An Empirical Assessment of Loanable Funds Market in Nigeria (2001 – 2015)

[1]Emmanuel tile Aime* and Ahmed [2]Aliyu Aliyu Tanko

[1*]Department of Business Administration, College of Advanced and Professional Studies
Makurdi, Benue State | Phone: tileaime@gmail.com
[2]Department of Business Administration and Management, Federal Polytechnic Nasarawa State

Abstract: *This paper investigates the impact of loanable funds market on economic growth in Nigeria. Data from 2001 – 2015 were used. This was obtained from CBN bulletin and Bureau of Statistics. The analysis was done using multiple regressions. The growth in line with a priori expectation. The study also affirms a positive relationship between interest rate and economic growth. The coefficient of determination R2 is 95.7% while the Durbin Watson statistic of 2.25 shows minimal level of autocorrelation. It was recommended that government should occasionally supply funds to meet up the high demand which cannot be met by DMB in order to step down the high demand which cannot be met by ground loan facilities desirable for rural dwellers.*

Key words: *Loanable funds, money market, demand and supply*

1. Introduction

The availability of credit facility to the investors has a reaching impact to the economic development of any nation. Availability literature suggests that an access to credit facility leads to positive economic growth and consequently influence the distribution of income positively. For the nation to achieve the above target, it has to mobilize adequate financial resources to aid such development, the government should make conscious efforts to ensure that adequate funds are available to attain such development. The mobilization of such financial resources will culminate into capital formation and it is through capital formation that real investment can be achieved (Aruomoagbe & Olgbega, 2014). It is also required of government to create a conducive economic environment and most importantly, a well-developed financial market that can give birth to better economic growth.

It was on the strength of the above that the Nigerian government in 1980s on a usual way of enhancing her financial sector determined interest rates, both for savings and lending. For the purpose of directing the allocation of credit to areas of proper economic development to enhance efficient performance of the money market. Unfortunately, the interest pegging resulted to economic repression. Government did not stop at that moment, introduced other policy measures designed to transform the financial system within an appropriate regulatory framework that will give room for promotion of competition and resource allocation (Wazabaca, 2000). This economic restructuring programme was embarked upon in 1986 with much emphasis on market forces and this reduced distortion in investment decisions and evolves a sound and more efficient financial system. The reforms which focused on structural changes, monetary policy, interest rate administration and foreign exchange management, encompassed both financial market liberalization and institutional building in the financial sector.

Bearing the state of economy, the Federal Government introduced again some various economic and structural reforms in 2003 under the platform of the blue print 'the National Economic Empowerment and Development Strategy'. The fact remains that with the persistent introduction of reforms which geared towards:

❖ Removal of controls on interest rates to increase the level of savings and improve allocation efficiently.
❖ Adoption of indirect monetary management in place of the imposition of credit ceiling.
❖ Strengthening the money and capital markets through policy changes and distress resolution measures (CBN, 2010).

The level of economic development seems not been felt if so what degree has the reforms affected the quality of resource allocation and output maximization? What has been the impact of laonable funds or total credit granted by the money market on the Nigerian economy? It is on the basis of these that this study seeks to address:

1. To determine if there is any relationship between amount of loan granted.
2. To determine if there is any relationship between amount of loan granted and gross domestic product (GDP).
3. To determine if there is any relationship between interest rate and GDP.

In the light of the foregoing, the researcher seeks to address the following questions:

1. To what extent is the relationship between interest rate and the amount of loan granted.
2. What is the relationship between the amount of loan granted and gross domestic product (GDP).
3. Is there any relationship between interest rate and GDP?

The hypotheses for the study are as follows:

H_{01}: The amount of loan granted does not contribute significantly to the growth of GDP.

H_{02}: The interest rate does not significantly affect the growth of GDP.

2. Literature Review and Theoretical Framework

The loanable funds are most crucial concept that vividly explains the determination of interest in terms of demand and supply of loanable as money available for lending to individuals and institutions in the financial markets. It comprises of the current savings of private individuals and firms, dishoarding, and any increase in money supply made available by the actions of depository institutions, government and monetary authorities in the financial markets. It is the flow of money into the financial markets for purpose of loans of whatever kind. According to the Macmillian Dictionary of motion Economic (1992), loanable funds or credit is strictly the term used for funds that are available for lending in the money and capital markets, and is usually considered within the context of the theory of interest rate.

The neo-classical or the loanable funds theory which states that the rate of interest is the price of credit which determined by the demand and supply for loanable funds. It is the price which equates the supply of credit or savings plus the net increase in the amount of money in a

given period, to the demand for credit, or investment plus net hoarding in the period (Jhingan, 2004). The loanable funds theory is one of the popular theories which argue that the risk-free interest rate is determined by the interplay of two forces: the demand for and supplpy of credit demands from domestic businesses, consumers, and governments, and also borrowing in the domestic market by foreigners. The supply of loanable funds stems from domestic savings, dishoarding of money balances, money creation by the banking system, and lending in the domestic market by foreign individuals and institutions. McConell, Brue, and Flynn, (2009) explained loanable funds theory of interest rate not in terms of the total supply of and demand for money but, in terms of the supply of and demand for funds available for lending and borrowing.

The loanable funds theory according to Adekange (1084) believed in the time preference explanation of how interest arises. The neo-classical theory states that interest is the price paid for the use of loanable funds. Like the classical and Keynesians theories, it asserts that, the rate of interest is determined by the equilibrium between demand and supply of loanable funds comes from savings while the demand for loanable funds comes investment. Both of these come from the real sector of the economy, so the interest rate is considered as real variable not a monetary variable. That the prevailing rates of interest at any one time represent an equilibrium price at which the demand for credit from those who prefer to have the good now, will equal the supply of loanable funds from who are to have interest.

The rate that equilibrates the financial market is that which equates the supply of credit, through savings from present income plus net increase in money supply in a given period; the demand for credit arises from the investment demand for real capital expenditure, plus net hoarding during the period. The above statement can be illustrated as follows:

$$S + DM + 1 + DH$$

$$S + M = 1 + H - \quad - \quad - \quad - \quad - \quad - \quad (1)$$

Where:

S = current savings; DM = net increase in money supply.

I = investment demand; and DH = net hoarding.

The loanable funds model explains that the demand for, and supply of credit determines the interest rate in the financial markets, it is the forces of demand for and supply of loanable funds that determine the interest rate in the financial sector.

$$r = f (Lf_d \ Lf_s) \quad - \quad - \quad - \quad - \quad - \quad (2)$$

where

r = rate of interest

Lf_d = demand for loanable funds

Lf_s = supply of loanable funds

The loanable funds model also explains how the deficit unit needs funds for purpose of investment, hoarding and consumption. The deficit intends to borrow more of a lower rate of interest than at a higher rate of interest.

$$\frac{Sr < 0}{Slf_d} \qquad - \qquad - \qquad - \qquad - \qquad - \qquad - \qquad (3)$$

The surplus unit prefers to supply more at a higher rate interest than at lower rate of interest.

$$\frac{Sr > 0}{Slf_s} \qquad - \qquad - \qquad - \qquad - \qquad - \qquad - \qquad (4)$$

(CBN, 2003)

The demand for the supply of loanable funds, many scholars reveals that it has been influenced by several reasons, according to CBN (2003) they involve: public sector deficit, regulatory and monetary, policies, inflationary expectations and the structure of the financial system.

Government borrows to finance shortfall between its revenue and expenditure. It may be from the banking sector or from private sector through issuance of securities. The supply of funds to the public sector by the banking sector constitutes part of the total supply of loanable funds from household savings increases, but at a rate less than the increase in government demand and this leads to the crowding out of other borrowers.

The regulatory actions of the monetary authorities affect the availability of credit in the economy. Since the monetary policy stance impacts on the reserves of deposit money banks comes their portfolio management in response to policy actions affect the flow of credit. The lending capacity of DNMs is constrained when part of the deposit mobilized is sterilized by the central bank, through reserve requirements, partly for prudential reasons and partly for monetary control purposes. This implies that less money is available to DMBs for lending operations. The implicit taxation is passed on to borrowers in the form of higher interest rates, which affect the demand for and supply of loanable funds.

The structure of the financial system can influence the level of credit. A repressed and shallow market may lead to weak intermediation and low funds mobilization, while a highly deepened market offers the reverse. Moreover, the size and structure of the informal sector may promote or hinder the availability of loanable funds: the larger the size of the informal market, the less the availability of loanable funds in the banking sector, and vice versa.

The total demand for loanable funds is the function of domestic consumer, business, and government credit demands plus foreign credit demands i.e. $D_{Lf} = f (D_{consumer} + D_{business} + D_{government} + D_{foreign})$.

It provides a demand curve that is downward and to the right with respect to the interest rate. Which explains that the higher rate of interest leads to some businesses, consumers, and governments to curtail their borrowing plans? But at a lower rate of interest ginger more credit demand. But the demand for loanable funds does not in any way determine the rate of interest by itself. It is the combination of supply of loanable funds that make th e story complete.

The total supply of loanable funds is made up of domestic savings, foreign lending, dishoarding of money, and new credit created by the domestic banking system. It offers a curve rising with higher rates of interest, which shows that a greater supply of loanable funds will flow into money and capital markets if the returns from lending increase. It is obviously that these two forces of supply and demand for loanable funds which determine not only the volume of lending and borrowing going on in the economy but also the rate tends toward the equilibrium point at which the total supply of loanable funds equals the total demand for loanable funds. It peradventure the interest rate is temporarily above equilibrium, the quantity of loanable funds supplied by domestic savers and foreign lenders, by the banking system and from the dishoarding of money exceeds the total demand for loanable funds, and the rate of interest will be bid down. On the other hand, if the interest rate is temporarily below equilibrium, loanable funds demand will exceed supply. The interest rate will be bid up by borrowers until it settles at equilibrium once again.

An excess supply of money would result to excess demand for goods and services which eventually cause inflation and at the same time deteriorate balance of payment position of the nation. On the other hand, inadequate supply of money would induce stagnation in the economy thereby retarding growth and development. The best option is to maintain an equilibrium position. For the economy to be in equilibrium, there must be planned saving which equal planned investment across the whole economic system. Supposing planned investment exceed planned saving at the equilibrium interest rate, the investment demands will push interest rate higher in the short term. But as additional investment spending occurs, incomes will rise, generating a greater volume of savings. Later, interest rates will fall. If exchange rates between currencies are not in the state of equilibrium with one another, an opportunity be created for profit among both foreign and domestic lenders it can be exploited by moving loanable funds from one country to another. The interest rate will only remain stable if and only if the money market, the economy, the loanable funds market and foreign currency are in equilibrium interest rate for a long time (Rose Marpuis, 2006).

3. Methodology

This study uses secondary data collected from central bank of Nigeria, (CBN) statistical bulletins and also, Bureau of Statistics for the period of 10 years (2001 – 2015). The loanable funds market is the explained variable. GDP is used as a proxy to represent the growth rate of the real investment, and it is considered a dependent variable. The interest rate was also used as one of the predictors, on the other side in the literature as a determinant of demand for and supply of loanable funds. The data collected were subjected to multiple regression analysis.

Model Specification

To achieve the objectives of the study a model was specified to help the analysis. The implicit form of the model is stated thus:

GDP = f (LOAN, INTEREST RATE)   -   -   -   -   -   -   (i)

GDP = f (LOAN, INTR).

Where:

GDP = Gross Domestic Product

LOAN = Amount of loan distributed during the time in question

INTER = Interest rate

The explicit form of the model is stated as shown below:

$GDP1 = \beta_0 + \beta_1 loan_t + \beta_2 intr_t + U_t$ -   -   -   -   -   -   (ii)

A priori expectation $b_1 > 0$, $b_2 < 0$.

Where: U_t = Error term.

4. Regression Results and Discussion

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7.123	8.067		5.443	.001
1	.358	.040	.786	8.940	.000
LOAN	1.201	.020	.328	3.738	.007
INTR					

a. Dependent Variable: GDP

The data were analyzed and the estimated equation shows that:

GDP = 7.123 + 0.328 LOAN + 0.786 INTR -   -   -   -   (iii)

    S(b$_i$)   [0.040]   [0.020]

The result of the ordinary least square (OLS) shows that there is a positive relationship between GDP and total loan disbursed to the economy for the period and the relationship is statistically significant ($P < 0.05$). This is also in line with a priori expectation.

The estimated equation also shows a positive relationship between GDP and interest rate and the relationship is statistically significant ($P < 0.05$). It is however against a priori expectation.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.978^a	.957	.944	94.88309	2.253

a. Predictors: (Constant), INTR, LOAN

b. Dependent Variable: GDP

The coefficient of variation $R^2 = 0.957$. This shows that 95.7% of the variation in the dependent variables can be explained by the variation in the explanatory variables. The adjusted R^2 value is 94.4% which shows a little penalty of introduction of explanatory variables into the model. The Durbin-Watson statistic of 2.253 shows that there is a minimal level of autocorrelation in the model. Thus the estimation can be used for prediction.

4.1. Test of Hypotheses

In an attempt to estimate the relationship between GDP and interest rate, and also GDP and Loan, the hypotheses stated at the introduction need to be tested. In the process, recall equation (iii), i.e.

Recall equation (iii) above:

GDP = 7.123 + 0.328 LOAN + 0.786 INTR -   -   -   -   (iii)

    S(bi)   [0.040]   [0.020]

4.2. Decision Rule for Accepting of Rejecting Hypotheses

i. Using the standard error test, we have that: if the standard error of b_i i.e. S ($b_i < {}^1/_2 b_i$) you reject the null hypothesis and accept the alternative, that the estimate b_i is statistically significant at 5% level of significance.

ii. Of the standard error of bi (S(b) > 1/2 b_i) we accept the null hypothesis, that is, we accept that the estimate b_i is not statistically significant at 5% level of significance.

Given that:

GDP = 7.123 + 0.328 LOAN + 0.786 INTR -   -   -   -   -   (iii)

    S(b)   [0.040]   [0.020]

H_1: The amount of loan granted does not contribute significantly to the economic growth.

$B_i = 0.786$

$S(b) = 0.040$

$H_0: = b_i = 0$

$H_a: b_i$ 0

${}^1/_2 b_i = 0.393$

Using the standard error test S (b_1) < ${}^1/_2 b_1$, i.e. 0.040 < 0.393, thus we reject null hypothesis. That is, we accept that the estimate b_i is statistically significant at 5% level of

significance. This implies that the amount of loan granted contributed significantly to the economic growth.

H_2: Interest rate does not significantly affect economic growth (GDP).

$b_2 = 0.020$

$S(b_i) = 0.020$

$H_o: b_i = 0$

$H_a: b_i \neq 0$

$\frac{1}{2}b_i = 0.164$

Using the standard error test, $S(b_2) < \frac{1}{2}b_2$, i.e. $0.020 < 0.328$; Thus, we reject the null hypothesis and accept the alternative that the estimate b_2 is statistically significant at 5% level of significance. This implies that interest rate has a significant effect on economic growth which is proxied by Gross Domestic Product. In another word, changes in interest rate affect economic growth.

5. Conclusion/Recommendation

A sound and healthy financial system is influenced by the state of the economy, to achieve such feat government in the past introduced control measures, amongst them include: credit control, a rise in interest rates, economic restructuring programme etc. with persistent reformation there exist grumbles of discontent from the public that the reformation is not yielding any fruitful results. On the basis of the foregoing, the paper re-examine the relationship between loanable funds market and economic growth to ascertain whether such complaint are fair. Following a detailed regression analysis, though two predictors were used for the purpose of this paper. The findings reveal that both predictors i.e. the amount of loan granted or distributed and interest rate have positive impact on economic growth in Nigeria.

The paper made some observations and suggests the following recommendations:
1. There are multiple interest rates and they are not uniform. The rate depends on the need of the borrower, the amount of loan, the time for which it is required and the nature of security. Government should from time to time complement the supply of loanable funds through small and medium scale enterprises and many other available means in order to cushion the effect of high demand for loanable funds.
2. The majority of the people in undeveloped countries live in rural areas and majority of them are poor and unfortunately the underdeveloped sector is not properly connected with the developed sector of the money market in undeveloped countries. This affect the quantity or volume of loan distributed because the majority of the people in the rural setting may not enjoy such credit facilities on the account of lack of information, accuracy, security, guarantor and as such, economic development may be limited in urban centres. Government may introduce such programmes that will be designed for rural dwellers only, so that they too can be involved in the distribution of special grant/loanable funds.

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