

Sectoral Credit Allocation and the Growth of Nigerian Real Sector

Dr. Greatness U. Oji and Dr. Ebi R. Odi
Department of Finance and Banking
University of Port Harcourt, Rivers State, Nigeria
DOI 10.56201/ijebm.v10.no10.2024.pg167.189

Abstract

This study examined the effect of sectorial credit on real sector growth in Nigeria. Time series data were sourced from Central Bank of Nigeria Statistical Bulletin from 1990-2021. Real sector growth was modeled as the function of Commercial banks loans and advances to agricultural sector, Commercial banks loans and advances to manufacturing sector, Commercial banks loans and advances to Export sector, Commercial banks loans and advances to mining and Quarrying sector and Credit to real estate and construction. The study employed multiple regression models to estimate the relationship that exists between monetary transmission channels and real sector growth. The null Hypotheses (H_0) were tested at 0.05 level of significance, Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, cointegrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. From model one; the study found 59.2 percent variation in the growth of Nigeria real sector output could be traced to variation in the sectorial credit allocations. From the findings, the study concludes that sectorial credit allocations have significant effect on the growth of Nigeria real sector. The study recommends that Central Bank of Nigeria should induce the variations of the amount of money changes through the nominal interest rates to increase bank credit. Macroeconomic and monetary policy environment that encourages commercial banks loans and advances to the real sectors of the economy and government through Central Bank of Nigeria should strengthen existing policies on the monetary policy instruments so as to increase and stabilize credit supply in the economy.

Keywords: Sectoral Credit Allocation, Growth, Nigerian Real Sector

INTRODUCTION

The role of commercial bank sectorial allocation in output generation financing cannot be over emphasized as credits are often used by various economic entities to bridge their financing gaps. For instance, businesses obtain credit to bridge gap in equity for financing fixed assets (land, plant, machinery and equipment) acquisition as well as working capital (inventories, salaries and wages). Governments obtain commercial bank credits to meet shortfalls in recurrent (salaries) and capital expenditures (provision of social infrastructures). Individuals take commercial bank credits to balance shortfalls that often exist between households' periodic incomes and expenditures (Panzaru, 2011). Provision of appropriate credit with sufficient consideration for output generation is a critical driver of financial system development, which has the tendency of leading to high rate of enterprises, employment and jobs creation in any economy. The reason being that credit helps businesses create and maintain reasonable size (economies of scale) which affords businesses the opportunity of being productive and

competitive. Commercial bank credit helps businesses diversify their financing risk to the extent that it attracts higher level of managerial efficiency and effectiveness due to increased supervision and control by more experienced and skilled finance professionals (Matoussi & Abdelmoula, 2010; Akani & Lucky, 2018). The need to enhance output capacity of productive units of any economy especially the real sector of the economy through increased access to credits from commercial banks cannot be overemphasized (Nnanna, 2004).

The importance of the real sector cannot be over emphasized in achieving economic growth. It has been named preferred sector of the economy by the regulatory authorities and attract various reforms to attract foreign investors and domestic credits. The sector comprises the agricultural, manufacturing, building, construction and service industries Anyanwu (2011). The sector is important for variety of reasons. First, it produces and distributes tangible goods required to satisfy aggregate demand in the economy Adegbite (2005). Second, performance of the sector can be used to measure the effectiveness of macroeconomic policies. And third, a vibrant real sector is capable of generating income, create employment, absorb idle resources and increase capacity utilization which is prerequisite for economic growth. In Nigeria, however, the impact of commercial banks credit allocated to the productive sectors, general commerce, service sector and other sectors have been given adequate attention.

Financial Stability Review (2006) asserted that credit needs of each sector basically depend on the structure of the business (such as intensity of factor inputs, payment cycle, ratio of variable to fixed costs, product type, among others). Accordingly, the Central Bank of Nigeria (CBN) has designed policies to suit each business structure so as to enhance credit impact on the business and ultimately on the economy. Lemo (2005) opined that the Central Bank of Nigeria (CBN) has designed policies that will enable the banking sector to develop the necessary tools needed to perform its financial intermediation roles efficiently.

Prior to financial sector reform in Nigeria, the repression of the sector was evident in interest rate control, credit ceiling, directed, credit, high reserve requirement and other direct monetary control instruments. Argument against repression informs a comprehensive reform of financial sector in 1987 as a component of Structural Adjustment Policy in 1986. Deregulation regime lasted till 1995 and for 1996 till date, it is termed guided deregulation regime. Whether intensive regulation, deregulation or guided deregulation; the likes of McKinnon (1973) and Shaw (1973) noted that the efficiency of financial intermediation is affected by regulatory regime at a point in time. Deregulation involves a regulatory framework that permits the development of competitive system where consumers are served at reasonable cost. In other words, it is believed that liberalization allows for a market driven intermediation which leads to competition and efficient allocation of credit to sectors that are better able to use it productively.

Computations of sectoral credit concentration show heterogeneity in sectoral credit allocation by bank size. Small banks exhibit less diversified credit portfolios than medium and large sized counterparts. At sector level, banks are more focused towards lending to the agricultural sector, although the level of concentration is once again higher for smaller banks. In terms of risk, large banks had the highest proportion of sectoral non-performing loans in agriculture, depicting increasing risk, despite being little exposure in the sector relative to other bank categories. Bank credit therefore remains a veritable avenue through which the gap in the

availability of capital can be bridged (Nwanji & Okories, 2018). Thus, with bank credit, existing productive enterprises can be expanded while those investments that were hitherto not embarked upon can be undertaken. From the foregoing, it is clear that bank credit plays an important role in fostering real sector growth. It is based on this that this study examined the relationship between sectoral allocation of commercial banks credit and real sector growth in Nigeria.

LITERATURE REVIEW

Sectoral Allocation of Commercial Banks Credit

This is the classification of the economy into categories of sectors and sub-sectors for banking lending. For example Nigeria, the economy is classified into two major sectors: the high priority sector and others. The high priority sectors include agriculture and manufacturing industries, while the other includes the rest of the sectors of the economy (Arora, 2014). Although lending by the CBN has exactly the same effect on the monetary base as an equivalent Open Market Operation, the effect of these actions on the allocation of credit is different. When the CBN makes a loan to a depository institution, it directly allocates credit to that institution. The effect on the allocation of credit is mitigated by the fact that the total supply of credit increases the borrowing institutions obtains credit and no one loses credit. The effect of CBN lending on the allocation of credit is intensified when the CBN offsets the effect of its ending activity on the total supply of credit through open market operations. In this case, borrowing institution obtains credit but the total supply of credit is unchanged. In effect, the borrowing institution is getting credit at the expense of some other individual or institution. The total supply of credit is reallocated (Bougheas, Mizen, & Yalcin, 2005). Historically, the CBN has offset the effect of discount window lending on the total supply of credit through open market operations.

However, in the wave of financial crisis during 2007 to date, the CBN has encouraged standing lending facility through the discount window and all loans to depository institutions are guaranteed at the CBN Discount Window. The practice of offsetting the effect of discount window lending on this monetary base means that discount window lending reallocated credit to the borrowing institution. The effect of discount window lending on credit allocation has not been an issue for two reasons (Bougheas, Mizen & Yalcin, 2005; Lucky & Akobundu, 2017). First, the initial effect of an open market operation is on depository institutions. Consequently, a discount window loan to a depository institution that is offset through open market operations has the effect of reallocating credit among depository institutions. Second, and more important, discount window lending has been small historically, before 2007 when the financial crisis created liquidity crunch on the depository institutions. This was because Central Bank of Nigeria has discouraged depository institutions from borrowing at the discount window by charging penal rate.

Depository institutions were expected to come to the window only when they had exhausted the relevant alternative sources of funds. But what happened was that the depository institutions refused to lend to each other because of the perceived depth of problems of these institutions. Moreover those institutions that borrowed from the Central Bank of Nigeria window were perceived as “troubles”, these problems were confirmed when in 2009 and the Central Bank of Nigeria had to do stress tests for the 24 banks and isolated five depository institutions as very distressed. These five depository institutions had frequented the discount window.

Real Sector of the Economy

The real economy is that sector of the economy that produces goods and services that translates to real output. The productive activities of an economy rest in the real sector which makes it entirely different from other sectors like the financial sector that is concerned with financial transactions. The Central Bank of Nigeria views the real economy as comprising of households, non-financial organisations and Non-Profit Institutions Serving Households (NPISH) involved in the production and distribution of goods and services (from a combination of factor resources), necessary to meet the consumption demand of an economy. The real economy in Nigeria is divided into three: primary, secondary and tertiary sector. The primary sector encompasses agricultural and mining activities; secondary sector consists of manufacturing and building & construction activities, while the tertiary sector is made up of services and commerce. In a nutshell, the real economy of Nigeria is constituted by agriculture & mining, manufacturing, building and construction, services and commerce output sectors. Based on the documentation of the Central Bank of Nigeria, the signals pertaining to the choice of goods and services to be produced and distributed in the real sector emanates from two key markets: production factor market and output market. Production factor market deals with raw materials, labour market, land and capital markets, while output market relates to production of agricultural and manufactured goods and general services by business units from factors of production.

The real economy drives economic growth and development, and provides an indication of the living standard of the citizens of an economy and the effectiveness of government's macroeconomic policies. It further facilitates the creation of economic linkages with other sectors and helps in capacity building, employment and income generation. GABV (2019) asserted that a sustainable real sector requires enterprises and individuals that emphasizes people before profit while focusing their resources on initiatives that result in economic resilience, environmental regeneration and social empowerment for the community and the people they serve. The sector is one of the sectors that is capable, if vibrant, of fast-tracking economic growth and development coupled with high level of massive employment creation.

However, financing the sector has been a major challenge considering the slow pace of growth in the financial sector which is further aggravated by the incessant money market (banks) collapses, caused by the malfeasance of corporate insiders. Sanusi (2009) noted that the real economy is important for a lot of reasons. Firstly, the sector produces and distributes the tangible goods and services required to satisfy aggregate demand in the economy. Its performance is a gauge or an indirect measure of the standard of living of the populace. Secondly, the performance of the sector can be used to assess the effectiveness of macroeconomic policies. Government policies can only be adjudged successful if they impact positively on the production and distribution of goods and services thereby impacting positively on the welfare of the citizenry. Thirdly, a vibrant real sector, particularly the agricultural and manufacturing sub-sectors create more linkages in the economy than any other sector and thus would reduce the economic pressures on the external sector. The relevance of the real sector is also manifested in its capacity building role, as well as in its high employment and income generating potentials.

Growth of the Real Sector

The real sector comprises the productive sector of the economy. The sectors are agricultural sector and manufacturing sector.

Agricultural Sector in Nigeria

A strong and an efficient agricultural sector would enable a country to feed its growing population, generate employment, earn foreign exchange and provide raw materials for industries. The agricultural sector has a multiplier effect on any nation's socio-economic and industrial fabric because of the multifunctional nature of agriculture (Ogen, 2007; Lucky & Akani, 2017).

The study of economic history provides us with ample evidence that an agricultural revolution is a fundamental pre-condition for economic development (Eicher and Witt, 1964; Oluwasanmi, 1966; Jones and Woolf, 1969). The agricultural sector has the potential to be the industrial and economic springboard from which a country's development can take off. Indeed, more often than not, agricultural activities are usually concentrated in the less-developed rural areas where there is a critical need for rural transformation, redistribution, poverty alleviation and socio-economic development.

From the standpoint of occupational distribution and contribution to the GDP, agriculture was the leading sector in the 1970s. During this period Nigeria was the world's second largest producer of cocoa, largest exporter of palm kernel and largest producer and exporter of palm oil. Nigeria was also a leading exporter of other major commodities such as cotton, groundnut, rubber and hides and skins (Alkali, 1997). The agricultural sector contributed over 60% of the GDP in the 1960s and despite the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, these farmers produced 70% of Nigeria's exports and 95% of its food needs (Lawal, 1997).

Manufacturing Sector

Manufacturing sector is one of the real sectors and the sector remains one of the most powerful engines for economic growth. It acts as a catalyst to transform the economic structure of countries, from simple, slow-growing and low-value activities to more productive activities that enjoy greater margins, are driven by technology, and have higher growth prospects. But its potential benefits are even greater today.

With rapid technological change, sweeping liberalization and the increased defragmentation and internationalization of production, manufacturing has become the main means for developing countries to benefit from globalization and bridge the income gap with the industrialized world. These are some of the many arguments that justify the importance of promoting manufacturing in the developing world (Mike, 2010). According to Mike (2010) players in the Nigerian industrial and manufacturing sector can be classified into four groups, Multinational, National, Regional and Local. However, the Manufacturers Association of Nigeria has categorized its industries into Large, Medium and Small Scales in line with the National Council of Industries (NCI) classification. According to MAN, SON, and RMRDC classification of manufacturing sectors, the following products sectoral groups exist in Nigeria: Food, Beverages & Tobacco; Chemical and Pharmaceuticals; Domestic and Industrial Plastic and Rubber; Basic Metal, Iron and Steel and Fabricated Metal Products; Pulp, Paper & Paper Products, Printing & Publishing; Electrical & Electronics; Textile, Wearing Apparel, Carpet, Leather & Footwear; Wood and Wood Products Including Furniture; Non-Metallic Mineral Products; Motor Vehicle & Miscellaneous Assembly (Mike, 2010).

The Financial Intermediation Theory

Financial intermediation is defined as the process of mobilization financial resources through financial institutions/ intermediaries which comprise of the surplus saving units of an economy

for lending or allocation to the effectual deficit spending units. Financial intermediation theory was first formalized in the works of Goldsmith (1969) Mckinnon (1973) and Shaw (1973) who see financial markets as playing a pivotal role in economic development attributing the differences in economic growth across countries to the quantity and quality of services provided by financial institutions. This contrast with Robinson (1952) who argued that financial market are essentially handmaidens to domestic industry and respond passively to other factor that produce cross- country differences in growth.

There is general tendency for the supply of finance to move with the demand for it. It seems to be the case that where enterprise leads, finance allows. The same impulses within an economy, which set enterprises on foot, make owners of wealth venturesome, and when a strong impulse to invest is fettered by lack of finance, devices are invented to release it and habits and institutions are developed. The Robinson school of thought therefore believes that economic growth will lead to the expansion of the financial sector. Goldsmith (1969) attributed the positive correlation between financial development and the level of per-capita gross national products to the positive effect that financial development has in encouraging more efficient use of the capital stock. In addition, the process of growth has feedback effects on financial markets by creating incentives for further financial development.

McKinnon's thesis is based on the complementarity hypothesis, which in contrast to the neo-classical monetary growth theory, argued that there is a complementarity between money and physical capital, which is reflected in money demand. According to McKinnon, complementarity links the demand for money directly and positively with the process of physical capital accumulation because "the conditions of money supply have a first order impact on decisions to save and invest". In addition, positive and high interest rates are necessary to encourage agents to accumulate money balance, and complementarity with capital accumulation will exist as long as real interest rate does not exceed real rate of return on investment parts and would hypothetically, apply noteworthy causal impact on monetary development.

Credit Rationing Theory

Access to credit is explained by credit rationing theory (Stiglitz and Weiss, 1981; Bester, 1985; Cressy, 1996; Baltensperger and Devinney, 1985). According to Stiglitz and Weiss (1981) credit rationing is said to occur when some borrowers receive a loan, while others do not. Credit rationing takes place at either financier level due to loan markets imperfection and information asymmetry or voluntarily by the borrowers (voluntary exclusion). At financier level, credit rationing occurs in a situation where demand for credit exceeds supply at the prevailing interest rate (Stiglitz & Weiss, 1981). There is scant literature on self-rationing, however, in situations where credit rationing is voluntary, Arora (2014) described such borrowers as non-credit seekers due to personal, culture or social reasons or could be in the bracket of discouraged borrowers. Bester (1985) suggested that financiers may choose to reject some borrowers because of negative enticement effects. For example, for given collateral, an increase in the rate of interest causes adverse selection, since only borrowers with riskier investments will apply for a loan at a higher interest rate.

Similarly, higher interest payments create an incentive for investors to choose projects with a higher probability of bankruptcy (Afonso and Aubyn, 1997, 1998; Matthews & Thompson, 2014). On the other hand, for a fixed rate of interest, an increase in collateral requirements may

also result in a decline in the lender's profits (Cressy, 1996). Stiglitz and Weiss (1981) showed that this happens if the more risk-averse borrowers, those that choose relatively safe investment projects, drop out of the market. According to Bester (1985) Andretti (1983), if financiers set collateral requirements and the rate of interest to screen investors' riskiness, then no credit rationing will occur at equilibrium. This is because increasing collateral requirements tends to result in adverse selection, even with risk-neutral investors (Bester, 1984a, 1985).

Loanable Funds Theory

Loanable funds theory of interest rate determination views the level of interest in the financial market as resulting from the factors that affect the supply and demand of loanable funds. (Saunders, 2010) interest rate in this theory is determined just like the demand and supply of goods is determined, supply of loanable funds increases as interest increases, other factors held constant. He goes further to explain that the demand for loanable funds is higher as interest rate fall, other factors held constant. Saunders (2010) identifies two factors among others causing demand curve for loanable funds to shift; economic conditions and the monetary expansion. Refers to the sum of money offered for lending and demanded by consumers and investors during a given period. The interest rate model is determined by the interaction between potential borrowers and potential savers.

According to the loanable funds theory, economic agents seek to make the best use of the resources available to them over their life time. One way of increasing future real income might be to borrow funds now in order to take advantage of investment opportunities in the economy. This will only work if the rate of return available from the investment were greater than the cost of borrowing. These borrowers would not be willing to pay higher real rate of interest than the rate of return available to capital. Savers are willing to save and lend only if there is a promise of real return on their savings that will allow them to consume more in future than they would otherwise be able to do. The extent to which people are willing to postpone consumption depends upon their time preferences (Saunders and Cornet, 2011).

Neo-Classical Growth

This was first propounded by Solow (1956) over 40 years ago. The model states that a sustained increase in capital investments increased the growth rate only temporarily, because the ratio of capital to labour goes up. The marginal product of additional units is assumed to decline and thus an economy eventually moves back to a long term growth-path with the real gross domestic products growing at the same rate as the growth of the workforce plus factor to reflect improving productivity. Neo-classical economists who subscribe to the Solow model believes that to raise an economy long term trend rate of growth requires an increase in labour supply and also a higher level of productivity of labour and capital. Differences in the rate of technological change between countries are said to explain much of the variation in growth rates. The neo-classical models treat productivity improvements as an exogenous variable which means that productivity improvements are assumed to be independent of the amount of capital investment.

Empirical Review

Nweke and Korgbeelo (2022) examined the impact of deposit money banks' credit allocated to the real sector on the development of the real sector in Nigeria. Specifically, the study investigated the impact of deposit money banks' credit allocated to the agricultural, manufacturing, mining and quarrying, and real estate and construction sectors on the

development of the real sector in Nigeria. To conduct the study, Philips-Perron unit root test, autoregressive distributed lag (ARDL) approach to cointegration, error correction model (ECM) and Granger causality test were applied on annual time-series from 1981 to 2020. The findings indicated the presence of long-run (equilibrium) relationship between sectoral bank credit allocation and real sector development in Nigeria. The estimated regression result showed that bank credit allocated to the agricultural, manufacturing, and real estate and construction sectors have insignificant positive impact on real sector development. On the other hand, bank credit allocated to mining and quarrying sector has significant positive impact on real sector development while bank lending rate (a control variable) has significant negative impact on real sector development in Nigeria. It is recommended that the deposit money banks should be encouraged and persuaded to allocate more credit to the real sector of the economy.

Akintola and Adesanya (2020) focused on the relationship between deposit money banks (DMBs) and economic growth in Nigeria from 1994 to 2017. The study was carried out on secondary data obtained from real gross domestic product (RGDP), money supply (M2), bank credit (BC) and interest rate (INT). Data was sourced from the Central Bank of Nigeria statistical bulletin and National Bureau of Statistics annual report. Regression analysis was applied to estimate the relationship between deposit money banks (DMBs) and economic growth, while Ordinary Least Square (OLS) method was used to estimate the model with the aid of econometric view (E-view). Results obtained from the study showed that deposit money banks through money supply, credit to private sectors and interest rate charged on lending to borrowers significantly impacts on economic growth in Nigeria.

Sunday (2020) examined deposit money banks credit and economic growth in Nigeria from 1980-2018. The study used time series data obtained from World Bank Development Indicators and Auto Regressive Distributed Lag (ARDL) technique to examine the effect of domestic credit (DCPS) on GDP as a proxy for economic growth among other variables (INF, LIR). The result showed that unit increase in domestic credit (dcps) has increased GDP by 6%. Inflation rate was found to shrink economic growth rate by 7%. The study concluded that deposit money banks credit was influential in driving economic growth in Nigeria for the 39 years period studied.

Toby and Zaagha (2020) empirically examined the effect of Central Bank policy rates on private sector funding in Nigeria. The purpose of the study was to examine the extent to which monetary policy affect private sector funding in Nigeria. Time series data were sourced from Central Bank of Nigeria Statistical Bulletin from 1985-2018. The study employed multiple regression models to estimate the relationship that exists between monetary transmission channels and private sector funding in Nigeria. Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, normalized co-integrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. Empirical findings that Central Bank Policy rates has significant relationship with credit to private sector, credit to core private sector and no significant relationship with credit to small and medium scale enterprise sector.

Zaagha (2020) examined the effect of money supply on private sector funding in Nigeria. The purpose of the study was to examine the extent to which monetary policy affect private sector funding in Nigeria. Time series data was sourced from Central Bank of Nigeria Statistical Bulletin from 1985-2018. Credit to private sector, credit to core private sector and credit to small and medium scale enterprises sector was used as dependent variables while narrow money supply, broad money supply, large money supply, private sector demand deposit was

used as independent variables. Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, normalized co-integrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. The empirical findings revealed that money supply explains 82.1 percent variation on credit to core private sector, 85.2 percent and 23.4 percent of the variation in credit to private sector and credit to small and medium scale enterprises sector. The study conclude that money supply has significant relationship with credit to private sector, credit to core private sector and credit to small and medium scale enterprises sector.

Zaagha and Murray (2020) examined the effect of deposit money banks policy on private sector funding in Nigeria. Time series data was sourced from Central Bank of Nigeria Statistical Bulletin from 1985-2018. Credit to private sector, credit to core private sector and credit to small and medium scale enterprises was used as dependent variables while liquidity ratio and loan to deposit ratio was used as independent variables. Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, normalized co-integrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. The empirical findings revealed that deposit money banks policy explains 40.8 percent variation on credit to core private sector, 28.1 percent and 58.9 percent of the variation in credit to core private sector and credit to small and medium scale enterprises sector. The study conclude that deposit money banks policy has no significant relationship with credit to private sector and credit to core private sector but has significant relation with credit to small and medium scale enterprises sector.

Kolapo, Ojo, and Olaniyan, (2018) examined deposit money banks' credit to private public sectors and its nexus with economic development in Nigeria over the period 1970-2016. The study adopted per capital income as proxy for economic growth, while credit to private sectors, credit to government sectors, money supply, and lending interest rate were the explanatory variables. The Ng-Perron and Augmented Dickey Fuller Breakpoint Unit Root tests were used in checking the presence of unit root, and in determining the order of integration of the variables. Findings revealed that bank credits to government sectors and lending interest rates were stationary series as $p < 0.01$. The Granger Causality feedback hypothesis establishes that banks' credit and economic growth Granger cause each other. The study recommended that monetary authorities should regulate the activities of deposit money banks to ensure that they gear up the growth of credits to private sectors by examining factors, such as lending interest rate which can possibly undermine lending to these sectors.

Okaro and Sunday (2016) evaluated the effects of deposit money bank's credit on economic growth and development in Nigeria (1981-2015). The study adopted the theory of financial liberalization which states that economic growth in a developing economy rest on an efficient financial sector that pools domestic savings and mobilizes foreign capital for productive investments. Multiple regression technique was used on an annual time series data from 1981 to 2015 sourced from CBN statistical bulletin. Estimated single equation models using Ordinary Least Square (OLS) regression framework was used and the findings indicate that total credit by deposit money banks to all sectors of the economy is positively and significantly related with economic growth in Nigeria. However, the study also revealed that while DMBs credit to private sector drives growth, DMBs credit to public sector frustrates growth due to crowding out effect.

Yet, Bartz and Winkler (2016) depicted a slightly different story with German data. In their study, small firms with limited resources appear to be able to mobilize additional funding during the financial crisis and do not appear to have lower growth. The authors suggest that

fast-growing small firms maintain their advantage during this economic turmoil. The article also points out the peculiarities of the German economy, such as the lending traditions in the banking system and the government's strong liquidity support to banks. These differences may have acted to protect small businesses from negative impacts of the crisis.

Moreira (2016) confirmed the contribution of widened credit accessibility on the growth of SME. SME, access to credit and innovation the problem of access to financial resources is more acute for SMEs planning to invest in Research and Development (R&D) and innovation projects. The risks involved in R&D and innovation and the uncertainty of outcomes and doubts about the commercial success of the end product increase the size of the wedge between the cost of internal and external finance. The matter is made worse by the lack of complete appropriability of the returns due to knowledge spillovers.

Imoughele and Ismaila (2014) employed Co-integration and Error Correction Modelling (ECM) techniques to investigate the impact of commercial bank credit on Nigeria's SMEs between 1986 and 2012. The results revealed that SMEs and selected macroeconomic variables included in the model have a long run relationship with SMEs output. The study also reveals that savings time deposit and exchange rate have significant impact on SMEs output in Nigeria. The study also showed that interest rate has adverse effect on SMEs output.

Mohammed (2014) examined the necessity and strategies of re-positioning commercial banks in order to enhance the productive capacities of SMEs employing the Error Correction Model (ECM) and Co-integration test. The results showed that there was co-integration between re-positioning of commercial banks and capacities of SMEs to deliver services and also a significant dispersion resulting from lending conditions and macroeconomic variables. He argued that relaxing the conditions for lending offered by the banks through the apex bank, prioritizes the SMEs in order to contribute to economic growth.

Suleyman (2013) examined the monetary policies of the Central Bank of the Republic of Turkey on SMEs credit between 2003-2011. Autoregressive Moving Average (ARMA) test and VAR estimation models were use. Results show that money supply has a strong effect for manufacturing sector credit volume. Also, result shows that increase in the credit volume of large enterprises does not have any effect on the credit volume for SMEs. On the contrary, as credit volume of SMEs increases, credit volume of large enterprises decreases, which reveals a reverse causality between credit volume tendencies of different size firms.

Nto, Mbanasor and Osuala (2012) examined the influence of monetary policy variables on banks' credit supply to SMEs in Nigeria. Time series data were collected on quarterly basis covering a period of 1995-2010 and were analyzed using fully Modified Least Squares (FMOLS). The results indicated that policies on interest rate and liquidity ratio were negatively and positively significant to SMEs.

De La Torre et al. (2010) documented competing evidence with bank survey data covering 12 emerging markets from both developed and developing countries. Their results suggest that the majority of SME financing comes from the broad range of services provided by large banks rather than relationship lending from small and niche banks, and that this pattern has not been affected by the Global Financial Crisis (GFC). Other work has looked at the aggravating effect of business cycles and financial shocks on financially constrained firms.

Beck et al. (2008a) exploited the full range of financing choices faced by large and small businesses, and find that property right protection greatly promotes SME's success in obtaining bank financing. Using a cross-country sample on industries from the manufacturing sector,

Beck et al. (2008b) identify that financing development significantly benefits the growth of industries more dependent on SMEs.

Goyal and Yamada (2004) looked at Japan's asset bubble burst in the 1990s. Both demonstrate that financially constrained firms had a more sensitive response during the business cycles than other firms. Studies on SME's financing-growth relationship at the specific periods of economic disequilibrium are still limited to evidence obtained from a few countries and the results are inconclusive. The global financial crisis in 2007 exposed the world economies to great economic challenges. A comprehensive understanding of how economic fluctuations affect the financing-growth nexus and a thorough assessment of the potential damage it might have had post-crisis on available financing options to small businesses requires more empirical evidence. 4. Financial Constraints and SME Survival and Growth SME's ability to effectively contribute to the economy with their unique advantages is conditional on firm survival. However, it is well-known that the SME sector is plagued by low prospects of firm survival. About 20 per cent of start-ups exit the market after the first year of entry and more leave in the following year. Only a small fraction move onto a path of fast growth (OECD, 2005; Bartelsman et al., 2005).

Bukvic and Bartlett (2003) further pointed to the high financing cost, e.g., cost for credit and loans, bank collateral requirements, alongside other bank charges and fees, as the key financial barriers to SME growth. It is the same story with Australian small businesses where access to finance, especially for innovation, tops the list of challenges they face (ASBFEO, 2019). The financing channel not only can hamper growth, but in some cases may be used as a tool to generate entry deterrence for new small business.

Cestone and White (2003) provided a theoretical framework on a mechanism where incumbents' choice of financial instruments deters the entry of others, suggesting that the existing lending relationship can manipulate the behaviour of potential investors towards new entrants. This financial barrier to newcomers is even more important when the credit market is less competitive (Cetorelli and Strahan, 2006). The above studies concentrate on either a single country or nations in similar economic development circumstances. To accommodate sufficient variation in the level of financial development, cross-country comparisons can shed light on the implications of improved credit market on SME finance for developed countries.

Literature Gap

Zaagha (2020) examined the effect of money supply on private sector funding in Nigeria. The purpose of the study was to examine the extent to which monetary policy affect private sector funding in Nigeria. Zaagha and Murray (2020) examined the effect of deposit money banks policy on private sector funding in Nigeria. Time series data was sourced from Central Bank of Nigeria Statistical Bulletin from 1985-2018. Nto, Mbanasor and Osuala (2012) examined the influence of monetary policy variables on banks' credit supply to SMEs in Nigeria. Suleyman (2013) examined the monetary policies of the Central Bank of the Republic of Turkey on SMEs credit between 2003-2011. Imoughele and Ismaila (2014) employed Co-integration and Error Correction Modelling (ECM) techniques to investigate the impact of commercial bank credit on Nigeria's SMEs between 1986 and 2012. Mohammed (2014) examined the necessity and strategies of re-positioning commercial banks in order to enhance the productive capacities of SMEs employing the Error Correction Model (ECM) and Co-integration test. The studies above examined different variables that affect bank lending while this study examined commercial banks sectoral credit allocation and the impact on growth of the real sector in Nigeria.

METHODOLOGY

This study whose data are drawn from Central Bank of Nigeria use quasi-experimental research design approach for the data analysis. This approach combines theoretical consideration (a-priori criterion) with the empirical observation and extract maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables. The data for this study were secondary data sourced from the Central Bank of Nigeria (CBN) statistical bulletin 2023 publication various issues.

Model Specification

In attempting to investigate the relationship between commercial banks loans and advances and economic growth the study adopt the following models

$$RSG = f(CBCA, CBCM, CBCE, CBCMQ, CRC) \quad (1)$$

Transforming equation 1 above to econometrics method, we have

$$RSG = \beta_0 + \beta_1 CBCA + \beta_2 CBCM + \beta_3 CBCE + \beta_4 CBCMQ + \beta_5 CRC + \mu \quad (2)$$

Where

RSG = Real sector growth as percentage of real sector gross domestic product to total gross domestic product

CBCA = Commercial banks loans and advances to agricultural sector

CBCM = Commercial banks loans and advances to manufacturing sector

CBCE = Commercial banks loans and advances to Export sector

CBCMQ = Commercial banks loans and advances to mining and Quarrying sector

CRC = Credit to real estate and construction

μ = Error term

Data Analysis Method

The technique used in this study is the Ordinary Least Square (OLS) estimation technique. The test instruments in the OLS are the T-statistics and F-test which were used to test the significance of variables and the overall significance of the regression respectively. Other test instruments also employed were the Durbin Watson test which was used to test the presence or absence of auto correlation between and among the explanatory variables and the adjusted R square used to test the percentage variation of the dependent and the independent variables.

Estimation Techniques

i. Stationarity Test:

Time series data were assumed to be non-stationary and this implies that the result obtained from Ordinary Least Square (OLS) may be misleading (Suleman & Azeeze, 2012). It is therefore necessary to test the stationarity of the variables using the Augmented Dickey Fuller 1979 test to both level and first difference. The ADF test constructs a parameter correction for higher order correlation by assuming that the times series follows an auto regressive process. Mathematically expressed as

$$\Delta y_t = c + \beta_t + \alpha y_{t-1} + \sum_{j=1}^k \gamma_j \Delta y_{t-j} + \varepsilon_t \quad (3)$$

$$\Delta y_t = c + \alpha y_{t-1} + \sum_{j=1}^k \gamma_j \Delta y_{t-j} + \varepsilon_t \quad (4)$$

Equation 1 is used to test for the null hypotheses of non stationarity of unit root against trend stationarity alternative in Y_t where y refers to the examined time series. Equation 2 tests the null hypotheses of a unit root against a mean stationarity alternative.

ii. Johansen Cointegration Test

The cointegration test established whether a long run equilibrium relationship exist among the variables. It is generally accepted that to establish a cointegration, the likelihood ratio must be greater than the Mackinnon critical values. The model can be stated as

$$\Delta X_t = \mu + \Psi_1 \Delta X_{t-1} + \Psi_2 \Delta X_{t-2} + \dots + \Psi_{p-1} \Delta X_{t-p+1} \quad (5)$$

Where μ is a constant term.

ΔX_t Represents the first cointegrating differences

iii. Granger Causality

To determine the direction of causality between the variables, the study employed the standard Granger causality test (Granger, 1969). The test is based on Vector Error Correction Model (VECM) which suggests that while the past can cause or predict the future, the future cannot predict or cause the past.

$$Y_t = \alpha_o + \sum_{i=1}^n \alpha_1^y Y_{t-1} \sum_{i=1}^n X_{a1} X \mu \quad (6)$$

and

$$X_t = \beta_o + \sum_{i=1}^n \beta_1^y Y_{t-1} \sum_{i=1}^n X_{\beta 1} X Y_t \quad (7)$$

iv. Vector Error Correction Model

Co-integration is a prerequisite for the error correction mechanism. Since co-integration has been established, it is pertinent to proceed to the error correction model. The VECM is of this form:

$$\Delta y_t = \alpha \beta y_{t-1} + \sum_{i=1}^{j=1} \Gamma_j \Delta y_{t-1} + \pi + \zeta_t, t = 1, \dots, T \quad (8)$$

Where Y_t is a vector of indigenous variables in the model. α is the parameter which measures the speed of adjustment through which the variables adjust to the long run values and the β is the vectors which estimates the long run cointegrating relationship among the variables in the model. π is the draft parameter and is the matrix of the parameters associated with the exogenous variables and the stochastic error term.

AND ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Unit Root Test

Variable	ADF Statistics	MacKinnon@ 1%	MacKinnon@ 5%	MacKinnon@ 10%	Order of Integration	Conclusion
ADF at Level						
RSO	-7.331818	-3.646342	-2.954021	-2.615817	1(1)	Stationary
BCTC	-5.129286	-3.661661	-2.960411	-2.619160	1(1)	not Stationary
BCREC	-1.066335	-3.646342	-2.954021	-2.615817	1(0)	Stationary
BCMQ	-5.469853	-3.646342	-2.954021	-2.615817	1(1)	Stationary

BCM	-	-3.646342	-2.954021	-2.615817	1(1)	Stationary
	5.679829					
BCA	-	-3.646342	-2.954021	-2.615817	1(1)	Stationary
	6.405240					
ADF at Difference						
RSO	-	-3.661661	-2.960411	-2.619160	1(1)	Stationary
	10.48925					
BCTC	-	-3.670170	-2.963972	-2.621007	1(1)	Stationary
	6.679026					
BCREC	-	-3.653730	-2.957110	-2.617434	1(1)	Stationary
	7.766302					
BCM _Q	-	-3.670170	-2.963972	-2.621007	1(1)	Stationary
	5.434809					
BCM	-	-3.653730	-2.957110	-2.617434	1(1)	Stationary
	9.394743					
BCA	-	-3.653730	-2.957110	-2.617434	1(1)	Stationary
	10.49471					

Source: Extract from E-view 9.0

Table 1 present's unit root test on the relationship between credit channel and real sector output, the ADF statistics for the test are presented in the table above. The result indicates that all the variables are stationary at level and integrated in the order of 1(1).

Table 2: Co-integration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.756190	138.2686	95.75366	0.0000
At most 1 *	0.705724	93.10492	69.81889	0.0002
At most 2 *	0.509621	53.96132	47.85613	0.0120
At most 3 *	0.412554	31.15886	29.79707	0.0346
At most 4	0.352879	14.13579	15.49471	0.0793
At most 5	0.006500	0.208671	3.841466	0.6478
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.756190	45.16365	40.07757	0.0123
At most 1 *	0.705724	39.14360	33.87687	0.0107
At most 2	0.509621	22.80246	27.58434	0.1821
At most 3	0.412554	17.02307	21.13162	0.1709
At most 4	0.352879	13.92712	14.26460	0.0565
At most 5	0.006500	0.208671	3.841466	0.6478

Source: Extract from E-view 9.0

The results in table 2 presents the Johansen co-integration test show that we reject the null hypotheses of no co-integrating equation at the 5% level of significance. This implies that, there is linear combination of the variables that are stationary in the long run and also confirms the existence of a long-run relationship between credit channel and real sector output.

Table 3: Pairwise Granger Causality Tests

Hypothesis	Obs	F-Statistic	Prob.	Conclusion
BCTC does not Granger Cause RSG	32	0.24739	0.7826	No causal relationship Accept HO
RSG does not Granger Cause BCTC	32	0.57789	0.5679	No causal relationship Accept HO
BCREC does not Granger Cause RSG	32	3.42399	0.0473	causal relationship Reject HO
RSG does not Granger Cause BCREC	32	0.45913	0.6367	No causal relationship Accept HO
BCMQ does not Granger Cause RSG	32	0.48148	0.6231	No causal relationship Accept HO
RSG does not Granger Cause BCMQ	32	0.03303	0.9675	No causal relationship Accept HO
BCM does not Granger Cause RSG	32	0.08359	0.9200	No causal relationship Accept HO
RSG does not Granger Cause BCM	32	0.00017	0.9998	No causal relationship Accept HO
BCA does not Granger Cause RSG	32	2.04864	0.1485	No causal relationship Accept HO
RSG does not Granger Cause BCA	32	1.05169	0.3632	No causal relationship Accept HO

Source: Extract from E-view 9.0

Table 3 summaries the causal relationship between credit channel and the Nigeria real sector output within the periods covered in this study.

Table 4: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1100.297	NA	4.30e+22	69.14355	69.41838*	69.23465
1	-1045.240	86.02705*	1.37e+22*	67.95247*	69.87625	68.59015*
2	-1010.592	41.14345	1.92e+22	68.03703	71.60976	69.22129

Source: Extract from E-view 9.0

Table 4 presents the var lag order selection criterion, since the value proposed by both AIC, HQIC is lag 1, the optimal lag length in this study is 1

Table 4: Error Correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RSG(-1))	0.128985	0.630317	0.204636	0.8420
D(RSG(-2))	0.291151	0.469437	0.620212	0.5490
D(RSG(-3))	0.795192	0.316549	2.512065	0.0308
D(BCTC(-1))	-0.397859	0.943496	-0.421686	0.6822
D(BCTC(-2))	-1.402540	0.891429	-1.573362	0.1467
D(BCTC(-3))	-0.841787	0.806243	-1.044086	0.3210
D(BCREC(-1))	0.003189	0.061184	0.052117	0.9595
D(BCREC(-2))	-0.220415	0.107659	-2.047346	0.0678
D(BCREC(-3))	-0.157276	0.077961	-2.017360	0.0713
D(BCM(-1))	-0.804722	0.457369	-1.759460	0.0490

D(BCM(-2))	-0.885603	0.616726	-1.435975	0.1815
D(BCM(-3))	0.057715	0.474306	0.121682	0.9056
D(BCM(-1))	-0.030377	0.023208	-1.308925	0.2198
D(BCM(-2))	-0.044027	0.021199	-2.076900	0.0645
D(BCM(-3))	-0.016139	0.015754	-1.024444	0.3298
D(BCA(-1))	1.179861	1.069880	1.102798	0.2959
D(BCA(-2))	0.600044	0.833875	0.719585	0.4883
D(BCA(-3))	0.255353	0.637041	0.400843	0.6970
ECM(-1)	-1.572820	0.676005	-2.326641	0.0423
C	15.25524	10.42774	1.462948	0.1742
R-squared	0.917487	Mean dependent var		-0.265913
Adjusted R-squared	0.760711	S.D. dependent var		83.76126
S.E. of regression	40.97365	Akaike info criterion		10.49846
Sum squared resid	16788.40	Schwarz criterion		11.43259
Log likelihood	-137.4768	Hannan-Quinn criter.		10.79729
F-statistic	5.852226	Durbin-Watson stat		2.064624
Prob(F-statistic)	0.003385			

Source: Extract from E-view 9.0

Table 4 presents the relationship credit channels and real sector output within the periods covered in this study. The corresponding sign of Error Correction Term (ECT) is negative but not significant. The negative sign of (ECT) indicates a move back towards equilibrium following a shock to the system in the previous year. The adjusted R^2 from the model proved that the independent variables can explain 76 percent changes on real sector output. The model is statistically significant from the value of f-statistics and probability. The Durbin Watson prove the absence of serial autocorrelation among the variables, however, the ECM coefficient indicates that the models can adjust at the speed of 157 percent annually. The coefficient of the variables defines the effect of the independent variables on the dependent variables at various lags.

Discussion of Findings

The estimated regression model found that credit to transport and communication, mining and quarrying and real sector has negative and significant effect on the growth of Nigeria real sector output. Coefficient of the variables indicates that the variables reduced growth of the manufacturing sector by 0.39, 0.8 and 0.03 percent. The negative effect of the variables contradicts our a-priori expectations and not in line with credit policies such as the deregulation of interest rate, banking sector reforms reduced interest rate for key sectors of the economy. The negative effect of the variables further contradicts demand and supply for loanable fund theory. Empirically, the negative effect of the variables contradicts the findings of D'Pola, and Touk, (2016) that commercial bank credit and real interest rate have a negative and significant impact on the performance of SMEs in Cameroon, the findings of Sesay and Abdulai (2017) that money supply and gross domestic saving exert positive and statistically significant effect on private sector investments whereas treasury bill rate, inflation and gross domestic debt exert a negative effect and the findings of João, Barroso and Gonzalez (2017).

Furthermore, the study established that credit to real estate and construction and real sector have positive and significant effect on the growth of Nigeria real sector output. The estimated

model justifies that the variables added 0.03 and 1.1 percent on the growth of Nigeria real sector output. The positive effect of the variables confirms our a-priori expectations and line with financial sector reforms and the empirically the findings is in line with the findings of Karimo and Ogbonna (2017) that financial deepening leads to growth and not growth leading financial deepening, Daniel (2017) that there is a significant relationship between liquidity management and the performance of Deposit Money Banks in Nigeria and the findings Ezeaku, Ibe, Ugwuanyi, Modebe and Agbaeze (2018) that in the Nigerian case, monetary policy transmission channels jointly have a long-run relationship with real output growth of the industrial sector, and disequilibrium in the system is corrected at the speed of 72.2% annually and the findings of Adelegan (2018) that the relationship between growth and domestic credit to the private sector is positive and insignificant. Also, the results show that increase in PLR reduces output for the period under study, but this was not statistically significant.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study found that 59.2 percent variation in the growth of Nigeria real sector output could be traced to variation in the sectorial credit. The model was found to be statistically significant in explaining the relationship between credit channel and growth of the real sector output, the variables were all stationary at difference, the cointegration result proved that there were linear combinations of the variables in the long run while the granger causality test proved that there were causal relationships among the variables. Beta coefficient of the variables proved that the variables were statistically not significant in determining variation in the growth of real sector output except credit to Mining and quarrying sector.

The study concludes that there is no significant relationship between bank lending to transport and communication and growth of the real sector. The study concludes that there is no significant relationship between bank lending to real estate and construction and growth of the real sector. The study concludes that there is significant relationship between bank lending to mining and quarrying and growth of the real sector. The study concludes that there is no significant relationship between bank lending to manufacturing sector and growth of the real sector. The study concludes that there is no significant relationship between bank lending to agricultural sector and growth of the real sector.

Recommendations

1. The study recommends macroeconomic and monetary policy environment that encourages commercial banks loans and advances to the real sectors of the economy and government through Central Bank of Nigeria should strengthen existing policies on the monetary policy instruments so as to increase and stabilize credit supply in the economy.

REFERENCES

- Adelegan, A.E. (2018). Private domestic investment, domestic credit to the private sector and economic performance: Nigeria in perspective. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 9 (3), 22-31.
- Adeniyi1, A.M., Adeyemi, A.K, Salawudeen O.S., & Fagbemi, T.O. (2018). Monetary policy and bank credit in Nigeria: A Toda-Yamamoto Approach. *ACTA UNIVERSITATIS DANUBIUS*, 14, (5), 718729
- Adigwe, P. K., Echekoba, F. N, & Onyeagba, J.B.C. (2015). Monetary policy and economic growth in Nigeria: A critical evaluation. *IOSR Journal of Business and Management (IOSR-JBM)*, 17(2), 110-119.
- Afonso, A, and Aubyn, M. (1997). Is There Credit Rationing in Portuguese Banking? *Department of Economics, Working Paper No 6 (97)*.
- Akani, H. W., Okonkwo V. I., &Ibenta, S. N. (2016). Empirical Analysis of Monetary Policy on Capital Market Activities: Evidence from Nigerian Economy. *Journal of Accounting and Financial Management* 2 (3), 82 – 111.
- Akani, H. W.,& Onyema, J.I., (2017). Determinants of credit growth in Nigeria: A multidimensional analysis. *Journal of Economics and Sustainable Development*,8(20)202- 215.
- Akintola, A.F., &Adesanya, O.A. (2020). Contribution of deposit money banks to economic growth in Nigeria (1994-2017). *International Journal of Scientific and Research Publications*, 11(1), 78-95.
- Anigbogu, T. U., Okoli, I. M. &Nwakoby, N. P. (2015).Financial intermediation and small and medium enterprises performance in Nigeria (An aggregated analysis: 1980-2013). *European Scientific Journal*, 11(28), 257-272.
- Arora, R.U. (2014). Access to finance: An empirical analysis. *European Journal of Development Research*, 26 (5), 798-814
- Assefa, M. (2014). Determinants of Growth in Bank Credit to the Private Sector in Ethiopia: A Supply Side Approach. *Research Journal of Finance and Accounting*, 15(17), 78-95.
- Ayub, G. &Seyed, A.M. (2016). The relationship between monetary policy and bank lending behavior and the influence of bank specific features on this relationship in the banks listed on the Tehran Stock Exchange. *International Journal of Advanced Biotechnology and Research (IJBR)*, 7(2).115-125.
- Baltensperger, E. & Devinney, T. (1985). Credit rationing theory: A survey and synthesis. *Zeitschrift für die gesamte Staatswissenschaft*, 14(1), 475–502.

- Bester, H. (1985). Screening vs. rationing in credit markets with imperfect information. *The American Economic Review*, 75 (4), 850-855.
- Blinder, M. (1958). Shaping the U.S. financial system. *Journal of Economics and Sustainable Development*, 8(20), 202- 215.
- Bougheas, S., Mizen, P., & Yalcin, C. (2005). Access to external finance: Theory and evidence on the impact of monetary policy and firm-specific characteristics. *Journal of Banking and Finance*, 30(1), 199-227.
- Carlin, W., & Soskice, D. (2006). *Macroeconomics: imperfections, institutions, and policies*. New York, Oxford University Press
- Central Bank of Nigeria (2017). Monetary Policy at a Glance. Monetary Policy Department Series. Accessed at https://www.cbn.gov.ng/Out/20_17/CCD/MONETAR_Y%20POLICY%20AT%20A%20GLANCE.pdf.
- Courage, O.E., & Leonard, N.A, (2011). [Impact of commercial banks' credit to the real sector on economic growth in Nigeria](#). *Oradea Journal of Business and Economics*, University of Oradea, Faculty of Economics, 4(1), 38-46.
- D'pola, K. U. and Touk, M.C. (2016). The effect of commercial bank credit on the output of small and medium enterprises in Cameroon: Empirical evidence from 1980-2014. *Maghreb Review of Economic Management*, 03 (3), - N° 02.
- Daniel, B.E. (2017). Liquidity management and performance of deposit money banks in Nigeria (1986 – 2011): An Investigation. *International Journal of Economics, Finance and Management Sciences* 5(3), 146-161.
- David, H. N., Fecht, F., Huang, K., & Martin, A., (2008). Financial intermediaries, market and growth. *Journal of Money, Credit, and Banking*, 40 (4), 701-720.
- Dhanuskodi, R. (2014). Impact of loan deposit ratio (ldr) on profitability: panel evidence from commercial banks in Malaysia. Proceedings of the third international conference on global business, economics, finance and social sciences (GB14Mumbai Conference) *Mumbai, India. 19-21. Paper ID: MF498*.
- Enu, N. (2012) Impact of Interest Rate Policy and Performance of Deposit Money Banks in Nigerian. *Global Journal of Management and Business Research*, 12(21), 89-100.
- Eyas G. A. (2014). The impact of private sector credit on Saudi Arabia economic growth (GDP): An econometrics model using (ARDL) approach to cointegration. *American International Journal of Social Science*, 3,(6), 890-899.
- Ezirim, B. C. (2005). *Finance dynamics: principles, applications and techniques*. Markowitz Centre for Research and Development. Port Harcourt.

- Ezirim, B. C., Muoghalu, M. I., & Emenyonu, E. N., (2012). Environmental correlates of the intermediation function of the Nigerian financial superstructure: A *Preliminary Investigation*. *FBN Quarterly Review*, .2, (4), 403-421.
- Gale, T., & Hettwig, B. (1989). Financial development, growth, and the distribution of income. *Journal of Political Economy*, 98, 1076-1107.
- Goldsmith, R. (1969). *Financial structure and development*. New Haven, CT, Yale University Press.
- Granger, C.M.J. (1969), Investigating Causal Relations by Econometric Models and Cross-Spectral methods, *Econometrica*, 37, 424 – 438.
- Gujarati, D. N. (2004). *Basic econometrics (4th Ed.)* McGraw-Hill, New York.
- Hansen, R. and Thatcher. J. (1983). On the nature of credit demand and credit rationing in competitive credit markets. *Journal of Banking and Finance*, 7, 273-284.
- Harold F. Williamson & Domar, T. (1957). Comment on Mozes Abramovits: Economics of Growth' in A survey of Contemporary Economics, Vol, II, (Bernard F. Haley ed.). Growth" in A Survey of Contemporary Economics, Vol, II, (Bernard F. Hale
- Hyunggeun P., Hyunwoo J., &Dokyung, L. (2015).Evaluation on the usefulness of the loan-to-deposit ratio regulation - from the macro-prudential policy perspective. Financial Research Team, Financial Stability Department, Bank of Korea working paper.
- Jaffee, D.M., & Modigliani, F. (1969). A theory and test of credit rationing. *American Economic Review* 59, 850–72.
- Jegade, C.A. (2014). Impacts of monetary policy on the commercial banks' lending in Nigeria. *Review of Public Administration and Management*, 3(5), 134 – 146.
- Jeong, H., (2009). The Procyclicality of Bank Lending and Its Funding Structure: The Case of Korea Bank of Korea International Conference on The Credit Crisis: Theoretical Perspectives and Policy Implications May.
- Jhingam, M. L (1992). *Macroeconomic theory*. 10th Edition, Vrinda Publications Ltd, New Delhi.
- João B. R., Barroso, R. B., Gonzalez, B. F., &Nazar V. D. (2017). Credit Supply Responses to Reserve Requirement: loan-level evidence from macro prudential policy. *Banco Central doBrasil. Working Paper Series 467*.
- John, N. N. U. &Onwubiko, N. D. (2013). Challenges of bank credit among small and medium enterprises in Nigeria. *Journal of Economics and Sustainable Development*, 4(6), 84-90.
- Karimo, T.M., &Ogbonna, O.L. (2017). Financial Deepening and Economic Growth Nexus in Nigeria: Supply-Leading or Demand-Following? *Economies MPDI Articles*.
- Kolapo, F. T., Ojo, M. O., &Olaniyan, T. O. (2018). Deposit money banks' credit to privatepublic sectors and economic development nexus: Nigeria in focus. *International Journal of Academic Research In Business And Social Sciences*, 8(5), 215–233.

- Leorne N. (2014). Implications of monetary policy for credit and investment in Sub-Saharan African (SSA) countries. *Political Economy Research Institute (PERI), Working Paper Series 356*.
- Lewis, W. A. (1963). Reflections on unlimited labour. In International economics and development (ed. L. Di Marco). Academic Press.
- Lucky, A. L., & Akani, H. W., (2017). Comparative analysis of commercial banks soundness: A CAMELS study of Nigerian pre and post consolidation era. *Research journal of finance and accounting*, 8(20), 149-173.
- Lucky, A. L., & Akobundu, C. E., (2017). Prime equity, leveraged structure and corporate earnings: A comparative analysis. A multi-dimensional analysis of quoted firms in Nigeria. *Australian journal of finance and banking review*, 1(1), 26-40.
- Matemilola, B.T. (2014). *The Impact of Monetary Policy on Bank Lending Rate in South Africa*. University of Malya, Malaysia.
- Matthews, K., & Thompson, J. (2014). *The economics of banking*, Wiley: Chichester, (3rd Edition).
- Mitku, M. Y. (2018). Lending and cash required reserve: Empirical evidence from Ethiopian commercial bank. *European Scientific Journal*.14, (13), 179-189.
- Mohammed, O. (2014). Re-positioning commercial banks to enhance the productive capacities of small and medium – scale enterprises (SMEs) for economic growth of developing nations: A focus on Nigeria. *International Journal of Public Administration and Management Research*, 2(2), 193-198.
- Nasko, A. M. (2016). Impact of Monetary Policy on the Economy of Nigeria. *Pyrex Journal of Business and Finance Management Research*, 29(4), 163-179.
- Nwanyanwu, O. J., (2011). An analysis of bank credit on the Nigeria economic growth (1992-2008). *Jos Journal of Economics*, 4(2), 43-58.
- Nwoko, N. M., Ihemeje, J. C., & Anumadu, E. (2016). The impact of monetary policy on the economic growth of Nigeria. *An International Multi-disciplinary Journal, Ethiopia*, 10(3), 192-206.
- Odior, S.I. (2013). The impact of commercial banks' credit to agriculture on agricultural development in Nigeria: An econometric analysis. *International Journal of Business Humanities and Technology*, 3(1), 85 – 95.
- Ogolo, T. M. (2018). Monetary policy and commercial bank lending to the real sector in Nigeria: A time series study. *American Finance & Banking Review*; 2, (1), 451-467.
- Okaro, C., & Sunday, O. (2016). Deposit Money Banks' Credit and Nigerian Economic Growth and Development 1981-2015. *Journal of Social Development*.5 (5), 10-26.

- Olorunmade, G., Samuel, O.J., & Adewole, J. A. (2019). Determinant of private sector credit and its implication on economic growth in Nigeria: 2000-2017. *American Economic and Social Review*, 5 (1), 45-60.
- Onoh, J. K. (2007). Dimensions of Nigeria's Monetary and Fiscal Policies: Domestic and External. *Astra Meridian Publishers*, Aba.
- Otalu, A. M. (2014). Monetary policy and commercial banks performance in Nigeria: an assessment of credit creation role. *The International Journal of Business and Management*, 2(7), pp. 45 -51.
- Ovat, O. O. (2016). Commercial banks' credit and the growth of small and medium scale enterprises: The Nigerian experience. *Journal of Economics and Finance*, 7(6), 23-30
- Robinson, O. O. (1952). Role of finance on the growth of small and medium enterprises in Edo state of Nigeria. *Journal of Educational and Social Research*, 5, 241-248.
- Roger, M. (1991). The benefits of lending relationships: Evidence from small business data. *The Journal of Finance*, 49(1), 3-38.
- Rychtárik, Š. (2009). Liquidity Scenario Analysis in the Luxembourg Banking Sector. *BCDL Working Paper*, 41.
- Saunders, S. (2010). *Financial Markets and Institutions: An introduction to the risk management approach*. McGraw Hill Pub.
- Sesay, B., & Abdulai, B.S. (2017). Monetary policy effects on private sector investment: Evidence from Sierra Leone. *International Journal of Economics and Financial Issues*, 7(1), 476-488.
- Shaw, E. (1973). *Financial deepening in economic development*. London Oxford University Press.
- Shoib A., (2010). Achieving the optimal capital structure and its impact on Pakistani banking performance. *International Review of Business Research Papers*, 7(3), 9 -24.
- Solow, R. M. (1956). A Contribution to The Theory of Economic Growth. *Quartaly Journal of Economics*, 70(1), 65-94.
- Stiglitz, J., & Weiss, A. (1985). Credit rationing and collateral in corporate finance. *Cambridge: Cambridge University Press*.
- Suleyman, S., (2014). The effects of the monetary policies on bank credit for SME's in the manufacturing sector: Evidence from Turkey. Istanbul Chamber of Commerce Department of SME's.
- Sunday, A.N. (2020). Deposit money banks credit and economic growth in Nigeria. *Lafia Journal of Economics and Management Sciences A bi-annual Publication of Department of Economics, Federal University of Lafia*, 5(3), 90-100.

- Sunny, O.I. (2013). The impact of commercial banks credit to agriculture on Agricultural development in Nigeria: econometric analysis. *International Journal of Business, Humanities and Technology* 3(1), 85-94.
- Swank, J. (1996). Theories of the banking firm: a review of the literature. *Bulletin of Economic Research*, 48 (3), 173-207.
- Timsina, N. (2014). Impact of bank credit on economic growth in Nepal. NRB Working Paper No. 22; 2014.
- Toby, A. J., & Peterside, D. (2014). Monetary policy, bank management and real sector finance in Nigeria: Who is to blame? *Proceedings of the First Middle Conference on Global Business, Economics, Finance and Banking (ME 14 Dubai Conferences) Dubai*.
- Toby, A. J., & Zaagha, A.S, (2020). Central Bank Policy and Private Sector Funding in Nigeria: A Multi-Variant Study. *Journal of Strategic and Internet Business*. 4 (2), 899-923.
- Todaro, M.P. (1977). *Economic Development in the Third World* 3rd Edition, Longman Publisher
- Torbila, L.L., & Zaagha, A.S. (2016). Capital Adequacy Measures and Bank Financial Performance in Nigeria: A Cointegration Analysis. *Journal of Finance and Economic Research*. 4(1), 15-34.
- Vossen A., (2010). Bank liquidity management. MCB University Press, *Bradford*, 11; 13-19
- Wette, H. C. (1983). Collateral in Credit Rationing in Markets with Imperfect Information. *American Economic Review*, 73, (4), 442-45.
- William, O., Zehou, S. & Hazimi, B.H., (2019). Determinants of domestic credit to the private sector in Ghana: application of vector auto regressive method. *Advances in Social Science, Education and Humanities Research*, volume 309.
- Zaagha, A. S. (2020). Money Supply and Private Sector Funding in Nigeria: A Multi-Variant Study. *Asian Finance & Banking Review*; 4(2), 24-41.
- Zaagha, A.S., & Murray, M. E. (2020). Deposit money bank policy and private sector funding: a multi-dimensional study from Nigeria. *Australian Finance & Banking Review*; 4(1), 18-36.
- Zuzana, F., Riikka, N., & Laurent, W. (2015). Reserve requirements and the bank lending channel in china (september 21, 2015). *BOFIT Discussion Paper No. 26/2015*.