The effect of deposit money banks credit on Nigerian economic growth

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ABSTRACT

This study examined the effect of bank credit to the private sector on economic growth in Nigeria using data on Gross Domestic Product (GDP) and bank credit to private sector (BCPS). Inflation and interest rates were included in the study as control variables. All data were obtained from Central Bank of Nigeria (CBN) statistical bulletin and span across 1981 to 2010. Data stationarity were ensured using the Augmented Dickey Fuller (ADF) statistic, while the OLS were applied to ascertain the impact of bank credit to the private sector on economic growth. Results of the analysis showed that bank credit to private sectors has a statistical strong positive relationship with GDP and that as expected, bank credit to the private sector has statistically significant effect on economic growth. The paper recommends that the CBN should lower its minimum rediscount rate to a moderate level that will enable banks fix low interest rates on their loanable funds while adopting direct credit control to favour preferred sectors like Agriculture and manufacturing. Finally, monetary authorities should through monetary policy reduce legal reserves requirement for banks to enable the banking sector to create more credit for the economy. This will enhance investment, job and employment opportunities which on the other hand will boast economic growth in the country.

Introduction

Economic growth has been a major objective of successive governments in Nigeria. In performing the financial intermediation role, it has been argued that by virtue of this function that banks generate economic growth by providing needed resources for real investment (Shaw, 1973; Mckinnon, 1973). Economic growth is one of the important factors that improve living standards in developing countries. It is an indispensable requirement for economic development among other factors. It is believed that the main factors effecting economic growth are labour, capital and exogenously determined technology. Subsequently the new growth theories try to incorporate technology and human capital as endogenous factors.

The role of finance in terms of bank credit was well acknowledged by researchers. The function of banks as financial intermediation, involves channeling funds from the surplus unit to the deficit unit of the economic, thus transforming deposits into loans or credits. The role of bank credit in economic development has been recognized as credits are obtained by the various economic agents to enable them meet investment operating expenses. For instance, business firms obtain credit to buy machinery and equipment, farmers obtain credit to purchase machines such as tractors, seeds, fertilizers, and erect various kinds of farm buildings. Government bodies obtain credits to meet various kinds of recurrent and capital expenditures. Individuals and families also take credit to buy and pay for goods and services Adeniyi (2006). According to Ademu (2006), the provision of credit with sufficient consideration for the sector's volume and price system is a way to generate self employment opportunities. This is because credit helps to create and maintain a reasonable business size as it is used to establish

and/or expand the business to take advantage of economy of scale. It can also be used to improve informal activity and increase its efficiency. While highlighting the role of credit, Ademu (2006), further, explained that credit can be used to prevent economic activity from total collapse in the event of natural disaster such as flood, draught, disease or fire.The banking sector helps to make these credits available by mobilizing surplus funds from savers who have no immediate needs for such funds and thus channels such funds in form of credit 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 on a large scale, Mckinnon (1980) as cited by Adeniyi (2006). According to Adekanye (1986) in making credit available, banks are rendering a great social services because through their activities, production is increased, capital investment are expanded and a higher standard of living is realized. However, in Nigeria as in many other developing countries, the ratio of bank credit to the private sector to GDP has not increased significantly.

Fig. 1: Ratio of Bank Credit to the Private Sector to GDP in Nigeria.

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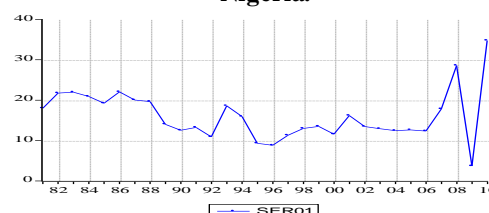
Source: Authors' calculation

The graph depicts that the ratio of bank credit to GDP has not increased steadily over the study period. The last five years from 2005 to 2010 recorded ratios of 12%, 18%, 29%, 4% and 35% respectively. It has only recorded significant increases from the preceding years in year 2008 and 2010 with an outstanding ratio of 29% and 35% respectively. The stringent loan conditions, short-term nature, quality, cost and availability of loanable funds have continued to constrain the expansion of businesses and the encouragement of small and medium scale enterprises (which are effective channels of job creation) in Nigeria. The Nigerian banking scene is devoid of the presence of investment or merchant banks for long-term loans, venture capital for viable businesses proposals and hence the inadequate growth of the economy. Furthermore, a significant proportion of credit transactions in Nigeria still take place in the informal markets despite government's efforts aimed at channeling credit to the productive sector through the deposit banks (DMBs) and the setting up of development banks. Amidst all the problems highlighted above, there is still a lack of a profound study that determines bank credit in Nigeria in a bid to capture core variables to target for needed banking system's credits to the economy. The objective of this paper is to analyze the effect of bank credit to the private sector on Nigerian economic growth to ascertain and highlight various ways banks credit has contributed and will contribute to economic growth in Nigeria, as well as to suggest ways of improving bank credit to the private sector so as to achieve better economic growth in Nigeria. The rest of the paper is structured into four sections. Section two is concerned with the theoretical framework and review of related literature. Section three elucidates the methodological framework, section four discusses the findings while section five concludes the paper.

Review of Related Literature

The concept of loanable funds in economics is central to the theory of interest rate. It explained how the demand for, and supply of credit decides the financial market interest rate. Bamocks etal (1998) defined loanable funds as money available for lending to individuals, government and institutions in the financial markets. It is comprised of current savings of private individuals and firms, discharging and any increase in money supply made available by the actions of depository institutions, governments and monetary authorities in the financial markets. Thus, loanable funds represent a flow of money into the financial markets for loans of all kinds. According to Pearce (1992), loadable 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. According to Uremadu (2005), loadable funds result out of planned and mobilized savings; accumulated savings when invested, translate into capital formation which is a stock of real productive asset. Capital formation is the background for real economic growth and development of developed economies (Jhigan, 1998). The modern theory of loanable funds, in a simple version explains the determination of interest rate in terms of the demands for, and supply of credit. The relationship between financial development and economic growth has extensively been studied by researchers especially for many developing countries. Patrick (1966) makes a distinction between supply-leading and demand-following responses. The demand-following approach states that lack of financial growth is a symptom of lack of demand for financial

services. For instance, it is real sector of the economy that determines the level of financial development. On the other hand, the supply-leading approach argues that the financial sector precedes the real sector and induces economic growth by channeling scarce resources from savers to investors. Again in human societies, since the evolution of money, there has always existed those who posses money in excess of their immediate needs (surplus economic unit) and those whose current possessions cannot finance their economic activates (deficit economic unit). The realization by the surplus economic unit, that their excess can be used beneficially to meet the shortfall experienced by the deficit economic unit led to the introduction of a credit system. This system was initially characterized by lenders (surplus unit) and borrowers (deficit unit) having to search out themselves and deal directly, a process known as direct financing (Akpan, 2009; Akpanuko and Acha, 2010). Because of problems which lenders ought to encounter in direct financing, there is need for deposit mobilization as stated by Ekezie (1997) and this is one of the important functions of a bank. This function enables banks mobilize deposits which otherwise would have remained idle and unproductive in the hands of the surplus economic unit. This fund so mobilized is then made available to the deficit unit for economically and socially desirable purposes. Incidental to this primary function of financial intermediation is the monitoring function and credit creation ability of banks (Scholtens and Van Wesveen, 2000). Banks with superior information on clients, usually gathered from their privileged position of holding the current accounts of such clients, are able to efficiently monitor such customers to ensure repayment of loans advanced to them. The other important primary function of bank is money creation because of the reserve requirement stipulated by monetary authorities.

According to CBN (2003) the amount of loans and advances given by the banking sector to economic agents constitute bank credit. Bank credit is often accompanied with some collateral that helps to ensure the repayment of the loan in the event of default. Credit channels savings into productive investment thereby encouraging economic growth. Thus, the availability if credit allows the role of intermediation to be carried out which is important for the growth of economy. The total domestic bank credit can be divided into two: credit to the private sector and credit to the public sector. Thus for this paper, we adopt the definition of credit given by CBN (2003).

According to Alede, et al (2003), empirical evidences suggest that there are various factors affecting the demand for, and supply of credit. These factors include the following:- public sector, private/corporate savings, regulatory and monetary policies, the level of economic activity, inflationary expectations and the structure of the financial system. The structure of the financial system can influence the volume of laonable funds. A shallow and repressed market portends weak intermediation and low funds mobilization, while a high deepened markets engenders the reverse Tobin (1979). Similarly, the size and structure of the informal sector may promote or hinder the availability of laonable funds. The lager the size of the informal market, the less the availability of laonable funds in the banking system and vice versa. In so far as savings affect the supply of laonable funds, the health of the banking system is an important explanatory variable for savings too. For example, during a banking crisis, public confidence in the banking system wanes and household savers are reluctant to put their money in the depository institutions. In fact, loss of confidence in the financial

Table 1. Augmented Dickey Fuller Unit Root Test

Variable	1% Critical value *@ level	ADF Test statistic @ level	Status	1% Critical value *@ level	ADF Test statistic (t*)
nlGDP	-3.6852	-0711136	2nd difference	-3.7076	-5.860768
nlPSC	-3.6852	-0412252	1st difference	-3.6959	-4.242780
Inflation	-3.6959	-3.065022	1st difference	-3.7076	-5.106804
Interest	-3.6852	-1.804136	1st difference	-3.6959	-4.146748

Source: Author's Eview 3.1 output

Table 2. Descriptive Statistics

	Mean	Std. Deviation	N
nlGDP	6.0438	.94689	29
nlPSC	5.2038	.87727	29
Inflation	22.3655	20.26655	29
Interest	13.0103	4.90603	29

Source: Authors' SPSS output

Table 3. Correlations

		NlGDP	nlPSC	Inflation	Interest
Pearson Correlation	nlGDP	1.000			
	nlPSC	.986*	1.000		
	Inflation	-.227	-.230	1.000	
	Interest	-.051	-.093	.442	1.000
Sig. (1-tailed)	nlGDP	.			
	nlPSC	.000	.		
	Inflation	.119	.115	.	
	Interest	.396	.396	.008	.

Source: Authors' SPSS output.

Table 4. Model Summary[b]

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change statistics R square change	F change	df1	df2	Sig. F Change	Durbin Watson
1	.987a	.974	.971	.16142	.974	312.832	3	25	.000	1.801

a. Predictors: (Constant), Interest, nlPSC, Inflation
b. Dependent Variable: nlGDP
Source; Authors SPSS output

Table 5. ANOVA[b]

Model		Sum of squares	Df	Mean Square	F	Sig.
1	Regression	24.454	3	8.151	312.832	.000a
	Residual	.651	25	.026		
	Total	25.105	28			

a. Predictors: (Constant), Interest, nlPSC, Inflation
b. Dependent Variable: nlGDP
Source; Authors' SPSS output.

Table 6. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.405	.212		1.913	.067
	nlPSC	1.064	.036	.985	29.768	.000
	Inflation	-.001	.002	-.023	-.613	.545
	Interest	.010	.007	.051	1.414	.170

a. Dependent Variable: nlGDP
Source: Authors' SPSS output.

system can cause a run on banks and effect the supply of laonable funds Alade et al (2003)

The concept of economic growth has been viewed by experts from many perspectives. This is attributed to the condition prevailing at the time of these scholars. According to Dewett (2005) it implies an increase in the net national product in a given period of time. He explained that economic growth is generally referred to as a quantitative change in economic variables normally persisting over a successive period. The expansion of the economy with intent to improving the welfare of citizens is a desirable goal. This explains why economic literature is replete with theories and studies investigating variables required by the economy to achieve sustainable growth. It also explains why governments are interested in such variables. Byms and Stones (1972) confirmed that economic growth is one of the macroeconomic goals of government, since most governments work hard at growing their economies in order to reduce unemployment, increase output, improve industrial capacity utilization. Wikipedia (2012) defines economic growth as a term used to indicate the increase in per capital gross domestic product (GDP) or otherwise measured as the rate of change in GDP. In other words, economic growth is said to refer to sustained increase in a country's output of goods and services which leads to increased income, savings and investment. Todard and Smith (2006) defined economic growth as a steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income. Jhingan (2006) viewed economic growth as an increase in output. He explained further that it is related to a qualitative sustained increase in the country's per capita income or output accompanied by expansion in its labour force, consumption, capital and volume of trade. Synthesizing insights of these definitions we define economic growth as the process by which national income or output is increased. Thus, an economy is said to be growing if there is a sustained increase in the actual output of goods and services per head.

Research Methodology

Data were obtained from the CBN statistical bulletin for a period of 29 years (1981-2010). Data used includes gross domestic product (GDP), credit to private sector (PSC), inflation (IFR) and interest rate (ITR). Correlation analysis and regression were used to assess relationship and the effect of credit to private sector (PSC), inflation (IFR) and interest rate (ITR) on economic growth. To ensure that spurious regression results were not obtained, the Augmented Dickey fuller test was used to ensure stationarity of the time series. The regression model is written as: GDP = f{psc, inflation and interest rate}

Analysis and interpretation of result

Unit root test result

A time series is considered to be stationary if its means and variance are independent of time. If the time series is non-stationary, that is, having a mean and or variance changing over time, it is said to have a unit root (Johnnes et al, 2011). Stationary is important in econometrics as most time series data exhibit unit root problem. If a time series is non- stationary, the regression analysis carried out in a conventional way will produce spurious results. A spurious regression occurs when after regressing a time series variable on others, the tests statistics show a positive relationship between these variables even though no such relationship exists. To guard against spurious result, this study took caution by checking the properties of the variables via the PP test. The result is presented below:

A non-stationary time series can be converted into a stationary time series by differencing (Johannes et al, 2011). The above table reports that none of the time series were stationary at level as their ADF test statistic at level > the 1% critical value at level indicating a unit root at level. However, the non stationary time series were converted into stationary time series by differencing at 2nd different for nlGDP (natural log GDP) with ADF statistics of -5.860768 < -3.7076 1% critical value while nlPSC (natural long private Sector Credit, inflation and interest rate became stationary at 1st difference. Given that the variables ADF test statistic at 2nd and 1st differences < critical values 1%, we therefore conclude that there is no unit root with the time series; that, the time series data are stationary for further statistical tests.

Table 2 above shows the descriptive statistics for the dependent and independent variables, GDP, nlPSC (natural log Bank Credit to the Private Sector, inflation and interest rate all have a positive mean value which ranges from 6.0438 to 22.3655 with a 29 observations. The highest standard deviation of 20.267 is recorded by inflation rate while the least standard deviation of .877 is recorded by nlPSc. There is greater variation in the data set of inflation rate. Notwithstanding the deviations from the mean, the relationships among the studied variables depicted in the model were tested using correlation and the result presented below.

The correlation result shows that our focal variable nlPSC (bank credit to the private sector) has a positive relationship with GDP. The relationship is actually strong at 98.6% as well as been significant as the sig. value of .000 < 0.05 significance level. This result suggests that bank credit to the private sector have a direct relationship with GDP. Therefore, banks' credit to the private sector does assist in growing the Nigerian economy.

The coefficient of multiple determination is given as: R = 97.4, and the adjusted coefficient of multiples determination as: R^2 = 97.1%. This indicates that the variations observed in the dependent variable as a result of changes in the independent variables were succinctly captured in the model and shows that 97.1% of the variations in the dependent variable are predicated by the independent variables in our model.

Our regression output shows that as expected that bank credit to the private sector has a statistically significant influence or effect on economic growth. The result is strengthened with the t of 29.768 > 2 the critical value t. The result is further strengthened with the significance value of .000 < .05 significant level.

The overall result shows that banks' credit to the private sector was positively signed showing that it has positive statistically significant influence or effect on economic growth in Nigeria Economy. The result is strengthened with the t of 29.768 > 2 the critical value t. It is further strengthened with the significance value of 000 < .05 significant level. On the other hand, the inflation and interest rate were negatively signed upholding the theoryss that increased interest rate discourages borrowing, stifles investment and retorts economic growth.

Conclusion And Recommendations

This paper examined the effect of banks credit on the Nigeria economic growth. In this work, gross demotic product (GDP) was adopted as an indicator of economic growth while bank credit to private sector, interest and inflation rates were the independent variables. The result of the analysis led to the conclusion that the banks credit to private sector has a statically significant or effect on economic growth. Based on the above implication of the result of this study, we shall make the following recommendation:-

i. Banking system in Nigeria should be encouraged to mobilize bigger demand deposit liabilities so that they can extend more credit to the domestic economy.

ii. Monetary authorities should through monetary policy reduce legal reserves requirement of banks to enable the banking sector to create more credit in the economy. This will enable investments and creation of employment opportunities which will boast economic growth of the country.

iii. The Central Bank of Nigeria (CBN) should lower its minimum rediscount rate, bringing it to moderate levels to enable the banks fix a low interest rate on their loaneble funds, as this will release more liquidly to the banking system.

iv. Banks should be encouraged to grant both short and long term loans for productive purposes as this will eventually lead to economic growth.

v. Better and strong credit culture should be promoted and sustained.

vi. Nigeria should adopt direct credit control where preferred sectors like Agriculture and manufacturing sectors should be favored in terms of granting loans.

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