BANK CREDIT, MONEY SUPPLY AND PERFORMANCE OF THE NIGERIAN ECONOMY, 1980-2020

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ABSTRACT: This study investigated the nexus between bank credit, money supply and performance of the Nigerian economy. Data on bank credit to the public sector, bank credit to the private sector, broad money supply were the independent variables while real gross domestic product was used as the dependent variable. The data were analysed using the Error Correction Model (ECM) technique. The findings revealed that bank credit to the private sector increased Nigeria's economic growth significantly while bank credit to the public sector had negative effect on growth but not significant. The study concluded that private sector utilizes bank credit more than the public sector. However, money supply showed signs of shrinking the economy mainly due to the irregular supply and the injection of the monies into consumption spending rather than growth-driven and productive spending. It was recommended that more credit be granted to the private sector by banks since the sector showed more signs of utilizing credit towards the growth of the economy. Also, banks should monitor credit granted to the public sector for probity as well as identify growth inducing public sector for credit advancement so as to engender growth of the economy.

Keywords: Credit to Private Sector, Credit to Public Sector, Error Correction Model, Money Supply, Nigerian Economy

INTRODUCTION

The importance of credit in economic development cannot be overemphasized, especially in the context of developing countries. There is a very close link between money supply and bank credit as the amount of money supply closely determines the frequency of credit. Money supply or money stock is the total amount of monetary asset available in an economy at a specific time. Public and private sector analysts have long monitored changes in money supply because of its effect on the price level, inflation, the exchange rate and the business circle (Taylor 2004).

Since the establishment of the Central Bank of Nigeria in 1959, it has continued to play the traditional role expected of a central bank which is the regulation of the stock of money in such a way to promote social welfare. The Central Bank of Nigeria views money supply in two ways: narrow and broad money, i.e., M1 and M2. On the other hand, the primary function of a bank is to accept deposit which in turn is used as bank credit to service needy areas of the economy. Thus, the nexus between bank credit and money supply is such that increase in bank credit will add to the stock of money supply in the economy and this is expected to have an increasing effect on economic growth.

Statistical evidence shows that bank loans constituted an average of 50% of the total money supply in the economy from 1980 through 2000. The highest was recorded in 2009 when money supply was made up of 91% bank credits with the remaining 9% being from diaspora

remittances and other sources (CBN 2020). Indirect monetary policy intervention was used from 2004 to 2008 to inject funds into major financial and non-financial institutions in order to revitalize the entire economy. These capital injections prevented the bankruptcy of various financial institutions by strengthening their balance sheets and restoring their ability to raise and productively deploy credit. Despite several policy initiatives of the CBN, small and medium–sized businesses in Nigeria continued to experience difficult moments in accessing funds.

Furthermore, some notable interventions in recent years by the CBN include: ₦200 billion Commercial Agriculture Credit Scheme; ₦200 billion Restructuring and Refinancing Facility; ₦200 billion SME Credit Guarantee Scheme; ₦300 billion Powers and Airline Intervention Fund, amongst others. For instance, the Bank of Industry (BOI) implemented some intervention funds such as the ₦5billion BOI/Dangote Matching Fund, Cassava bread Fund, ₦1.1 billion Cottage Fund, ₦5 billion FGN Special Intervention Fund for MSME, ₦800 million National Programme for Food Security, ₦13.6 billion Rice and Cassava Intervention Fund, Sugar Council Development Fund, National Automotive Council Fund comprising ₦1bn for Automotive Assembly Plants, ₦200 million for automotive component manufacturers, ₦100 million for automotive garage workshop and ₦20 million for artisans, craftsmen and mechanics. Also, the banks have disbursed ₦8, 479,486.76 under the Cement Fund. Similarly, the Bank of Agriculture disbursed ₦41 billion to over 600 enterprises across Nigeria in the last ten years, ₦3 billion on-lending facilities to about twelve states of the Federation and ₦4billion to about 30,000 beneficiaries. In addition to these, a total of US$86.56 billion was received as capital inflows into the economy in the form of direct and portfolio investment, trade credits and loans as well as currency and deposits from 2011 to 2015.

As at the end of 2020, Nigeria recorded money supply of ₦41.8trn while bank loans were ₦19.5trn which means that 47% of money supply came from bank loans. Also, banks give credits to both the public sector and the private sector. For example, the public sector received ₦796bn in 2001 while the private sector received ₦764bn same year. By 2009, private sector credits exceeded public sector with private sector receiving average of ₦17bn while the public sector received about ₦12bn in credits from 2009 through 2020.

The experience of Nigeria leaves no doubt that capital is a prerequisite for its economic and social progress as well as for effective public policy making. The Central Bank of Nigeria (CBN) recognizes that for the economy to function efficiently given structural rigidities, and for the private sector to develop and flourish, businesses need to have access to credit. In view of this, this study tries to study the nexus between bank credit to the private sector, bank credit to the public sector, money supply and economic growth in Nigeria.

Statement of the Problem

Given the multiplicity of credit interventions by Banks and other funding institutions, it is plausible to express some doubt about the absorptive capacity of the economy. The basic problem of interest is that credit purveyance may lead to sub-optimal outcomes and poor resource allocation decisions of local conditions which may eventually cascade into a huge stock of non-performing credit facilities. The Central Bank of Nigeria also recently noted that the flow of credit to the priority sectors did not meet the prescribed targets and failed to impact positively on investment, output and domestic price level. Certainly, these comments have

evoked certain questions bothering the strength, effectiveness and productivity of bank credit in the Nigerian economy.

Statistical evidence proved that the private sector has been receiving more of bank credits over and above the public sector; therefore, the underlying problem that necessitated this paper is to find out the individual effects of credit granted to both public and private sector and how they affect the economy in terms of increasing the stock of investible funds and growth in the economy.

There have been several studies on the linkage between bank credits and economic growth on one hand (Orimogunje, 2019; Emecheta and Ibe, 2014; etc.), and other studies on the effect of money supply and economic growth on the other hand (Chude and Chude, 2016; Ogunmujiwa and Ekone, 2010; Mbutor, 2019; Ekpenyong, Emefiele, kolawole& Ita 2020; Emecheta and Ibe, 2014 etc.), however, none of these studies linked bank credits and money supply to economic growth. They focused on either one of the two without considering both economic variables in a single study as seen in the works of Orimogunje (2019) and Emecheta and Ibe (2014). Also, none of the previous studies disaggregated bank credit into public and private sector credit on the same model. Emecheta and Ibe (2014) studied only private sector credit without considering the public sector. Thus, the major objective of this study is to evaluate bank credit, money supply and how they have affected the Nigerian economy. The study specific objectives are to:

1. Investigate the effect of bank credit to the public sector on Nigeria's real gross domestic product;
2. Examine the effect of bank credit to the private sector on Nigeria's real gross domestic product;
3. Determine the effect of broad money supply on Nigeria's real gross domestic product.

The hypotheses to be tested in the course of the study are stated in their null forms as follows:

H_{01}: Public sector credit has no significant relationship with real gross domestic product in Nigeria.

H_{02}: There is no significant relationship between private sector credit and real gross domestic product in Nigeria.

H_{03}: There is no significant relationship between broad money supply and real gross domestic product in Nigeria.

The study covers the period of 1980-2020. Bank credit and money supply were proxied with public sector credit, private sector credit and broad money supply, and was measured against the performance of Nigerian economy which was proxied with real gross domestic product.

LITERATURE REVIEW

This section covers the conceptual, theoretical and empirical reviews. Also, the gap in literature is detected and discussed.

Bank Credit

Credit is the extension of money from the lender to the borrower. Spencer (1977) notes that credit implies a promise by a party to pay another for money borrowed or goods and services received. Credit cannot be divorced from the banking industry as banks serve as a conduit for funds to be received in form of deposits from the surplus units of the economy and passed on to the deficit units who need funds for productive purposes. Banks are therefore debtors to the depositors of funds and creditors to the borrowers of funds. According to Nwanyanwu (2008), bank credit is the borrowing capacity provided to an individual, government, firm or organization by the banking system in the form of loans.

CBN Briefs (2003) defines bank credit as the amount of loans and advances given by the banking sector to the various economic agents. CBN Monetary Policy Circular (2010) identifies such bank credit facilities to include loans, advances, commercial papers, banker's acceptance, bill discounted, with a bank's credit risk. 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, availability of credit allows the role of intermediation to be carried out, which is important for the growth of the economy. The availability of credit is important to the real economy. Globally, positive change in credit availability has positive significant effect on the nation's real gross domestic product (RGDP). According to Nzotta (2004), it is generally accepted that bank credits influence positively the level of economic activities in any country. It influences what is to be produced, who produces it and quantity to be produced.

Bank credit affects and alters the level of money supply in an economy or country. It is the most important source of bank income and it promotes the activities of banks and non-bank financial institutions and thus influences the level of growth of the financial system. It also affects aggregate output and productivity, the pattern of production, the level of entrepreneurship, and the realization of aggregate economic performance, development and growth. It could thus be said with absolute assurance that banking industry credit is of crucial importance both to the banks, the monetary authorities, business community and the economy in general.

Bank Credit and Credit Creation

According to Pearce (1992), credit refers to the process of lending and borrowing of fund from financial able bodies such as banks, government, individuals and other financial institutions. It can also be described as a means of obtaining resources at a certain period of time with an obligation to repay in accordance with the terms and conditions of the credit obtained.

Succinctly, credit refers to availability of resources (money) to household, firms and government with an agreement to repay at a stipulated period of time. Pandey (2006) posits that the credit term to be granted to any customer depends on the norms and practice of the industry.

In creating credit, a bank has to know how much of its idle fund after satisfying the requirements of the regulatory authorities (i.e., the Central Bank Nigeria, Nigeria Deposit Insurance Corporation). The tools such as the reserve requirements (cash and liquidity ratios), open market operations and stabilization securities are generally used by the authorities to

control the flow of credit. Credit is created when a bank decides to lend some of the depositors' idle fund in its vaults to credit worthy customers. The granting of such credits assists the growth of the economy as resources are pooled from surplus units to needy units. Banks also used this process as an avenue to generate income/ profit as the interest rates at which the loans are granted is higher than deposit rate. Ekezie (1997) opines that banks are legally required to keep a fixed percentage of their deposits in cash and then, lend or invest the remaining amount. It is the amount lent that actually leads to credit creation process. In the view of Jhingan (2002), the following assumptions are the means of explaining credit creation process:

i. There must be more than one bank in the system

ii. There is no cash leakage in the banking system.

iii. Availability of initial deposit of ₦100, 000 into the system

iv. 30% is the reserve ratio.

v. The banks have credit worthy customers who are interested in borrowing

vi. Loans given out are the limit set by law and this is done before additional cash is injected into the system.

vii. The loans are withdrawn by borrowers, spent and re-deposited by recipient in the same or another bank.

Bank Credit as an Instrument for Nigerian Economic Growth

The role of bank credits and growth of modern economies seems inseparable. The quantum of financial capital required before achieving any meaningful economic development also underscores the importance of banks. An individual's savings are not usually large enough to procure all his needed resources for development. The saver may not also possess the ability and huge capital that investment calls for. The banks therefore, aggregate the small savings of the individuals and hold these, away from the consumption and made available as loan for investment. Several studies have adopted various measures of bank credits. For instance, Levin (2005) discussed the relationship between bank credit and economic growth. According to him, bank credit can be divided into two: credit to the private sector and credit to the public sector.

Credit is one of the main activities of deposit money banks and other financial institutions in Nigeria as evident by the size of loans that form banks' assets and the annual substantial increase in the amount of credit granted to borrowers in the country (Akujuobi & Nwezeaku, 2015). The loan and advances from commercial banks to the economy have been on the rise since the introduction of Structural Adjustment Programme (SAP) in 1986. It magnificently and drastically rose from ₦15.7 billion in 1986 to ₦13, 086.2 billion in 2015, shimmering over 1,500% within a period of thirty (30) years. Sector analysis reveals that oil and gas sector is the most preferred by commercial banks for disbursement of loans and advances. In 2014 and 2015, a total of ₦45, 900.7 billion and ₦52, 890.6 billion were respectively extended to the economy, only oil and gas sector received ₦10, 589.2 billion (23.07%) and ₦13, 314.3

billion (25.17%) of the total credit. This situation where such predilection is given to oil and gas sector, other sector (agriculture, manufacturing, commerce) are handicapped of needed finance for productive activities, for this reason economic growth is slowed. By 2020, Nigeria recorded money supply of ₦41.8trn while bank loan was ₦19.5trn which means that 47% of money supply came from bank loans (CBN 2021).

Money Supply in Nigeria

Money supply comprises of banknotes, and coins, outside the central bank circulating within a period of time. M0, M1, M2, and M3 measures currency and liquid instrument held in different types and sizes of accounts in operation within Nigeria (Udo, Ben, Abner, Johnson & Okolo, 2019). Money supply is the amount of money available in a country. Domestic credit is one of the factors which leads to changes in amount of money. The measurement of money supply is done by looking at amount of domestic credit and net foreign assets in a country. Money supply is categorized as narrow money and quasi money.

The definition of money supply differs from country to country. This is because it depends on what is added by country to ascertain total money in circulation (Satrugan, 2018). In its simplest form, money supply is the amount of money, which is in circulation over a certain period of time. Increases in this amount cause increases in the prices, in other words, inflation thereby increasing consumption expenditures and investment expenditures (Cuma, 2014).

In Nigeria, the Central Bank defines money supply as comprising narrow and broad money. The definition of narrow money (M1) includes currency in circulation with non-bank public and demand deposits or current accounts in the banks. The broad money (M2) includes narrow money plus savings and time deposits, as well as foreign denominated deposits. The broad money measures the total volume of money supply in the economy. Thus, excess money supply (or liquidity) may arise in the economy when the amount of broad money is over and above the level of total output in the economy (CBN, 2006).

The Public Sector Analyses

The existence of public sector can be attributed to the prevalence of political and social ideologies, which depart from the premises of consumer choice and decentralized decision-making (Ajibola 2008). Against this backdrop, a major activity of the government includes the determinant of the optimal financing of public goods under a democratic society. One of the sources of public sector finances includes external borrowing from banks and other financial institutions (Onuoha, 2005). According to Bhatia (2002), in an underdeveloped country, public expenditure has an active role to play in stimulating the economy through the provision of infrastructure facilities. In his own contribution, Taiwo and Abayemi (2011) wrote that the mechanism in which government spending on public infrastructure is expected to affect the pace of economic growth depend on the precise form and size of total public expenditure allocated to economic and social development projects in the economy. This effect, therefore, is basically in the nature of re-allocation of resources from less to more desirable lines of investment. Musgrave and Musgrave (1980) postulated that it is interesting to pause and consider what may be said more sympathetically about the underlying causes of increasing public sector borrowing and expenditure growth. They maintained that high need for capital goods, technical changes, population change, relative costs of public services and changing scope of transfers are the major causes of expenditure growth in the public sector.

However, as these basic facilities are built up and capital market developed, the path is cleared for capital formation of the manufacturing type to go into place and for industrial development in the private sector to occur. It is imperative to note that certain public goods have growth driving effect on the economy.

Private Sector Funding

The private sector is said to be the engine of economic growth for a country, especially, for developing economies (William, Zehou & Hazimi, 2019). The private sector remains the nucleus that drives economic growth. Private sector funding (credit) is no doubt a driver of the real economy, particularly in developing economies like Nigeria where the financial markets are porous and near well developed to mobilize the needed resources to accelerate the desired level of economic growth. The private sector is the part of the economy that is run by individuals and companies for profit and is not state controlled. Therefore, it encompasses all for-profit businesses that are not owned or operated by the government.

Private sector funding entails the ways and means by which private firms and households (individuals) readily have access to fund to finance their investment and promote economic growth. It involves the pros and cons through which individuals and statutory firms gain access to the availability of credit (fund) to finance and promote their investment drive. Private sector funding involves credit extended by the banking and financial institutions to the private sector of the economy alone and basically include firms and households excluding loans disbursed to the government. According to the global economic report (2019), domestic credit to private sector by banks refers to financial resources provided to the private sector by other depository corporations (deposit taking corporations except central banks), such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment. Financial resources by way of credit extension are essential lubricants that oil the wheels upon which the economy strives. It enables the funding of new investments and allows individuals to buy houses, cars, and make other investment plans. Though, excessive credit usually leads to financial crises as witness in the 2008 - 2009 global financial crises but, in essence, credit availability remains the hallmark for the promotion of investment and economic development. As a vital engine for economic growth in developing economies, the private sector relies on the financial sector as a source of funds in advancing growth (Katusiime, 2018).

According to global economy report, if the banking industry credit to the private sector is about 70 percent of GDP and more, then the country has a relatively well-developed financial system. However, in developed and advanced economies the amount (rate) of credit to the private sector can hover above 200 percent of GDP. Conversely, in some developing and poor countries (economies), the amount of credit disbursed to the private sector could be less than 15 percent of GDP. Thus, private sector funding remains a financial bane in poor economies as this constitutes major challenges confronting private sector investment and economic growth. Assefa (2014) opined that these countries, firms and households essentially do not have access to credit for investment and various purchases. The private sector represents the productive sector of the economy and should be fueled with sufficient funds so as to enhance the growth of the sector (Abdullahi 2014).

Theoretical Review

a. **Theory of Financial Intermediation**

Besley and Bringham (2009) emphasized that the presence of intermediaries improves economic well-being. They further explained that financial intermediaries were created to fulfil specific needs of both savers and borrowers and to reduce the inefficiencies that would otherwise exist if users of funds could get loans only by borrowing directly from savers.

According to Organisation of Economic Cooperation and Development (OECD, 2001), financial intermediation is a productive activity in which an institutional unit incurs liabilities on its own account for the purpose of acquiring financial assets by engaging in financial transactions on the market. The role of financial intermediaries is to channel funds from lenders to borrowers by intermediating between them. At the macro-level, several researchers have argued that financial intermediation is passive in nature and serves as a conduit through which monetary policy is effected (Benston and Smith 2005).

Finance is required for different purposes by different people, organizations, and other economic agents. To provide the needed finance, there are varieties of institutions rendering financial services. Deposit money banks are among such institutions that render financial services. They are mainly involved in financial intermediation, or indirect financing which involves channelling funds from surplus unit to the deficit unit of the economy, thus transforming bank deposits into loans and credits. There are businesses that have good ideas and business opportunities they would want to invest money in, but they do not have money. They would be willing to borrow from the net savers who have idle funds. For this reason, the second group is the deficit unit of the economy. However, there are barriers that make it difficult for the borrowing to take place. And to remove this barrier, there is therefore a need for an intermediary (a-go-between) to play the role of bridging the gap between the net savers and net borrowers (deficit unit). This role is called financial Intermediation. Financial intermediation is the role of channelling money from net savers who have idle funds to investor or net borrowers who are in need of funds.

The justification for this theory is that, financial intermediation is a process, and that such process involves three parties: the savers (surplus unit), the intermediaries (Banks and Non-banks) and the borrowers (deficit unit). Thus, the process of financial intermediation involves financial intermediaries which are banks or individuals that serve as middleman among diverse parties in order to facilitate financial transactions. And it is the free flow of funds from the surplus to the deficit unit that facilitates optimal production in the economy leading to economic growth.

Empirical Review

Ogunmuyiwa and Ekone (2010) examined the impact of money supply on economic growth in Nigeria for the period 1980 to 2006 using Ordinary Least Square (OLS), Granger Causality test and Error correction Model. The results revealed that although money supply is positively related to growth, the result is however insignificant in the case of GDP growth rates on the choice between contradictory and expansionary money supply.

Emecheta and Ibe (2014) investigated the impact of bank credit on economic growth in Nigeria applying the reduced form of vector autoregressive (VAR) technique using time series data from 1960 to 2011. Current gross domestic product (GDP) was the dependent variable and proxy for economic growth while bank credit to the private sector (CPS) to GDP ratio and broad money (M2) to GDP ratio were proxies for financial indicator and financial depth respectively. Using econometric procedures, they found a significant positive economic growth. The past values of all the variables were significant in predicting their current values. They concluded that the bank consolidation and recapitalization exercise was a welcome development and that further steps should be taken to ensure the stability of the banking sector.

Akujuobi and Nwezeaku (2015) determined the effect of bank lending activities on economic development in Nigeria, covering the period, 1980-2013. Applying the test for stationarity with the Ordinary Least Square (OLS), and Co-integration procedures, the results revealed a significant relationship between bank lending activities and economic development in Nigeria. Marshal, Igbanibo and Onyakachi (2015) examined the impact of bank domestic credits on the economic growth of Nigeria using time series Nigerian data for the period 1980-2013. Credit to private sector, credit to government sector and contingent liability were used as proxy for bank domestic credit while gross domestic product represents economic growth. The relative statistics of the estimated model showed that credit to the private sector (CPS) and Credit to the government sector (CGS) positively and significantly correlate with GDP in the short run.

Another study by Makinde (2016) explored the implications of commercial bank loans on economic growth in Nigeria between 1986 and 2014. Using the Ordinary Least Square (OLS) multiple regression techniques; the study revealed that only the agricultural sector have being enjoying much of Bank credit and it has been making positive impact on the Gross Domestic products (GDP) while others like Mining and Quarrying, Manufacturing and the Building and Constructions sectors did not get much attention in terms of bank credit to spur development in that sector. Chude and Chude (2016) found a positive and significant relationship between money supply and economic growth in Nigeria. This implied that M2 has dominant influence on output and prices while Echekoba and Ubesie (2018) proved that private sector credit, money supply and market capitalization all had significant effect on Nigerian financial deepening. Adeniyi, Adeyemi, Salawuden and Fagbemi (2018) used the Toda and Yamamoto granger non-causality model and found that structural changes in monetary policy system exerted positive significant impact on loan and advances of Deposit Money Banks in Nigeria.

Ogolo & Tamunotonye (2018) found out that interest rate, monetary policy rate had positive relationship with commercial banks' lending to the agricultural sector while Treasury bill rate, exchange rate, broad money supply and liquidity ratio had negative effect on commercial banks' lending. Adewole, Ojo, Abiodun Popoola (2018) examined the relationship between deposit money bank credit and economic growth in Nigeria and found a positive or strong correlation between the dependent variable (GDP) and independent variable (bank credit, Interest rate/Lending rate, inflation rates). Orimogunje (2019) in his own study showed that Domestic Credit and Net Domestic Credit have statistical significant relationship with gross domestic product but no significant relationship on inflation. Olorunmade, Samuel, and Adewole (2019) found a significant relationship between private sector credit and economic growth in Nigeria and Mbutor (2019) reviewed the relationship between money supply and economic growth in Nigeria and found that, there exist long run insignificant positive relationship between money supply and GDP. More recently, Ekpenyong, et al (2020)

empirically investigated money supply, inflation and economic growth in Nigeria and found that inflation, labour supply, interest rate had positive and insignificant effect on economic growth in Nigeria.

Having reviewed literatures related to this study, it was discovered that only few discourses actually disaggregated deposit money bank credit to examine the impact of each type of credit on economic growth in Nigeria. The need to address this glaring knowledge gap made this study relevant. We also filled the gap of time by extending the period of this research work to 40 years, from 1980 to 2020. Moreover, the relevant variables to this work include the real Gross Domestic product (as a proxy for economic performance), credit to the public sector, credit to the private sector and broad money supply which were found to be predominantly absent in most of the previous studies reviewed.

METHODOLOGY

This study makes use of the *ex-post facto* or after-the-fact research design. The use of secondary data to test the hypothesis formulated formed the basis for adoption of the *ex-post facto* design. The data are sourced mainly from the Central Bank of Nigeria Statistical Bulletin (2020) edition and the National Bureau of Statistics (NBS, 2020). The data used in the estimation are time series and annual in nature. They were therefore subjected to econometric tests using e-views 9 statistical software.

Model Specification

The disaggregation of bank credit into public and private sector credit is a result of the modification of the models specified in Emecheta and Ibe (2014) and Ogunmuyiwa and Ekene (2010). The model of this study is such that bank credit interacts with money supply and how these affect economic growth of the country. The functional form of the model is stated as follows:

$$RGDP = f(CPUB, CPRIV, MSS) \quad \ldots 3.1$$

Where;

RGDP = Real gross domestic product at constant price (in billions of ₦)

CPUB = Bank credit to the public sector (in billions of naira)

CPRIV = Bank credit to the private sector (in billions of naira)

MSS = Broad money supply (in billions of naira)

Putting the above model in econometric form, we have:

$$RGDP = \beta_0 + \beta_1 CPUB + \beta_2 CPRIV + \beta_3 MSS + \varepsilon_t \quad \ldots 3.2$$

The coefficients $\beta_0 - \beta_3$ are the unknown coefficients of the model to be estimated and ε is the error term; ε_t = Stochastic error term.

The a-priori expectation of the model is such that $\beta_1 > 0$, $\beta_2 > 0$, and $\beta_3 > 0$, i.e. bank credits to both public and privates sectors are expected to increase growth in the economy, money supply is also expected to have positive relationship with growth.

DATA ANALYSIS

Unit Root Test

The unit Root Test was carried out using the Augmented Dickey–Fuller test statistics. The null and alternate hypothesis for the unit root test is stated thus:

H_0: The variables have unit root (i.e. it is stationary)

H_1: The variables have no unit root

We summarize the test as shown below:

Table 1: Unit Root Test

Variables	ADF Test Stat. @Level	5% critical value	ADF Test Stat. @1st Difference	5% critical value	Order of Integration
Ln RGDP	-0.13959	-2.9369	-3.50627*	-2.9389	I(1)
Ln CPUB	-0.82204	-2.9369	-5.29693*	-2.9389	I(1)
Ln CPRIV	-0.85019	-2.9369	-4.22404*	-2.9389	I(1)
Ln MSS	-0.77319	-2.9369	-4.03068*	-2.9389	I(1)

Source: Researcher's compilation from E-views 9 output

The Asterisks (*) is used to indicate stationarity at the 5% level of significance. From the stationarity test above, we can observe that the ADF test statistics at first difference are all greater than the 5% critical values for each of the variables thus, we reject their respective null hypothesis and conclude that all the variables are stationary at first difference. Thus we say that they are integrated of order I(1).

Johansen Test for Cointegration

The Johansen test is used to determine the long run relationship that exists between bank credit, money supply and economic growth in Nigeria for the period under review. The hypothesis for the test is stated below:

H_0: There is no long run relationship in the model

H_1: There is a long run relationship in the model

Table 2: SUMMARY OF THE COINTEGRATION TEST (TRACE)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.304237	32.48977	27.85613	0.0451
At most 1*	0.234555	18.34268	17.79707	0.0409
At most 2	0.171336	7.918064	15.49471	0.4742
At most 3	0.014974	0.588399	3.841466	0.4430

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Decision Rule: The table above shows that there is presence of long run relationship in the model since the trace test indicated 2 cointegrating equation at the 0.05 level. Therefore we reject the null hypothesis and conclude that bank credit, money supply and economic growth have long run relationship.

Error Correction Model Estimation

The study proceeded with the estimation of the error correction model which is a short run model that reconciles the long run properties of the data with their short run dynamics. The model is summarized below:

Table 3: Summary of the Error Correction Model Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.948641	0.101947	87.77778	0.0000
Ln CPUB	-0.127845	0.080941	-1.579483	0.1238
Ln CPRIV	0.361727	0.147831	2.446889	0.0199
Ln MSS	-0.025171	0.152267	-0.165310	0.8697
ECM(-1)	-0.244344	0.055539	-4.399503	0.0257
R-squared	0.969851	Mean dependent var		10.35113
Adjusted R-squared	0.966197	S.D. dependent var		0.575256
F-statistic	26.53924	Akaike info criterion		-1.533122
Prob(F-statistic)	0.000000	Durbin-Watson stat		1.506271

Source: E-views 9 Output

Bank credit to public sector (CPUB) has a negative coefficient of -0.1278 and this means a unit change in bank credit to the public sector will decrease growth (real GDP) by 0.1278 units. This depicts an inverse relationship. However, it was not statistically significant at 5% level (*p-value* = 0.1238).

Bank credit to the private sector (CPRIV) has a positive coefficient of 0.3617 and this means that a unit increase in bank credit to the private sector will increase real GDP by 0.3617 units.

The positive effect was statistically significant at 5% level since the *p-value* of 0.0199 is less than 0.05 critical value.

Broad money supply has an inverse relationship on economic growth with a negative coefficient of -0.0252. This means a unit change in broad money supply will decrease real GDP by 0.0252 units. It was not statistically significant at 5% level since *p-value* = 0.8697.

The error correction coefficient is negative (-0.2443) which is appropriately signed and significant (*p-value* = 0.0257) hence it holds the long run equilibrium in the model. The speed of adjustment of the model is estimated at 24.43% annually. Furthermore, based on the a-priori expectation of the model, we state as follows, as shown in the Table below:

Table 4: Summary of *A-Priori* Expectations

Variables	Definition	Expected Sign	Obtained Sign	Remark
CPUB	Bank credit to public sector	(+)	(–)	Does not agree with a-priori
CPRIV	Bank credit to private sector	(+)	(+)	Agrees with a-priori
MSS	Broad money supply	(+)	(–)	Does not agree with a-priori

Source: Researcher's compilation (2022)

The Table 4.5 above shows that only the expected sign of bank credit to private sector agreed with the a-priori expectation as it showed positive relationship with economic growth. The other variables bank credit to public sector and broad money supply did not agree with the a-priori expectation as they both have negative coefficients.

Implication of the Findings

This research on Bank credit, money supply and performance of the Nigerian economy from 1980-2020 revealed some very important findings. First and foremost, the study made use of data on bank credit to the public sector, bank credit to the private sector, money supply and real GDP. The variables were tested for unit root were found to be stationary at first differencing. This led to the test for long run relationship using the Johansen co-integration test. The Johansen test showed that there exists long run relationship between bank credit to public and private sector, money supply and economic growth in Nigeria.

The error correction model estimates showed that bank credit to the public sector and money supply had negative relationships with economic growth in Nigeria. While bank credit to public sector decreases growth by 0.1278 units, money supply decreases growth by 0.0251 units. This implies that the credits granted to the public sector by banks have not actually translated to increase in economic growth over the years. This may be due to the lopsidedness of the credit or the fact that the public sector does not utilize credit for the purpose for which they are meant. Similarly, the negative effect of money supply is due to the concentration of the bulk of the supply at the elite class which has stifled the economy and probably not injected into growth-driven sectors of the economy.

Furthermore, bank credit to the private sector showed more prospects as it had a positive and significant effect on growth. This simply implies that the private sector utilizes bank credit judiciously and conscientiously more than the public sector. Ekpenyong *et al* (2020) supported this position by stating that the private sector credit is used to measure financial deepening because the economy is mostly private sector driven. As such, there are more tendencies of banks to grant credit to private sector than to the public sector.

The model estimated a speed of adjustment of 24.4% annually with a fitness coefficient of 96.6%. The joint interactive effect between bank credit to public sector, bank credit to private sector, money supply and economic growth was significant at 5% level.

Conclusion

There is no doubt that bank credit is very vital in the quest for growth in the economy. Banks have invested heavily in the economy and this has great effect on the volume of money supply. Hence, the interaction between bank credit to public and private sector, money supply and growth is one worthy of studying. After due analysis of the nexus between bank credit, money supply and economic performance, the study concluded that bank credit to the private sector has affected Nigeria's economic growth very significantly and positively. Placing this side-by-side with bank credit to the public sector, it became obvious that the private sector utilizes bank credit more which is made evident in its significant effect on the economy. However, money supply sign of shrinking the economy is mainly due to the irregular supply and other macroeconomic variables affecting money supply. In terms of money supply and its negative effect on real gross domestic product, it could be that money supply is mainly injected into consumption spending and not growth-driven and productive spending. It may also have been stacked or laundered thus no impact on the economy

Recommendations

The following recommendations become necessary at this point:

i. Deposit money banks in Nigeria should concentrate their efforts more on the private sector by granting more credit to this sector. The public sector has long been in existence and the effect of bank credit still has not shown any positive strides on the economy. Most likely as a result of the channelling of bank credit to non-growth induced sub sectors and possible misappropriation of funds.
ii. Banks should endeavour to prevail on government institutions to effectively monitor and track credit granted to them. This is necessary because most public institutions embezzle these funds making it seem like the banks are not doing enough to fund some of the public institutions and projects.
iii. Government should effectively devise a monetary policy framework that will ensure optimal supply of money in the economy. The monetary authority should strive to strike a balance between expansionary monetary policy and contractionary monetary policy.
iv. The apex bank should formulate suitable policies that will favour the provision of bank credit to the private sector to enhance the industrialization of the economy and boost economic growth.
v. Government should identify growth inducing public sector projects and create more institutions to check corrupt practices of public servants in office so as to ensure appropriate allocation of bank credit.

This study contributes to the body of existing knowledge in economic literature by way of establishing the disaggregated effects of bank credit to public and private sector on the economy of Nigeria. The study established that for the period 1980-2020, private sector credit impacted more on the growth of the Nigerian economy more than the public sector credit given the intervening effect of money supply.

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