of Nigeria.
4. find out the impact of loans and advances of deposit money banks on the economic growth of Nigeria.

Research Questions

Based on the research objectives of this study, the following research questions are pertinent to the realization of the stated objectives of this study:

1. What is the impact of demand deposit on economic growth of Nigeria?
2. What is the impact of time deposit on the growth of the Nigerian economy?
3. What is the relationship between the savings deposit and the economic growth of Nigeria?
4. To what extent have bank loans and advances affected the growth of the Nigerian economy?

Hypothesis of the Study

The study will be guided by the following statement of hypotheses formulated based on the objectives of the study:

H0₁: There is no significant relationship between demand deposit of deposit money

banks and economic growth in Nigerian economy.

H0₂: There is no significant relationship between time deposit and the economic growth of the Nigerian economy.

H0₃: There is no significant relationship between savings deposit and the economic growth of Nigeria.

H0₄: There is no significant relationship between loans and advances and the economic growth of Nigeria.

Review of Related Literature

Conceptual Framework

Financial intermediation is a process that involves the transformation of mobilized deposits liabilities by the financial institutions into loans and advances. Actually, financial intermediation is a process whereby a financial intermediary such as bank mobilizes and consolidates bank deposits and transforms the mobilized or consolidated deposit money into banks credits, usually loans and overdrafts. It is simply the process of taking in money from depositors and then lending same out to borrowers for investment and other economic development purposes.

There are two strands in the literature that formally explain the existence of financial intermediaries. The first is the provision of liquidity and the second strand is the ability to transform the risk characteristics of assets. In both cases, financial intermediation can reduce the cost of channeling funds between the borrowers and the lenders, leading to more efficient allocation of resources.

What is common and of great interest in these definitions is the determinant of the endogenous components of the process; the deposits mobilized in the form of Demand Deposit, Time deposits and Savings deposit

as well as funds application or allocation in the form of Loans and Overdraft. From the foregoing were financial intermediation variables derived which include Demand Deposits (DD), Time deposits (TD) Savings deposits (SD) and Loans and advances ((L&A).

The concept of GDP (Gross Domestic Product) is absolutely important in the field of macroeconomics, essentially, as it relates to the economy of countries. GDP is defined as the quantity of goods and services produced in a country at a given period of time, whether consumed or used for further productive investments. It may also be defined as the total value of all goods and services produced in a country in a given period of time, usually a year.

Officially, Gross Domestic Product (GDP) is the most popular measure of the economic growth of a country. GDP indicates the market value of all officially recognized final goods and services produced within a nation at a specified time period. The relevance of GDP in every economy cannot be overemphasized because it is the major indicator of a country's economic growth and the living standard of its citizens. Indeed, the best index to understand a country's economy is by looking at its output in terms of Real Gross Domestic Product (RGDP). By global standard, it is output that shows how rich and viable a country is economically.

The magnitude of accumulated capital available for productive purposes positively influences the magnitude of output that could be produced. In other words, the higher the accumulated capital, the higher the output produced. Reciprocally, in a cyclical manner, it is also true that the magnitude of output produced has positive impact on the amount of Savings and other

economic activities and subsequently on capital accumulation, and in turn, further higher output (Agbada & Osuji, 2013).

This phenomenon is responsible for the gradual, steady and continuous economic growth of emerging and developed economies. Okorie and Uwaleke (2010) argued that the financial systems that are more effective at pooling the savings of individuals can profoundly affect economic development; better savings mobilization impact positively on capital accumulation and that can improve resource allocation and boost technological innovation.

The funds which customers deposit into their accounts can be used by the banks to create loans to other customers of the bank. These accounts can be divided into Current, Demand and Savings Accounts.

a. Current Account

This is the principal and most popular account. Holders of current account do not normally receive interest on their deposits; indeed, the opposite is true: they are charged for services rendered in connection with such account. Current account customers can deposit both cheques and cash into their accounts and can draw cheques on them at any time. It has been argued that although money held on current account represents money set aside to cover current expenditure rather than being a permanent or semi-permanent cash surplus, current account balances are still "savings" Adekanye (2010). Current account is also known as demand deposit.

b. Demand Accounts.

These are funds placed on deposit for repayment after a specific number of days' notice is given or at the end of a definite period. In this type of account, high rate of interest is paid to the customer by the bank

but they (funds) are expected to be kept for the fixed period of time. Failure to keep to the agreed terms may attract some penalty. These are also called time deposits.

c. Savings Accounts

Savings accounts are similar in many ways to deposit accounts. They attract interest at a fixed rate, but funds can be withdrawn at any time without notice. They are aimed at attracting small depositors who want to save for a rainy day.

Based on the foregoing, we specify an empirical model to link our dependent or explained variable, Output (GDP) and our independent or explanatory variables; Bank Demand Deposit (BDD), Bank Time Deposits (BTD), Bank Saving Deposit (BSD), Bank Total Credit (BTD) or Bank Loans and Advances

In summary, financial intermediaries play an important role in credit markets because they reduce the cost of channeling funds between relatively uninformed depositors to uses that are information-intensive and difficult to evaluate, leading to more efficient allocation of resources. Intermediaries specialize in collecting information, evaluating projects, monitoring borrowers' performance and risk sharing.

Theoretical Framework

The pioneering work of Schumpeter (1912) on finance-growth nexus argues that financial development will induce economic growth through efficient allocation of fund resources to the productive sectors of the economy. Robinson (1952) however challenges this view on the premise that it is the necessity from high economic growth that creates the need and demand for financial sector. Thus, in this view, it is the improvements in the economy that drive higher demands for the use of money which consequently promote financial development.

In other words, financial markets develop and progress as an aftermath of increased demand for their services from the growing real sector. These two views were later formalized by Patrick (1966) who identified two possible causal relationships between financial development and economic growth, namely the "supply-leading" (i.e. finance-led growth) hypothesis and the "demand-following" (growth-led finance) hypothesis. The former encapsulates the views of Schumpeter (1912) and the later represents that of Robinson (1952).

Both the Keynesian monetary growth models and the Mackinnon and Shaw models support the supply-leading hypothesis. However, they differ markedly in the role of government and interest rates in the financial market. Keynes affirmed that there is a historical and natural tendency for real interest rates to rise above its full employment equilibrium level and that this should necessitate government intervention to reduce it and stimulate growth.

According to this thought, a high rate of economic growth leads to a high demand for particular financial arrangement; and the well-developed financial sector will automatically respond to these types of demand. This view was defined recently as growth-led finance hypothesis.

However, this study was anchored on two theoretical frameworks namely: Concentration theory and Endogenous growth theory.

Concentration theory explains how few large dominant banks can use their market power to improve the intermediation efficiency of banks through economies of scale, cost reduction and reduction in credit risk, while the endogenous growth theory offers useful link through which accumulated savings

(deposits) held by banks are channeled to productive investments (through lending activities) for economic development.

Empirical Review

Due to some disagreements in the theoretical postulations, there aroused curiosity and many researchers were motivated to test, empirically, the logic behind these arguments. Their quest for knowledge yielded a result, which became the genesis of empirical argument over the need to justify the relationship between finance and economic growth. Beyond this, quite a number of studies have shown that there is a relationship between finance and economic growth.

The direction of causality has been described by Patrick (1966), as supply-leading and demand-following hypothesis. This postulation was buttressed by Mckinnon (1973). When causal relationship runs from financial development to growth, it is termed supply-leading because it is believed that the activities of the financial institutions increase the supply of financial services which creates economic growth. The proponents of this hypothesis believe that the activities of financial institutions serve as a useful tool for increasing the productive capacity of the economy. They opine that countries with better developed financial system tend to grow faster.

Fevero et al (1995) indicated that the intermediation approach is most appropriate for banks where most activities consist of turning large deposits and funds purchased from other financial institutions into loans and financial investments. Elyasiani (1990) stressed that the production approach can be applied only when functional cost analysis data are available. Since the data on the number of deposits and loan accounts are

available only as a part of the functional cost analysis, the ability to use the production approach appears to be limited. Contrarily, the intermediation approach allows the use of the value of the input and output variables.

Levine et al (2000) changed the face of the argument on the relationship between financial intermediation and economic growth. This study seeks to establish the impact of the endogenous component of financial intermediation on economic growth. A robust methodology, which comprises two models and two estimation techniques, was employed. The first model, which defines economic growth as a function of finance indicators and a vector of economic growth determinants, was estimated using the pure cross-sectional estimation technique. The second model is a dynamic panel model and is estimated using the Generalized Methods of Moments (GMM). Both tests confirm the strong positive impact of the endogenous components of financial intermediation on economic growth.

Romeo-Avila (2007) also confirms the positive impact of finance on growth. He investigated the relationship between finance and growth, with emphasis on the effect of financial deregulation and banking law harmonization on economic growth in the European Union. The study establishes that financial intermediation impacts positively on economic growth through three channels.

Gries et al (2009) sought to test for the causality between financial deepening, trade openness, and economic development. This study focused on 16 sub-Saharan African countries, using annual time series observations. For the purpose of establishing

the causal relationships, the Hsiao-Granger method, the vector Auto-Regression (VAR), and the vector Error Correction Model (VECM) were used. This study shows sparse support for the hypothesis of finance-led growth. It, however, suggests that the adoption of a more balanced policy approach may reduce financial system deficiencies among the Sub-Saharan Countries.

Nzotta (2004) was affirmative on this and concludes that bank credits influence positively the level of economic activities in any country. It influences what is to be produced, who produces it and what quantity is to be produced. Banking system credit affects and alters the level of money supply in an economy. It is the most important source of bank income and it promotes the activities of bank and non-bank financial institutions, thus, it influences the level of growth of the financial system. It also affects aggregate output and productivity, the pattern of production, the efficiency of entrepreneurship and the realization of aggregate economic performance, development and growth.

Tonye & Priye.(2014) examined the relationship between financial intermediation and economic growth in Nigeria. The methodology used was vector error correction model. The study found that there is long run relationship between financial intermediation and economic growth. The study concluded that about 89% of the variations in economic growth in Nigeria are explained by changes in financial intermediation variables

Sasa & Milka (2015) empirically examined the possible causal relationship between financial intermediation and economic growth in Serbia between 2004– 2011 by

using Toda-Yamamoto causality test. Their empirical findings suggest that process of economic growth contributes to process of financial deepening. On the other hand, the results indicate that there is a significant unidirectional causality that runs from both private enterprise credit to GDP and household credit to GDP to economic growth. Bidirectional causal relation is confirmed only between the share of bank credit to non-financial private sector in total domestic credit and economic growth rate.

Ekpenyong and Acha (2011), through an error correction model, estimated the role of banks in the form of savings mobilization and credit allocation to the real sector on the growth of the economy. It was discovered that bank intermediation insignificantly impacts on growth.

Acha (2011) tested for the causality between financial intermediation provided and economic growth and found no evidence of causality between savings/credit and economic growth. Shittu (2012), on the contrary however, found that financial intermediation significantly impacted on economic growth using an error correction modeling approach. Using the Ordinary Least Square (OLS) method, Agbada and Osuji (2013) discovered that financial intermediation had a direct relation on economic output. Efoyena (2014) applied the correlation test to establish that financial intermediaries have a strong positive relationship with economic growth.

Nwaeze, Michael & Nwabekee (2014) analyzed the effect of financial intermediation on economic growth using the OLS technique, and revealed that financial intermediation has a significant positive impact on economic growth.

Ogiriki and Andabai (2014) employed the co-integration test and Vector Error Correction Mechanism (VECM) to unearth the relationship between financial intermediation and growth. The study found that a long-term relationship is present and that financial intermediation explains a considerable amount of variation in economic growth.

Ogwumike and Salisu (2010) examined the short run, long run and the causal relationship between financial development and economic growth in Nigeria from 1975 to 2008. Using the Bound test approach, this study finds a positive long run relationship between financial development and economic growth in Nigeria. Financial intermediation- credit to private sector, stock market and financial reforms exert significant positive impact on economic growth. Further, analysis of the short run dynamics reveals that about 40% of the resulting disequilibrium is captured each period, indicating minimal deviations from the equilibrium. In addition, the result of the VAR-Granger causality test lends support to the supply-leading hypothesis.

Odhiambo (2008) examined the dynamic causal relationship between financial depth and economic growth in Kenya. The study focused on the period, 1969 to 2005, and included savings as an intermitting variable. To achieve this task, this study adopted two econometric techniques; the dynamic tri-variate granger causality test and the error correction model (ECM Modeling). The study concludes that one-way direction causality, from economic growth to finance, exists in Kenya. In other words, finance plays a minor role in the attainment of economic growth in Kenya.

Wolde-Rufael (2009) is of a contrary opinion. Using a different econometric technique, the

Quad-variate Vector Autoregressive (VAR) framework and data from 1966 to 2005, it concludes that two-way directional causality exists in Kenya. Abu-Bader and Abu-Qarn (2008) examined the causal relationship between financial development and economic growth. The study focused on Egypt over the period, 1960 to 2001. Using the trivariate VAR model, this study concludes that two-way directional causality exists in Egypt. In other words, finance leads growth, and economic growth induces financial development. Conversely, Odhiambo (2011) argues that economic growth granger causes financial development in South Africa. The study examined the dynamic causal relationship between financial development, economic growth, and poverty reduction. Using a trivariate causality model and the ECM modelling to analyze the data collected from 1960 to 2006, it concludes that the hypothesis of finance-led growth do not hold in South Africa.

How financial intermediation links with economic growth remains equivocal. Studies have shown that financial intermediation drives economic growth and vice versa.

Therefore, this study seeks to provide clear evidence on the relationship that exists between the decomposed financial intermediation variables and economic growth in Nigeria.

A review of previous literature in the preceding section shows that studies that have been carried out in Nigeria on financial intermediation and economic growth savings using time series data approach have majorly focused on lumped total of deposits and credits of the financial sector, for example the study of Acha (2011), Nwaeze, Onyidikach, Nwabekee (2014), Nwanne (2015) Imoughele (2015) etc. Few studies

have also focused on decomposing or disaggregating either the deposits or credits or both of them to see if any of the unit(s) has/ have a dominating impact on the economy. Furthermore, a close scrutiny of all the variables shows that there is a disparity between the different findings of the different variables and hence the study aims at filling this gap.

Materials and Methods

The data for this study is secondary and were collected from the National Bureau of statistics and Central Bank of Nigeria (CBN) statistical bulletin from 1981- 2016. This study looks at the inputs and outputs of the banking sector and how this relationship affects the entire economy of Nigeria.

The definition of inputs and outputs for the banking sector are derived from the intermediary role that banks play in the economy.

Method of Data Analysis

The analytical framework of this study includes pre-estimation analysis such as descriptive statistics and stationarity test. This is to reveal the behaviour of the data on

the variables. The stationarity test will investigate the stationarity of the variables; non stationarity could lead to spurious regression results. Such spurious relationship between or among variables may be evident in time series data that exhibit non-stationarity. Ordinary least square regression test will reveal the predictive ability of the model as well as the relative statistics of the variables in the short run, while the test for the presence of long-run equilibrium relationship is carried out based on the Johansen's (1991) multivariate cointegration technique. The error correction model (ECM) is applied to tie the short-run dynamics of the co-integrating equations to their long-run statics dispositions.

Model specification

Following a detailed review of previous studies and improving upon the work of Agbada and Osuji (2013), the equation will be expanded to accommodate further decomposed bank deposits of deposit money banks (Savings, Demand and Time Deposits). Thus the new formulation reads:

$$RGDP = f(BDD, BTDC, BSD, BTC) \text{ ----- (1)}$$

Functionally stated as in natural logarithm as;

$$\log RGDP = \alpha_0 + \alpha_1 \log BDD + \alpha_2 \log BTDC + \alpha_3 \log BSD + \alpha_4 \log BTC + \mu \text{ ----- (2)}$$

RGDP=Real Gross domestic product

BDD= Bank Demand Deposits

BTDC= Bank Time Deposits Credit

BSD= Bank Savings Deposits

BTC= Bank Total Deposits

LOG= Logarithm

μ = error term

α_0 = Model intercept

$\alpha_1, \alpha_2, \alpha_3, \alpha_4$ = Coefficients

Appriori Expectation

The appriori expectation is that all the independent variable; BDD, BTD, BSD and BTC will have a direct positive relationship with the dependent variable RGDP.

This is thus stated; $\alpha_1, \alpha_2, \alpha_3, \alpha_4 > 0$.

Data Analysis and Interpretation

Table 1: Descriptive Statistic Result

	RGDP	BDD	BSD	BTC	BTD
Mean	17827.15	1289.461	549.6431	2587.732	878.8614
Median	4189.250	142.2521	101.3735	322.7649	61.26320
Maximum	94144.96	5436.000	2942.700	13222.70	4475.500
Minimum	94.32502	4.880900	1.979200	8.582900	3.816800
Std. Dev.	28092.36	1930.980	842.9288	3952.754	1393.798
Skewness	1.688211	1.253779	1.570214	1.357139	1.425439
Kurtosis	4.405487	2.898361	4.153437	3.392632	3.586786
Jarque-Bera	19.50612	9.184837	16.32270	10.96880	12.35474
Probability	0.000058	0.010128	0.000285	0.004151	0.002076
Sum	623950.4	45131.14	19237.51	90570.63	30760.15
Sum Sq. Dev.	2.68E+10	1.27E+08	24157985	5.31E+08	66050836
Observations	35	35	35	35	35

The result above shows the mean values of the RGDP, BDD, BSD, BTC and BTD

Variables are, 17827.15, 1289.461, 549.6431, and 878.8614 respectively. It should be noted that the median is a robust measure of the center of the distribution that is less sensitive to outliers than the mean. The maximum values of each of the series in the current sample are 17827.15 for RGDP, 1289.461 for BDD and 878.8614 for BTD respectively. The standard deviations, which are a measure of dispersion spread in each of the series, are 28092.36 for RGDP, 1930.980 for BDD, 842.9288 for BSD, 3952.754 for BTC and 1393.798 for BTD. Additionally, the descriptive analysis was

also furnished with Skewness and Kurtosis of all the variables of interest. The Skewness measures symmetrical property of the histogram while the kurtosis measures the height and the tail shape of the histogram. The yardstick for measuring the Skewness is how closer the variable is to the zero (0) and for the kurtosis is how closer the variable is to the three (3). Based on this, all the variables have relatively asymmetrical distribution. For the kurtosis, RGDP and BSD can be regarded as leptokurtic, since its distribution is peaked relative to the normal and they have values greater than 3. While

BDD, BTC and BTD are playkurtic, suggesting that their distributions are flat relative to the normal and its value is less 3 (2.516001).

The Jarque-Bera test was used to determine whether financial intermediation factors and gross domestic product follow the normal probability distribution. The Jarque-Bera statistic is a test statistic for testing whether the series is normally distributed, measuring the difference of the skewness and kurtosis of the series. The probability values of the Jarque-Bera statistics for all the explanatory variables are all significant at a 5% confidence level and are not normally

distributed. In other words, the results indicate that RGDP, BDD BSD, BTC and BTD are not normally distributed.

Testing for Stationarity

In an attempt to estimate the relationship between financial intermediation and economic growth in Nigeria, the first task is to test for presence of unit root. This is necessary in order to ensure that the parameters are estimated using stationary time series data. To do this, the Augmented Dicky-Fuller test is used. The table 2 below shows that all the series are stationary at first difference that is;1(1) order

Table 2: Unit Root Test Result

Series	ADF Test Statistic	5% Critical Value	Order	Remarks
RGDP	-5.369211	-2.951125	1(1)	Stationary
BDD	-3.893471	-2.951125	1(1)	Stationary
BSD	-5.280136	-2.951125	1(1)	Stationary
BTC	-4.663492	-2.951125	1(1)	Stationary
BTD	-9.237513	-2.957110	1(1)	Stationary

Source: E- views7.

Test for Cointegration

In order to ascertain the significant implications of the financial intermediation on economic growth in Nigeria, there is need to identify the number of stationary and long-run relationships that exist among the set of integrated variables

Table 3: Johansen Cointegration Result

Included observations: 34 after adjustments
Trend assumption: Linear deterministic trend
Series: BDD, BSD, BTC, BTD, RGDP
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Trace	0.05		
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.978909	348.5004	69.81889	0.0001

At most 1 *	0.969228	217.2979	47.85613	0.0001
At most 2 *	0.787779	98.93843	29.79707	0.0000
At most 3 *	0.731738	46.23414	15.49471	0.0000
At most 4	0.043080	1.497220	3.841466	0.2211

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.978909	131.2024	33.87687	0.0000
At most 1 *	0.969228	118.3595	27.58434	0.0000
At most 2 *	0.787779	52.70430	21.13162	0.0000
At most 3 *	0.731738	44.73692	14.26460	0.0000
At most 4	0.043080	1.497220	3.841466	0.2211

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level

Since the unit root test shows that the variables are stationary at first difference, we therefore test for co-integration among these variables by employing the Johansen co-integration test. The result of the test is shown in table 3 above. The result shows that there exists four (4) co-integrating equations at 5% level of significance. This is because the Trace Statistic is greater than critical values at 5%. This shows that there is long run relationship between economic growth of Nigeria and all the explanatory variables. The result indicates that, in the long run; the dependent variables can be

efficiently predicted using the specified independent variables. Hence, error correction model can be estimated

Error Correction Model (ECM)

The existence of long-run cointegrating relationship provides for short-run fluctuations; in order to strengthen out or absolve these fluctuations, attempt was made to apply the error correction model (ECM). Therefore, ECM is meant to tie the short-run dynamics of the cointegrating equations to their Statics dispositions as stated in table 4 below

Table 4: Error Correction model

RGDP

Method: Least Squares

Sample: 1981 2016

Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGBDD	-0.131847	0.841082	-0.156759	0.8765
LOGBSD	48.87289	1.737816	28.12317	0.0000
LOGBTC	-4.842419	0.536140	-9.032006	0.0000
LOGBTD	4.112884	1.459577	2.817860	0.0085
ECM(-1)	-0.457833	-0.165848	2.760552	0.0099
C	50.75062	315.4863	0.160865	0.8733
R-squared	0.997388	Mean dependent var	17827.15	
Adjusted R-squared	0.997040	S.D. dependent var	28092.36	
S.E. of regression	1528.328	Akaike info criterion	17.63330	
Sum squared resid	70073617	Schwarz criterion	17.85549	
Log likelihood	-303.5828	Hannan-Quinn criter.	17.71000	
F-statistic	2864.353	Durbin-Watson stat	2.477197	
Prob(F-statistic)	0.000000			

Source:E-views7.0

The result in table 4 above shows that the coefficient of error correction mechanism (ECM) is negative -0.457833 and significant at 0.05 per cent critical level. This shows that about 46 percent disequilibria in Nigeria's economic growth in previous year are corrected for in the current year. The significance of the ECM is an indication and a confirmation of the existence of a long run equilibrium relationship between economic growth of Nigeria and all the explanatory variables.

Global Statistical Results Analysis

The econometric property of the estimated equation shows that the global utility or the overall goodness of fit is high with an F-

statistics of 286.353 and probability value of 0.000000. From ECM result, R^2 is 0.9974 or 99.74% and the adjusted R^2 is 99.70%. This implies that, at 5% level series, about 99.70% of the total variations in the Economic growth of Nigeria (RGDP) are explained by the changes in financial intermediation variables in Nigeria – BDD, BTD, BSD and BTC.

The Durbin – Watson statistic from the output result is 2.477197 and it is closer to 2 than 0. This depicts the absence of autocorrelation. But in order to be sure of data employed, a more reliable test is conducted to check for serial correlation which is more serious than autocorrelation.

Test for Serial Correlation

Table 5: Serial Correlation Test Result

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.916174	Prob. F(1,29)	0.1346
Obs*R-squared	2.073275	Prob. Chi-Square(1)	0.1243

Source:E-views7.0

Breusch-Godfrey serial correlation LM test is used to test whether Residuals are auto-correlated or not.. A P-value of 12.43% reported in Table 4.6 is above 5% implying that the residual of the values is not serially correlated or auto-correlated and hence fits for regression model.

In other words, the observed chi-square (χ^2) value of 2.073475 with a Probability. value of 0.1243, which is greater than 0.05 allowed us to accept the null hypothesis and agree that there is no presence of serial correlation in the model or equation is constant

overtime. That is, it is free from serial correlation.

Test of hypotheses

This sub-section presents the result of hypotheses testing. Null hypothesis to be tested is that the explanatory variables (BDD, BSD, BTC and BTM) used in the model have no significant relationship with economic growth of Nigeria. If the t-statistic of any explanatory variable is less than p-value at 5% significance level, such variable is said to have significant relationship on economic growth, and if otherwise it has no significant relationship.

Table 6: Hypotheses Result

Variables	T-Statistic	Prob.Value	Observation	Decision
BDD	-0.156759	0.8765	p-value>0.05	Accept Null
BSD	28.12317	0.0000	p-value< 0.05	Reject Null
BTC	-9.032006	0.0000	p -value< 0.05	Reject Null
BTM	2.817860	0.0085	p-value< 0.05	Reject Null

Source: Extracted from E-views 7.0

As earlier observed, the F-statistic proved that variables entered have the capacity to determine the economic growth in Nigeria.

However, we will go on and test for individual contributions of each of these variables by looking at the hypotheses stated in section one of this study.

H₀₁: There is no significant relationship between the demand deposit of deposit money banks and economic growth of Nigeria

Based on the table 6 above, we reject the null hypothesis and accept the alternative hypothesis and conclude that the bank demand deposits (BDD) of banks have no

significant impact on economic growth of Nigeria. Demand deposit is a 'hot' money liability and can be withdrawn at any time by the owners. It is theoretically believed that a large proportion of demand deposit is essentially meant to meet liquidity needs of business firms rather than real investment purposes. This finding is contrary to the findings of Agbada & Osuji (2013).

H0₂: There is no significant relationship between time deposit and the economic growth of the Nigeria Economy.

From table 6 above, H0 is rejected thereby leading to the acceptance of the H₁ and conclude that time deposit of banks has significant positive relationship with economic growth of Nigeria. Indeed, the positive sign conforms to apriori expectation, thus affirming the theoretical assertion that Time deposit and domestic savings are the primary source of capital accumulation and investments.

H0₃: There is no significant relationship between the savings deposit and the economic growth of Nigeria.

From the table 6 above, we therefore reject the null hypothesis and accept the alternative hypothesis and conclude that savings deposit of banks has significant positive relationship with economic growth of Nigeria.

H0₄: There is no significant relationship between the loans and advances and the economic growth of Nigeria.

Ho is rejected thereby leading to the acceptance of the H₁ and conclude that loans and advances of banks have significant negative relationship with economic growth of Nigeria. This is contrary to the apriori expectation of this study. This means credit to the economic agents is counter-

productive. This alone explains the reason for poor performance of this sector to economic growth. The reason for this may not be far-fetch as cost of credit (interest rate) is so high and the level of infrastructural development in Nigeria is quite low. Entrepreneurs have to provide some of these facilities like Water, power supply and sometimes access road. These build up the price of the goods or services been provided.

Summary

This study entitled "**Financial Intermediation And Economic Growth of Nigeria**" has the main objective of finding out the impact of financial intermediation to economic growth of Nigeria over the period 1981-2016.

The data used for the study utilized the ex-post facto design. Time series data for thirty five years period (1981-2016) were collated from secondary sources from National Bureau Of Statistics and Central Bank Of Nigeria (CBN) Statistical Bulletin of 2016. The test for autocorrelation and serial correlation revealed absence of both autocorrelation and serial correlation.

Hypotheses were formulated and tested using the Error Correction Model (ECM) and the test for stationarity proved that the variables under consideration are integrated in 1(1) order which implies that units do not exist among the variables. The test of cointegration shows that there is long-run equilibrium relationship between financial intermediation and economic growth in Nigeria. The result of ECM also confirms that about 45 percent short-run adjustment speed from long-run disequilibrium.

The coefficient of determination (R²) indicates that about 99 percent of the variations in economic growth are explained by changes in financial intermediation

variables in Nigeria within the period of study. The hypotheses tested showed that Bank Saving Deposit (BSD), Bank Time deposit (BTD) and Bank Total Credits (BTC) exert significant impact on economic growth of Nigeria. Although the Bank Total Credits revealed a negative impact to economic growth.

This study therefore concludes that there is a strong and positive significant relationship between financial intermediation and economic growth of Nigeria. While the bank total credits have significant negative impact on the economic growth of Nigeria, the savings and time deposits contributed largely to economic growth more than the bank demand deposit.

Conclusion

In conclusion, these empirical findings as seen above clearly indicate that there is significant relationship between financial intermediation and economic growth of Nigeria within the period of study. The negative impact of bank credits in this work is worrisome. Therefore, the lopsided distribution of banks' financial output to favour household and import in Nigeria negates the principles of Cobb-Douglas' Production function because credits targeted at immediate consumption do not impact or affect economic growth.

Recommendations.

Based on the forgoing, the paper recommends as follows;

1. There should be a working regulatory framework that will enable and ensure that banks channel their resources to the most viable sector of the economy and also ensure or enforce total compliance that the funds so far advanced are used for the purpose in which they are approved for.

2. Government should endeavour to provide the basic infrastructures/amenities like constant power supply, good accessible road and security. This will reduce the cost of production and thereby reducing the price of goods and services in Nigeria.
3. Efficient and effective intermediation by deposit money banks should be pursued and encouraged by the regulatory authorities since a positive significant relationship has been established with economic growth. In view of this, interest rates should be aligned in a way that it enhances efficient deposit mobilization.
4. Finally, a component analysis of the real sector of the Nigerian economy should be carried out with the view to having a better understanding of the inverse relationship between credits to private sector and economic growth.

Contribution to Knowledge.

A proper review of existing empirical literature revealed that there has never been an in-depth study of the components of what constitutes bank deposits as one part of financial intermediation. So this study has come to break the jinx and come up with the decomposed or disaggregated bank deposits: Saving Deposits, Time Deposits And Demand Deposits. In this study, it was revealed that bank demand deposit has no significant impact on economic growth as against the previous studies that aggregate the deposit together.

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