

AGRICULTURAL SECTOR BANKS CREDIT AND ITS IMPACT ON ECONOMIC PERFORMANCE IN NIGERIA

¹Biradawa Kayadi, ²Zwingina, Christy Twaliwi & ³Ndubisi Ohakalam Charlse

Department of Banking and Finance, University of Maiduguri¹

Department of Business Administration, Bingham University²

Department of Industrial Relation and Personnel Management, Michael Okpara

University of Agriculture, Umudike³

Abstract

The study empirically investigated the impact of commercial banks' credit to the real sector on economic growth of Nigeria, covering the period, 1981-2020. Quarterly data from statistical bulletins of Central Bank of Nigeria and National Bureau of Statistics were used during the study. Autoregressive Distributed Lag (ARDL) approach was adopted for estimation. Economic growth, proxied by gross domestic product, agricultural gross domestic product and industrial gross domestic product were regressed against the explanatory variables (Commercial banks' credit to agriculture, industry, manufacturing and mining, quarrying and solid minerals; Government expenditure on agriculture; Agricultural credit guarantee loan; Inflation and Lending rates), thus forming three models in the study. Prominent among the findings is that significant relationship exists between Nigeria's commercial banks' credit and economic growth. The study further revealed that under most of the models, commercial banks' credit key explanatory variables were statistically insignificant contrary to a priori expectations. On the basis of these findings, the study therefore concludes that the impact of commercial banks' credit to the real sector on the economy is mixed and largely insignificant in Nigeria. Based on the findings, the study recommends, that as a means of monitoring commercial banks' credit to the real sector, funds should be granted to registered agriculturists and industrialists on the basis of evident track records of real sector produce with a view to ensuring that misapplication and misappropriation are drastically reduced if not eradicated.

Key words: Banks' Credit, Real Sector, Economic Growth, Agricultural Growth, Industrial Growth ARDL Approach

Introduction

An in-depth look at the major contributors to gross domestic product (GDP) reveals that agriculture, services' and industrial sectors rank highest. Nonetheless, with increases in Banks' credit and economic growth over the years of study, economic growth indices (unemployment rate, the level of income per capita, poverty) are abysmal. Worried over this situation, Sanusi again echoes that available statistics have put the national poverty level of Nigeria at 54.4 per cent while unemployment has risen to 19.7 percent by National Bureau of Statistics. Currently, these figures are 62.6% and 13.9% as at 2016 respectively, in further expression of worry, Sanusi

expressed that while China and Thailand occupy a 5th and 22nd position in 2009 Global Hunger Index, Nigeria was ranked 64th. The ugly situation of Nigerian economic indicators underscores the United Nations Development Program's Annual Report (2014) that Nigeria continues to be an example to the rest of the World on many fronts, having attained the rank of being the biggest economy in Africa after rebasing. However, juxtaposing United Nations Development Program's (UNDP) positive remarks and the poor economic growth indices of Nigeria, one is poised to ask if commercial Banks' Credit to real sector has any impact on economic growth in Nigeria. It is on the basis of this question that the research work is premised and further, the research attempts to study the impact of Commercial Banks' Credit to the productive sectors on the growth of Nigerian economy. Consequently, this work evaluates the relationship between commercial banks' credit to the real sector and economic growth in Nigeria, covering the period, 1981-2016. The research work has a broad aim to ascertain the influence of Commercial Banks' credit to the agricultural sector on agricultural growth in Nigeria. Predicated in this, the researchers formulated the hypothesis thus:

Ho: There is no significant effect does not exist between commercial banks credit to agricultural sector and growth in agricultural output in Nigeria.

The paper is organised as follows' the next section reviews relevant literature with regards to context justification and provide a theoretical background for the study, respectively. Next describes the sample data and empirical methodology. The last section summaries the main results, offers conclusion and recommendations.

Review of Related Literature

Conceptual Reviews

The conceptual reviews reviewed the relevant underlying concepts and variables in the study with the view of exposing their linkages and for a clearer understanding of the research exercise.

Concept of credit policy

Credit policy is a monetary policy mechanism of transmitting funds through the banks and informal credit markets to the economy while monetary policy is a package of actions designed to manage money supply growth during a period of time. It consists of discretionary measures designed by monetary authorities to regulate and influence the supply, cost and direction of money and credits provided to the economy, (Osinubi, Amaghionyeodiwe and Folawewo, 2002). Banks' credit (loans and advances) is a mechanism that banks use to channel funds to the economy with the aim of stimulating it for rapid economic growth. The efficient use of banks' credit serves as an instrument for evaluating the strength of the monetary policy. Credit policy instruments are used by monetary authorities to achieve some of its

overall objectives that include: high level of employment; price stability and economic growth among others. Credit policy may involve the granting of credit to selected segments of the economy. Explaining further, Essien and Akpan (2007) posit that credit policy refers to strategies directed at developing and encouraging investment in some sectors of the economy and this essentially involves granting loans on preferential terms and conditions to priority sectors of the economy.

Financial intermediation, financial development and economic growth

The world without finance is unimaginable. Financial intermediation remains an integral function of financial institutions. Financial intermediation is achieved through the mobilization of funds from the surplus-spending groups and simultaneously channelling same to deficit-consuming economic units for productive purposes. The judicious use of the funds by the productive sector culminates into economic growth and improvement of the welfare of citizens. A notable economist, William Schumpeter in 1934 identified the critical role financial institutions play in facilitating technological innovations through credits given to entrepreneurs. Schumpeter stressed that funds granted to entrepreneurs with innovative and productive ideas consequently enhance economic growth. This treatise by the prominent economist provoked and attracted chronicle of literature and empirical studies in finance-growth nexus all over the globe, then and thereafter.

The financial sector in any economy is critical to real sector growth because it provide an appropriate avenue for funds to be pooled together and risks diversified to fund economic activities, which would otherwise have exposures to non-funding. Oduyemi, (2013), posits that the financial sector provides an efficient avenue for the selection, funding and monitoring of risky projects that stimulate and strengthen economic growth. An economy where financial intermediaries are absent, then, the cost of operations and funding of risky ventures in the real sector may be prohibited while participation in productive activities will be discouraged.

Banks' credit and economic growth in Nigeria

The banking industry represents a vital segment of the economy. Similar to the real sector, banks provide substantial credit required for productive and industrial activities in the economy. Banks perform major functions in the growth and development of an economy. Jhingan (2006) captures economic growth as a quantitative and continuous increase in a country's income per capita or output accompanied by increases in labour force, consumption, capital and volume of trade. For growth in output, consumption, capital and labour force; finance is critical and banks are essential agents that provide credit that foster productive initiatives and stimulate growth. While the real sector and economic growth remain critical to a nation, the financial institutions (banks) that provide the conduit through which funds (credit) that invigorate economic growth are nonetheless vital. Bank credit is

the provision of access to bank loans and advances to persons, firms or government by the banking system. On this note, Branch, Cooper and Moxey (2014) assert that bank credit as an essential means of elevating standards of living and achieving economic development remain central in every economy and dominate the financial sector even as they account for an overwhelming proportion of business funds financed externally within the domestic and international markets. Hence, bank credit plays a fundamental role in the growth and development of an economy. The provision of bank credit to individuals and firms increases household consumption and investment in productive ventures respectively. The bank credit provided to the economic units has a multiplier effect that leads to a boost in economic activities which further spurs job creation; poverty reduction; increase in income per capita and literacy level; development of human capital among several other benefits. In their contribution, Safdar, Iqra, Ishfaq and Muhammad (2015) submit that increase in bank credit influences asset price and their obtained value. The scholars explain that a rise in asset price offers the owner the chance to borrow more due to wealth appreciation and further credit produces the sensation of increased wealth which makes people feel happier insofar as they are moving within the kingdom of this ring. Agbada and Osuji (2013) in their submission, propose that economic growth is fostered by raising savings, efficiently improving in the allocation of loanable funds and promoting capital accumulation.

Banks role in providing credits to economic units help to eliminate both transactions and information asymmetry costs associated with granting credit to fraudulent entrepreneurs with deceptive and quality paper proposals that will rather deprive genuine industrialists' loans that positively impact on economic growth. On this note, King and Levine (1993); Bencivenga and Smith (1996) conceive that through credit facilities, banks identify entrepreneurs that can introduce new goods and methods of production that facilitate long-run investment in high return projects. In asserting to the importance of banks' credit in promoting production, Skaggs (1999) stresses that through lending, banks bring under-utilized resources into production, thereby extending market frontiers and also promote venture capitalists via credit facilities. In a related contribution, Sharon, Yvonne and Martiniqua (2014) add that bank credit contributes to economic expansion because it remains an important link in monetary transmission; financing production, consumption and capital formation that in turn affects economic activity.

Structure of Nigerian economy and the real sector

Nigeria is situated at the Gulf of Guinea in West Africa, with a land mass of about 923,773 square kilometres and a population of about 160 million people. The country is the largest populated black race in Africa and the World. It became an independent nation on 1st of October, 1960, with 36 states and 774 local government areas with its Federal Capital at Abuja.

The country has two principal vegetation belts, namely: rain forest belt and

savannah grass lands belt and two major rivers; namely Niger and Benue that divided the country into three major geographical regions namely; West, East and North. Other important rivers found in the country include Imo; Anambra; Gongola; Kaduna and Cross River. There are equally a few mountains and plateaus along the eastern boundary and the northern region. As a tropical region, Nigeria has two climatic seasons: - Rainy (April to November) and Dry seasons (December to March). The topography of the country (mountains, rocks, valleys and closeness to the ocean) and its climatic condition account for the enormous deposit of mineral resources; animal rearing and agricultural produce.

The Nigerian real sector

The Nigerian real sector is responsible for the production and distribution of goods and services in the country. It is where productive activities; utilization of raw materials and other factor inputs (labour, land and capital) and distribution of goods and services take place. Sanusi (2011) posits that real sector is the main engine and driver of economic growth and development. For the purposes of our study, Nigerian real sector is classified into three, namely: agricultural; industrial and services' sectors. The agricultural sector comprises of crop production, livestock, forestry and fishing. The sector practices subsistence and modern farming. The sector is responsible for food production that is consumed directly; and the provision of raw materials that serve as factor input or feeder to our industries. Before crude oil was discovered in 1967, Nigerian economy was predominantly agrarian; afterwards, exploration of crude oil became a dominant revenue activity of the nation. Nevertheless, agriculture still remains the preponderant sector of Nigeria economy with regard to food production, employment generation, provision of raw materials to the infant industries and major contributor to gross domestic product (GDP). It is necessary to mention that every region of Nigeria can boast of over two agricultural and animal produce. The produce from agriculture helps feed the nation, serve as major input in the manufacturing process and it is equally exported to generate foreign exchange income. Nigerian agricultural sector is, however, characterized by the predominance of subsistence small scale farming; peasant farmers with poor farm equipment, low technology, low yield and lacking in bankable assets to attract credits from Commercial Banks. Irrespective of the role agriculture plays in the economy, the sector has not been able to meet its traditional challenge of feeding the Nigerian population; meeting the raw material needs of the industries and providing a surplus for export purposes. Nevertheless, the agricultural sector remains the dominant and mainstay of the Nigerian economy.

The agricultural sector stands as a major resource base of the nation's wealth and contributes substantially to the country's aggregate Gross Domestic Product (GDP). It is surprising to observe that despite the dominance of the agricultural sector in aggregate gross domestic product (GDP) contribution before the advent of crude oil in early 1970s and later, its contribution has been dwindling, from a dominant

position of 55.8 % of gross domestic product (GDP) in 1960 - 1970 to 41.2%; 42%; 41.7%; 40.2% and 24.43% in 1981-1990, 1991- 2000, 2001- 2010 and 2011-2016 decades respectively.

The reasons for low productivity in the sector are traceable to continued use of subsistence farming methods; poor adoption of modern technology; inadequate provision of agrochemicals and lack of improved seedlings among several others. However, CBN (2013) adds that inadequate access to funds in agricultural investment hinders improved productivity in the sector.

The industrial sector is comprised of manufacturing; crude petroleum; solid minerals; building and construction; and mining and quarrying. Manufacturing segment is responsible for the processing of inputs from the primary sector into either semi-finished or finished good. Crude petroleum and solid minerals involve the extraction and exploration of crude oil, tin ore, coal and other solid minerals. Prior to the finding of crude oil in the 1970s, the manufacturing sector thrived and contributed meaningfully to gross domestic product. Although the agricultural sector, like the manufacturing segment of the industry lost its glory due to neglect with the advent of crude petroleum, gas production and exploration. By extension too, tin ore and coal that were the primary mining activities of the citizens in the 1960s and 1970s lost their glory as one of the main sources of government revenue. These two foremost solid minerals (tin ore and coal) have gone into extinction during the last three decades or more. It is necessary to emphasize that the increasing contribution of crude petroleum and gas in aggregate gross domestic product is not attributable to the refining of crude oil or an enhanced industrial components of petrochemicals but accounted by crude oil production. The manufacturing segment is comprised of micro; small; medium and large scale enterprises engaged in agro based businesses, cottage and handicrafts. Nigeria, as an independent nation in 1960, embarked on various policies and programmes (including indigenization decree of 1974) as enshrined in Nigerian's development plans aimed at transforming the country from its predominantly agrarian nature, to a highly industrialized economy. The decline in Gross Domestic Product (GDP) contribution by the industrial sector is attributed to various factors including inconsistencies and reversals of policies, and infrastructural bottlenecks. Other factors include: overdependence on foreign raw materials inputs; poor foreign exchange earnings; low patronage of domestic goods by citizens owing to their preference to foreign substitutes; double taxation; absence or poor power generation and inaccessibility to credits. Statistically, industrial sector's contribution to total gross domestic product in the past ten years is relatively low when compared to the other sectors of the economy. For instance, manufacturing contributed 3.8%; 4.02%; 4.17%; 4.16%; 4.23%, 9.35% and 9.28%, in 2005; 2007; 2009; 2011; 2013, 2015 and 2016 respectively to total Gross Domestic Product.

The decline in industrial sector's contribution to the gross domestic product in the past decade especially the manufacturing segment is worrisome due to its adverse effect on the economy, i.e. unemployment; low productivity; poverty; crime and depletion of foreign reserve.

The Nigerian services' sector, likewise, consists of commerce and service related activities. The composite of the sector include: utilities, transport, communication, distributive trade, hotels and restaurants, personal and professional, finance and insurance, real estate, education and other business services. The Services' sector contribution to aggregate gross domestic product (GDP) increased from 27.9 % in 2003 to 41.74 % in 2013. The increase recorded in the sector's contribution is primarily accounted by the privatization of the telecommunications industry in 2000. The telecommunication industry is competing favourably with Banking, Oil and Gas industries with regard to product services and employee remuneration. In the past ten years, the sector contributed about 29%; 32.3%; 35.6%; 38.4%; 41.7%, 53.18% and 53.55% to gross domestic product in the years 2005; 2007; 2009; 2011; 2013, 2015 and 2016 respectively.

The economy has passed through series of policy regimes and development plans as a framework for developing and restructuring the economy. The nation has undergone four National development plans viz; 1962-1968; 1970-1974; 1975-1980 and 1981 that is aimed at putting the nation on a fast track of development and infrastructural rehabilitation. The indigenization decrees of 1972 and 1974 were aimed at giving greater control of the ownership and means of production to Nigerian indigenes within the framework of nationalism. Another phenomenal change that brought a turning point and impacted strongly on the economy of the country was the introduction of Structural Adjustment Program (SAP) economic reform in 1986. The economic reform was aimed at removing all structural and administrative impediments in the country so as to foster a friendly market based financial and economic environment that will enhance growth at the domestic and international levels. The objective of the program was to encourage growth of private enterprises through an efficient allocation of resources via deregulation and liberalization of trade including the financial industry. In fact, the gains recorded through Structural Adjustment Program (SAP) were truncated in 1994 when successive military governments introduced the re-regulation policy in the economy. Thus, the exchange and interest rates were capped due to high-interest rates recorded at 48 % and 60 % for commercial banks and non-bank financial institutions respectively even as inflation was 48.8 % and 61.3 % respectively in 1992 and 1993. The change in government from military to civilian in 1999 after an uninterrupted sixteen years of military dictatorship witnessed yet many economic reforms aimed at addressing the enormous distortions caused by the military, hence, restoration of the economy to the path of recovery and growth. Next, came the 2004

reform captioned, National Economic Empowerment and Development Strategy (NEEDS).

Historical development of the Nigerian banking industry

The Nigerian banking industry has undergone different phases. Adopting Nzotta (2004) stylized classification; the study examined the development under the following periods:

i. Free Banking Period (1892 - 1952)

Commercial Banking business in Nigeria started during the free banking period with the advent of African Banking Corporation of South Africa, in 1892. The establishment of the bank was initiated by a shipping firm known as Elder Dempster Company, based in Liverpool, United Kingdom. The bank opened its branch then, at Lagos. The bank was set up with the aim of financing the shipping business of the promoter, within the territory of West Coast of Africa and Liverpool.

In 1894, British Bank of West Africa (BBWA) that was set up in 1893 started operations. During the same period of operation by British Bank of West Africa (BBWA), West African Currency Board (WACB) that was responsible for the receipt, storage and issuance of West African Silver Coins, in exchange for Sterling coins or London drafts was entrusted to British Bank of West Africa (BBWA) hence; later became an agent for West African Currency Board (WACB). British Bank of West Africa (BBWA) is the present First Bank of Nigeria Pic.

Anglo-African Bank was another bank that came on board in 1899. It was established in Old Calabar. British Bank of West Africa later took over this bank in 1912. In 1957, the name of British Bank of West Africa (BBWA) was changed to Bank of West Africa, shortly after Ghana's independence. Later in 1965, the bank's name was again changed to Standard Chartered Bank of London and finally, to First Bank of Nigeria Limited in 1979. This was after Nigerian government acquired sixty per cent shares of the bank. Currently, the bank is a Public Liability Company (Pic) and fully privatized.

About 1916, another bank known as "The Colonial Bank" was established, but nine years later, precisely in 1925, Barclays Bank took it over together with the Anglo-Egyptian Bank and National Bank of South Africa, to form Barclays Bank DC. The bank operated with the name till 1979 when its name was changed to Union Bank of Nigeria and the name remained till date. Equally, in 1949, another foreign bank with the name, British and French Bank for Commerce was established but this bank metamorphosed to United Bank for Africa in 1961. The name of the bank has remained unchanged till date.

Due to the nonexistence of banking legislation during the time, the period was known as "free banking era" because many banks were licensed during the era. A characteristic of free banking age was that many of the banks established during the

time were foreign with the sole aim of fostering the businesses of Nigerian colonial masters. The businesses engaged by the foreigners were mainly merchandise (importing and exporting) with no efforts to enter into productive activities that could promote growth of Nigerian economy. Paradoxically, the credit obtained by foreigners to execute their businesses from these banks were domestic savings from Nigerian citizens and according to Nzotta (2004), the colonial banks preferred investing their proceeds in London financial markets where they believe the funds were safe.

On realizing that the colonial banks were established to flourish the merchandise businesses of the colonial masters without any plans to develop the country's real sector, some Nigerian citizens spearheaded the establishment of indigenous banks that could foster growth of the real sector and the economy generally. Unfortunately, the indigenous banks were short-lived due to poor management, under capitalization, fraud, mounting bad debts and the 1930 global economic downturn. According to Onoh (2002), another reason for failure was the lack of a regulatory and supervisory authority to guide banks and play the role of last resort. A foremost local bank established by indigenous businessmen residing in London was the Industrial and Commercial Bank in 1924 but was liquidated six years later due to the aforementioned reasons. Other indigenous banks established during the era were; Nigeria Merchant Bank (1931-1936), National Bank of Nigeria (1933), Agbomagbe Bank (1945), Nigerian Farmers and Commercial Bank (1947-1952) and African Continental Bank (1948).

ii. Pre-Central Banking Era (1952-1959)

With the enactment of 1952 Banking Ordinance, the era of free banking came to an end. The Ordinance sliced down the number of banks on the basis of "definition of Banks" and "Banking business" and the minimum capital base for banks. Due to the stringency of the ordinance, some of banks voluntarily liquidated while out of the several banks (both indigenous and foreign), only seven survived and remained in the business of banking.

iii. Banking Legislation Period (1959-1970)

Bank legislation was possible and imminent with the establishment of Central Bank of Nigeria in 1959. Nzotta (2004) posits that the establishment of the Central Bank of Nigeria led to increased banking supervision and control, which substantially curtailed unprofessional misconduct common in the system hitherto. The establishment of Central Bank of Nigeria (CBN) saw the apex bank in full control of the activities of commercial banks in Nigeria. Some issues evident about this era include; orderliness, correction of banking deficiencies, an end to bank collapse and promulgation of Banking law in 1969. The Banking law led the foundation for regulation and supervision of Nigeria banking industry.

iv. Indigenization Period and Post - Okigbo Panel (1970-1985)

This era was marked with the indigenization of Nigerian enterprises that include foreign owned banks operating in the country. During this era, the Nigerian government had to intervene through direct ownership and took control of enterprises by employing indigenes to ensure the achievement of certain economic goals. With the enactment of Indigenous Enterprises Promotion Decree 1972 as amended in 1977, both the Federal Government and the Nigerian public were able part-own 60 per cent shares of expatriate banks and companies. It was during this era that wholly owned banks by the Nigerian government including three development banks (i.e. Nigerian Bank for Commerce and Industry; Nigerian Agricultural and Cooperative Bank and Nigerian Building Society now Federal Mortgage Bank Ltd) were implemented. This phase is important because it was the period when State commercial banks and development finance companies were established.

The phase was also significant because the recommendation of Okigbo's panel on financial system review was implemented then. The panel brought an overhaul in Nigerian financial system through financial intermediation process; enlargement of the framework for expansion of branch banking and rural banking as a means of encouraging banking habits in rural communities for an enlarged savings mobilization in the country.

v. Deregulation Period (1986-1992)

This era witnessed an overall transformation in the financial system by introducing a couple of reforms due to flaws in allocation of credit and its associated costs. The deregulation of Nigerian economy in 1986 gave the country a free hand as regards resource allocation. The policy among several others saw to the privatization of government interests in various banks and the entrant of new many banks; keen competition in savings mobilization among banks that gave room for efficiency as opposed to arm-chair services in the past; packaging of new bank products; introduction of electronic banking and a standardized accounting system that increased the tempo of financial intermediation in the country.

During this period too, came the licensing of two specialized banks (Peoples Bank and Community Banks) aimed at bridging the financing gaps in the nation. Nigeria Deposit Insurance Corporation (NDIC) was establishment in 1988 with the aim of insuring depositors' fund; Urban Development Bank (UDB) for urban development purposes and Primary Mortgage Institutions (PMI) to assist in mortgage financing. As a way of strengthening the legal framework of the banking system, Banks and Other Financial Institutions Decree (BOFID) of 1991 was enacted while the prudential guidelines was introduced to guarantee effective monitoring of banks' earning and non-earning assets.

vi. Banking Distress Period (1993-2002)

This era witnessed the distress in banks due to a host of issues. There was stiff competition for scarce savings mobilization in the banking system owing to a huge number of banks (Commercial and Merchant) and nonbanking institutions; unwholesome activities were perpetrated by some operators to outsmart others and remain in business; deposits were accepted at high rates and loans were given indiscriminately that led to an unprecedented level of nonperforming loans. Added to this catalogue of issues were insider abuses; fraud; low ratio of regulatory staff to the number of banks and financial institutions for effective monitoring and inadequate human capacity both at the board, management or supervisory levels to guide and control competition. Even when distress was evident in some banks, the regulatory body adopted 'holding actions' as a management option for distressed banks. However, to avoid catastrophe in the system during the era, Central Bank of Nigeria and Nigeria Deposit Insurance Corporation acquired some distressed banks, suggested the recapitalization of some banks and encouraged merger and acquisition of some. But when the efforts of Central Bank of Nigeria did not get the desired goal, the licenses of four banks in 1994 and twenty-six bank licenses were revoked in 1988 due to the banks' inability to statutorily meet the minimum capital requirements for banking operations.

To ensure sanity in the system and increase public confidence, the government promulgated the Failed Banks and Financial Malpractices Decree of 1994.

vii. Universal Banking Period (2002-2004)

The liberalization of banking licensing in 1986 led to the emergence of many new banks especially merchant banks, propelled by huge opportunities in foreign exchange arbitraging. However, some policy initiatives by CBN and government authorities made it possible for commercial banks to undertake certain activities that traditionally fall within the scope of merchant banking. On that note, the distress and failure of many banking houses as diminishing profitability of others brought about the clamour for Universal banking practice. The demand for universal banking was to ensure that a level playing ground is created for all the banks, (Okafor, 2000). Thus, Universal Banking system was approved by Central Bank of Nigeria (CBN) with a number of guidelines for its commencement. The guidelines provide that all licensed banks are free to choose which activity or activities to undertake (money or capital market, insurance services or a combination thereof). In that case, the activities banks engage in determine the type financial regulations to adopt. The implication therefore, is that a single uniform license was issued to all conventional banks desirous of practising universal banking without delineation as to 'commercial' or 'merchant' when the old license would have been returned to Central Bank of Nigeria (CBN). The advent of universal banking introduced "multi-purpose banking" concept and further disabled the commercial-merchant banking

barrier. The period was also characterized by merger of three development banks (Nigerian Industrial Development Bank, Nigerian Bank for Commerce and Industry and Nigerian Economic and Reconstruction) into one functional development bank known as Bank of Industry (BOI). Similarly, a new bank known as Nigerian Agricultural, Cooperative and Rural Development Bank (NACRDB) surfaced through the merger of Nigerian Agricultural and Cooperative Bank, Peoples Bank and Family Economic Advancement Programme.

viii. Bank Consolidation Period (2004 -2009)

The era became necessary in 2004 when Central Bank of Nigeria (CBN) came up with the consolidation agenda owing to the need to strengthen the banking system, prevent illiquidity and undercapitalization; restore confidence of the public and safety of depositors' funds; avoid collapse of the financial system; reposition banks to meet economic development needs; increase banks' capital base; enhance expansion of shareholders' base that will enhance sound corporate governance; ensure emergence of international banks and contend with global trends. The apex bank then, raised upwards the minimum capital base of banks from N2Billion to N25Billion with a maximum implementation period to December 31, 2005. This policy led to mergers and acquisition of some banks while those banks that were highly capitalized were unaffected by the policy or acquired smaller banks. At the conclusion of consolidation exercise, number of banks reduced significantly from eighty-five to twenty-five banks. The argument in support of bank consolidation exercise is that the increase in capital base of banks will enhance liquidity and access to loanable funds. Availability and accessibility of funds will further reduce interest rate charged by banks thereby creating demand for investment credits' that will stimulate economic growth. However, empirical studies on post-consolidation in Nigeria have not strongly confirmed the expectation of the exercise. Despite huge funds injected from domestic and international sources to boost banks' capital base, the real sector is yet to feel the significant impact of bank credit on the economy after more than ten years post-consolidation of banks.

ix. Post-Consolidation Period (2010- Date)

With the financial tsunami that globally rocked the financial industry in 2007 that did not exempt Nigerian banks, it became obvious that many of the so-called bank's assets arising from credits were toxic. The venomous assets were hugely non-performing while they remained painted in financial books of banks. The era witnessed unethical and unprofessional practices by bankers that led to the erosion of banks' capital base. The situation necessitated the establishment of an asset management agency known as "Asset Management Corporation of Nigeria" (AMCON) and was charged with the responsibility of buying the toxic assets of banks rather than declaring the banks bankrupt. The idea behind setting up the corporation was to restore public confidence and ensure safety of depositors' funds. It was during this period also that some chief executives of banks caught in unethical

and disreputable practices were removed. The era equally saw to the discharge of chief executives of banks that have served more ten years on the Board or served out two tenures consecutively. There was also an adoption of uniform end-of-year accounting for all Nigerian banks, effective 2010 during the period.

Another striking event during this time was the decline in the number of banks from twenty-five to twenty-one due to recent capital adequacy exercise that was aimed at ensuring solvency, high-level liquidity, great ability to assume risks and restoration of public confidence in the industry. During the post consolidation period, Basel 1 and 2 accords were implemented in accordance with international standard practices due to the globalization phenomenon. The Basel accord, though a good development in the banking industry but has so many challenges that cut across industries, economies and regions. Basel accord was originally formed by Group of Ten (G10) most industrialized nations of the world, however, membership has been enlarged to include developed and developing countries. Basel 1 and 2 accords are helpful in harmonizing banking supervision, regulation and capital adequacy standards in international market economics.

The post-consolidation era further ushered in Bank Verification Number (BVN) exercise championed by Central Bank of Nigeria (CBN) in 2015. The exercise has the aim to restore confidence in the financial system and equally reduce fraud related cases in banking sector. Bank Verification Number (BVN) links a depositor to all his account information in other banks the customer has account. The measure is targeted not only to reduce frauds committed with bank officials but also reduce fraud and looting in Nigerian economy.

Theoretical Framework

When a banker starts to study the theory of financial intermediation in order to better understand what he has done during his professional life, he enters the world unknown to him. That world is full of concepts which he did not, or hardly, knew before and full of expressions he never used himself; asymmetric information, adverse selection, monitoring, costly state verification, moral hazard and a couple more of the same kind. He gets the uneasy feeling that a growing divergence has emerged between the microeconomic theories of banking... (Scholtens & Wensveen, 2003).

This section pursued a theoretical explanation of methods, postulations and theories that guide banks as financial intermediaries; bank credit as a vehicle in stimulating growth in the economy and economic growth as one of the ultimate macroeconomic goals of a nation. Hence, the study reviewed some relevant theories that guided the research on bank credit and economic growth.

Perfect model or resource allocation theory

The theory of resource allocation by Arrow - Debreu model hold that economic agents interact through markets, therefore, financial intermediaries have no roles and financial intermediation is unimportant. In the Arrow-Debreu world of complete perfect market paradigm the following conditions subsist: absence of an individual party to influence prices; equal borrowing/lending conditions and circumstance for all parties; absence of discriminatory taxes; homogeneity, divisibility and tradable financial titles; and absence of information, transaction and insolvency costs. The theory states that every market participant has prior, immediate and full information on all factors and events that relate to the (future) value of traded financial instruments. The perfect model theory proposed that surplus and deficit economic units locate each other since they have perfect information on each other's preferences at no cost in an attempt to exchange savings against readily available financial instruments. However, some theories have argued against this traditional dogma by clarifying on financial intermediation roles. Few of the theories include; asymmetric information (imperfect information) and agency, all of which lead to imperfections in the market, in addition to transactions costs that arise from information asymmetry between lenders and borrowers. The modern theory of financial intermediation is hinged on two arguments namely; - intermediaries (such as banks) ability to provide liquidity and their ability to change assets' risk features. Thus, banks, in the words of Diamond & Dybrig (1983) are able to act as coalitions of deposits that provide households and business enterprises with insurance against idiosyncratic shocks that adversely affect their liquidity positions. The agency argument for intermediaries' roles is the value creation arising from the transformation of quality asset in a situation where the market is unable to meet the supply and demand for credit.

Empirical Review

Murtala, Siba, Ahmad, Muhammad and Ali (2015) to establish the relationship that exists between financial intermediaries and economic growth in Nigeria. Annual time series data from 1970 - 2013 was used to analyse the long-run and short-run relationship between the development of financial intermediaries and economic growth and the direction of causality relationship between the indicators. The stationarity test showed that the variables were integrated at first difference and there was co-integration between the series and the presence of a structural break in 1987, 1992 and 1996. The bound test for co-integration showed a stable long-run relationship between the indicators of financial intermediaries and economic growth while the coefficient of error correction was statistically significant. The findings revealed however, that bank credit has a negative influence on economic growth; causality test revealed a bi-directional relationship between bank credit and economic growth while a unidirectional causality moved from economic growth to insurance premium and value of stock transactions during the study frame.

Safdar, Iqra, Ishfaq and Muhammad (2015) investigated the relationship between bank credit to private sector and economic growth in Pakistan, ranging from 1973 - 2013. Economic growth was the dependent variable in the study while bank credit to private sector, interest rate, inflation and investment to Gross Domestic Product and government consumptions were the independent variables. Data was collected from World Bank Indicators. Unit root test established stationarity of variables in the study. Co-integration VECUM and Granger causality tests were employed to test relationships, causality effects and analyse the impact of bank credit on economic growth. The findings from the analysis revealed that Bank credit has a strong relationship with economic progression and in the short-term, the relationship between the variables was significant. The study further showed that Bank credit has an adverse impact on economic growth in Pakistan.

Ozor, (2018) studied commercial banks' credit to the agricultural sector on economic growth of Nigerian Economy. Autoregressive Distributed Lag (ARDL) approach was adopted for estimation. The study found that significant relationship exists between Nigeria's commercial banks' credit to agricultural sector and economic growth. The study further revealed that under most of the models, commercial banks' credit key explanatory variables were statistically insignificant contrary to a-priori expectations. On the basis of these findings, the study therefore concluded that the impact of commercial banks' credit to the agricultural sector on the economy is mixed and largely insignificant in Nigeria.

Mikhail (2015) studied the causality relationship between the ratio of domestic private credit to gross domestic product and growth in the real gross domestic product per capita using a framework of country-by-country time-series for twenty four OECD economies, from 1980— 2013. A proposed threefold methodology that included - lag-augmented Vector Auto-Regressive Granger causality tests; Breitung-Candelon causality tests and causal inference based on a Fully Modified Ordinary Least Square (FMOLS) approach were used to test for causal linkages. The results revealed that the three tests in 12 out of 24 countries in the sample, yielded uniform results in terms of causality presence (absence) and direction. Causality relationship from credit depth to economic growth was found in UK, Australia, Switzerland, and Greece, hence, refuting the findings that financial development shifts from a supply-leading to the demand-following pattern as economic development proceeds.

Suna (2015) investigated the effect of domestic credits created by banking sector on macroeconomic variables for ten selected European countries by using annual panel data from 2006-2012 and regression model for estimation. The result of the study revealed that domestic credits created by banking sector for ten European countries has no effect on inflation but affected economic growth.

Sibindi and Bimha (2014) examined the causal relationship between banking sector development and economic growth in Zimbabwe by using Granger causality method of vector error correction model. Banking development was proxied with the ratio of real broad money to real gross domestic product and the ratio of real domestic credit to real gross domestic product. Further, the proxy used for economic growth was absolute values of real gross domestic product while real domestic credit and real broad money were proxies for financial intermediary development. The findings from the study established a long-run relationship between economic growth and banking sector development.

An impact of Commercial Banks' credit to the private sector on economic growth in Nepal from the supply side perspectives was investigated by Neelma (2014). The data for the study was time series in nature, 1975-2013, with the application of Johansen co-integration and Error Correction Model for analysis. The empirical results established a positive effect of bank credit to the private sector on the economic growth in the long run. The study further revealed an existence of a feedback effect from economic growth to private sector credit in the short-run.

Branch, Cooper and Moxey (2014) carried out an empirical assessment of private sector credit, economic growth, government expenditure, interest rate and inflation in the Bahamian economy, from 1989 - 2014. The study employed the Ordinary Least Squares approach for estimation, Johansen cointegration test and Granger Causality test for cointegration and causality relationships respectively. Historical trends from the study revealed that periods of either economic boom or downturn were mirrored by changes in credit. The findings showed a positive and significant influence of economic growth and government expenditure on credit to the economy; depicted long-run cointegrating relationship among private sector credit and the exogenous variables while the Granger Causality test revealed that both economic growth and government expenditure cause credit to the private sector whereas private sector credit in The Bahamas is "demand following" rather than "supply leading".

Kapingura (2013) empirically examined the dynamic relationship between financial development and economic growth in South Africa, from 1960 - 2012. The data was yearly time series in nature. Vector Error Correction Model and an application of maximum likelihood estimation to Vector Auto-Regressive (VAR) were simultaneously used to determine the long-run and short-run determinants of the dependent variable in the study. The research provided empirical evidence on the causal impact of the financial market on economic growth in South Africa. The study further showed bidirectional causality between the stock market and economic growth and unidirectional causality was established from the bond market to economic growth.

Sackey and Nkrumah (2012) examined the effects of Financial Sector Development on Economic Growth in Ghana by using Johansen Co-integration analysis within a bi-variate Vector Autoregressive framework. Quarterly time series data set of data ten years, (2000 - 2009) was used for the study. The findings from the analysis showed a significant and positive relationship, between Financial Sector Development and Economic Growth in Ghana.

In a study to investigate the long-run impact of banks credit on economic growth in Ethiopia over a coverage period of 1971-2011, Murty, Sailaja and Demissie (2012) employed Johansen Multivariate Co-integration approach on an annual time series data for estimation and analysis. The study also investigated how the transmission mechanism of bank credit to the private sector affects long-run growth. The findings of the study gave a positive and significant equilibrium relationship between bank credit and economic growth in Ethiopia. The findings equally revealed that bank credit to the private sector positively impacted on economic growth.

Were, Nzomoi and Rutto (2012), used sectoral Panel data to investigate the impact of bank credit accessibility on the country's economic performance of her key sectors. The study adopted the GMM and Seemingly Unrelated Regression (SUR) fixed effects models for estimation. The findings of the study produced a positive and significant impact of credit on sectoral gross domestic product.

Asuamah, Kwarteng and Awuah (2012) carried out a theoretical review of previous empirical studies on the link and causality between economic growth and financial development. The study used purposive sampling method in its selection of reviewed research works. Results from the empirical studies reviewed showed a positive and significant relationship between finance and economic growth in some of the studies whereas other studies reviewed did not establish same findings. Similarly, in some studies examined, there was unidirectional causality while in other studies there was bi-directional causality between economic growth and financial development.

Ali (2012 investigated) the Banking Sector Development and Economic Growth with the use of annual time series data and during the period, 1992-2011. The study used Granger Causality tests to establish a one-way causality running from economic growth to banking sector variables that include; deposit growth and credit to private sector. Conversely, bank credit to the private sector, bank size, efficiency and concentration has no significant impact on economic growth. The result of the findings reveals support for demand- following hypothesis in Lebanon.

Nuno (2012) investigated the relationship between banks' credit and economic growth in the European Union (EU - 27), from 1990 - 2010. The study employed dynamic panel data (GMM - System estimator) for analysis. The findings of the

study showed that savings promote economic growth while inflation and bank credit revealed a negative impact on economic growth.

An examination of the changes in Banks' credit across a group of emerging market economies in the last decade was undertaken by Kai and Vahram (2011). The study employed quarterly time-series data and cross-section information that were sourced from International Monetary Fund (IMF) databases. The data spans a period from the Q12001 - Q22010 and covered thirty-eight countries; Argentina, Brazil, Bulgaria, Chile, China, Colombia, Costa Rica, Croatia, Czech Republic, Egypt, El Salvador, Estonia, Georgia, Guatemala, Hungary, Indonesia, Israel, Jamaica, Jordan, Korea, Latvia, Lithuania, Malaysia, Mexico, Morocco, Panama, Peru, Philippines, Poland, Romania, Russia, Serbia, South Africa, Thailand, Turkey, Ukraine, Venezuela, and Vietnam. The result of the findings disclosed that domestic and foreign funding contributed positively and symmetrically to credit growth. The findings equally revealed that strong economic growth leads to high credit growth while on the other hand, high inflation with increasing nominal credit is detrimental to real credit growth. The study further showed that loose monetary conditions at domestic or global levels resulted to new credit.

Siti, Zarinah and Kee-Cheok (2012) in their study explored the relationship between the real sector and the financial sector in Malaysia, from 1986Q1 - 2011Q4. To examine the role of financial variables in real output in the long and short-runs, Parsimonious Error Correction Model (PECM) was used in the study. The findings disclosed the existence of a long-term relationship between real output and the financial sectors while causality tests revealed that real output has strong relationships with real estate and banking sectors.

In a related study, Lorenzo, Arjan, Christoffer and Marco (2011) studied whether bank loans and credit standards have an effect on output by using a Panel approach for the Euro Area and observing data at a quarterly frequency that covered the period, 1999Q1 - 2008Q1, i.e. from the inception of the European Monetary Union. The Euro area countries included in the analysis were Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal and Spain. The researchers applied the identification strategy employed by Driscoll (2004) for the United States. The result of the findings provides empirical evidence for the existence of a bank lending channel of monetary policy transmission in the Euro area. In addition, and in contrast to the findings in the United States of America, the study revealed that in the Euro area, changes in the supply of credit both in volumes and credit standards terms applied on loans to enterprises have significant influence on real economic activity.

Avinash, Tanisha and Daryl (2012) carried out a study to assess the sectoral distribution of commercial Banks' credit on economic growth and development in Trinidad and Tobago for a period covering, 1970-2008. The paper drew heavily

from the credit channel of the monetary transmission mechanisms of Trinidad and Tobago and employed Vector Error Correction Model (VECM) to assess the relationship between credit and investment and also determine the causal directionality of the relationships (if any). The result of the analysis showed that overall credit. Siti, Zarinah and Kee-Cheok (2012) in their study explored the relationship between the real sector and the financial sector in Malaysia, from 1986Q1 - 2011Q4. To examine the role of financial variables in real output in the long and short-runs, Parsimonious Error Correction Model (PECM) was used in the study. The findings disclosed the existence of a long-term relationship between real output and the financial sectors while causality tests revealed that real output has strong relationships with real estate and banking sectors.

Lorenzo, Arjan, Christoffer and Marco (2011) studied whether bank loans and credit standards have an effect on output by using a Panel approach for the Euro Area and observing data at a quarterly frequency that covered the period, 1999Q1 - 2008Q1, i.e. from the inception of the European Monetary Union. The Euro area countries included in the analysis were Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal and Spain. The researchers applied the identification strategy employed by Driscoll (2004) for the United States. The result of the findings provides empirical evidence for the existence of a bank lending channel of monetary policy transmission in the Euro area. In addition, and in contrast to the findings in the United States of America, the study revealed that in the Euro area, changes in the supply of credit both in volumes and credit standards terms applied on loans to enterprises have significant influence on real economic activity.

Avinash, Tanisha and Daryl (2012) carried out a study to assess the sectoral distribution of commercial Banks' credit on economic growth and development in Trinidad and Tobago for a period covering, 1970-2008. The paper drew heavily from the credit channel of the monetary transmission mechanisms of Trinidad and Tobago and employed Vector Error Correction Model (VECM) to assess the relationship between credit and investment and also determine the causal directionality of the relationships (if any). The result of the analysis showed that overall credit growth tends to demonstrate a 'demand-following' relationship while between credits within key sectors of non-oil economy revealed a 'supply-leading' relationship.

Athanasios and Antonios (2010) empirically investigated the causal relationship between financial market development and economic growth in United Kingdom during the period, 1965- 2007 by using Vector Error Correction Model (VECM) and Granger causality tests on an annual time series data. The study was aimed to unravel whether financial market development causes economic growth or the reverse, by taking into cognizance the negative effect of interest rate. To achieve the objective, classical and panel unit root tests were used to establish stationarity

of the data. Johansen co-integration analysis was applied to examine whether the variables are cointegrated of the same order using the maximum Eigen values and trace statistics tests. The results of the study showed a short-run increase in economic growth of per one percent led to an increase of stock market index per 0.6%, while an increase of interest rate per one percent led to a decrease of stock market index per 1.59% in the United Kingdom. The negative sign of the estimated coefficient of error correction term confirmed the long-run equilibrium between the examined variables. The Granger causality tests revealed that there is a bilateral causal relationship between economic growth and financial market development in the United Kingdom.

By using Vector Autoregression (VAR) approach in the study to examine the impact of financial development on economic growth in China for a 20 - year period, Jordan and Qi (2006), applied innovation accounting (variance decomposition and impulse response function) analysis to examine interrelationships between variables in the VAR system. The result of the study showed that financial development comes as the second force (after the contribution from labour input) in leading economic growth in China. The study hence supports the view that financial development and economic growth exhibit a two-way causality.

Vighneswara (2010), in his study evaluated the impact of financial inclusion and inclusive growth on bank-based financial intermediation in a developing economy like India, during the period, 1975 - 2007. The study used annual data and appropriate statistical techniques in its analysis. The findings of the research revealed that to realize the objective of inclusive growth and sustainable economic development, a precondition to reduce poverty is accessibility to finance by the poor.

Guglielmo, Christophe, Robert and Anamaria (2009) empirically investigated the relationship between financial development and economic growth in ten new European Union (EU) members, during the period, 1994-2007. The data for analysis was estimated by using a dynamic panel model. The study, in its findings revealed that Granger causality test showed that causality runs from financial development to economic growth, but not in the opposite direction and besides, a more efficient banking sector accelerated growth. It was also clear from the findings of the study that the stock and credit markets were still underdeveloped in the selected economies and due to the absence of financial depth in those economies their contribution to economic growth was inadequate.

Burzynska (2009) examined the financial development and economic growth in the Chinese banking sector with an annual time series data that covered the period, 1978-2005. The variables used in the study were; gross domestic product, rural credit cooperatives, capital constructions and other medium and long term loans.

The study employed a co-integration test for empirical analysis. The result of the findings indicated the existence of cointegration between economic growth and all financial development variables, an implication of a long run equilibrium relationship among the variables.

In a study to investigate one of the important functions of the banking system - transformation of short-term liquid deposits into long-term illiquid financial assets that can fund long gestation activities and, consequently, raise the rate of economic growth, Nikola (2008), in his doctoral dissertation, collected two new annual data sets on the maturity of Banks' credit to the private sector from seventy-four countries, over a coverage period, 1990 - 2005 while the second data set contained quarterly observations covering fourteen transition countries from 1995 - 2006. The result of the findings from the data on a broad set of countries indicated that economic growth is enhanced in countries where the financial system extends more long-term credit. Additionally, using the same data set, the study revealed that credit maturity depends on a number of institutional and economic factors and credit maturity has an impact on economic growth via its influence on the availability of long-term external financing.

By employing a dynamic Granger Causality model in the examination of the direction of causality between financial development and economic growth in Kenya, Odhiambo (2008) found from the study that demand-following response predominates in Kenya, and the choice of measure of financial development is a determinant in causality between financial development and economic growth.

Zang and Kim (2007) investigated in their study the causal relationship between financial development and economic growth in East Asian countries. The study applied Sims-Geweke causality technique on large panel data from the selected countries. The result of the analysis revealed significant confirmation to support economic growth-led financial development; however, the study could not provide evidence to support a positive unidirectional causal association running from financial development to economic growth.

Atindehou, Gueyie and Amenounve (2005) used an annual time series data from 1960-1997 to empirically test the causality relationship between finance and economic growth in the context of West African country members of the Economic Community of West African States (ECOWAS). The result of the findings in all but a few countries showed a weak causal relationship between finance and economic development on one side, and between economic development and finance on the other side. The results further indicated specifically that economic development impacted on finance in Burkina Faso, Mauritania, Niger, Nigeria, Sierra Leone and Togo. Conversely, financial variables explained economic development in Ivory Coast, Mali, Gambia, Mauritania and Sierra Leone. The study remarkably revealed the limited role credits played in economic development. The findings of the study

further showed that in only two countries, credits granted by financial institutions (mainly banks) to the economy made an insignificant impact on economic development during the period of the study.

Calderon and Liu (2003) used a pooled data from 1960-1994 to examine the direction of causality between financial development and economic growth of 109 developing and industrial countries. The study employed Geweke decomposition for causality tests and analysis. The findings from the paper made among several revelations that: financial development in general leads to economic growth; the coexistence of Granger causality from financial development to economic growth and vice versa; in developing countries, financial development made greater contribution to the causal relationships than in industrial countries; financial development on economic growth have stronger effect with longer sampling gap and lastly, faster capital accumulation and growth in productivity are avenues through which financial development drives economic growth but productivity growth is the stronger channel.

In a related study in nine OECD countries and China, Shan, Morris and Sun (2001) employed Vector Auto-Regressive (VAR) approach to investigate causal relationship between financial deepening and economic growth. Evidence from the study revealed insufficient proof to hold to the finance-led economic growth hypothesis, hence, the scholars cautioned against making such conclusion.

Kar and Pentecost (2000) used data from Turkey to investigate the causal relationship between financial development and economic growth. The result of the findings by the duo showed that the sensitivity of the causal direction between financial development and economic growth is a determinant of financial development measurement choice.

MODEL SPECIFICATION

Thus, the model is mathematically represented in this form:

$$ARgdp = f(Barg, Bind, Gagr, Acgl, infl, lend) \quad \dots \quad (3.1)$$

$$AAgdp = f(Bagr, Gagr, Acgl, infl, lend) \quad \dots \quad (3.2)$$

$$Algdp = f(Bmfg, Bmqs, infl, lend) \quad \dots \quad (3.3)$$

Econometrically, the functional models in equations 3.1 - 3.3 are specified thus:

$$ARgdptt = p_0 + p_1(Bagr_t) + p_2(Bind_t) + p_3(Gagr_t) + p_4(Acgl_t) + p_5(infl_t) + p_6(lend_t)$$

$$+ p_t \dots \quad (3.4) \quad AAgdpt = p_0 + p_1(Bagr_t) + p_2(Gagr_t) + p_3(Acgl_t) + p_4(infl_t) + p_5(lend_t)$$

$$+ p_t \quad (3.5)$$

$$Algdpt = p_0 + p_1(Bmfg_t) + p_2(Bmqs_t) + p_3(infl_t) + p_4(lend_t) + p_t \quad (3.6)$$

Putting some of the above relationships in their semi-natural logarithm form, the model is thus expressed as follows:

$$ARgdp_t = p_0 + p_1 \log Bagr_t + p_2 \log Bind_t + p_3 \log Gagr_t + p_4 \log Acgl_t + p_5 \log infl_t + p_6 \log lend_t + p_t \quad (3.7)$$

$$AAgdp_t = p_0 + p_1 \log Bagr_t + p_2 \log Acgl_t + p_3 \log infl_t + p_4 \log lend_t + p_t \quad (3.8)$$

$$Algdp_t = p_0 + p_1 \log Bmfg_t + p_2 \log Bmqs_t + p_3 \log infl_t + p_4 \log lend_t + p_t \quad (3.9)$$

Where:

Log = Natural Logarithm

ARgdpt = Growth in Real Gross Domestic Product at time t

AAgdpt = Agricultural contribution to Growth in Gross Domestic Product at time t

Algdpt = Industrial contribution to Growth in Gross Domestic Product at time t

Bagr_t = Bank Credit to the Agricultural Sector at time t

Bind_t = Bank Credit to the Industrial Sector at time t

Bmfgt = Bank Credit to the Manufacturing Sector at time t

Bmqst = Bank Credit to Mining/Quarrying, Solid Minerals/Oil and Gas Sector at time t

Gagr_t = Government expenditure on agriculture at time t

Acgl_t = Agricultural Credit Guarantee Loan at time t

infl_t ~ Inflation rate proxied by consumer price index at time t

lend_t = Interest rate proxied by commercial banks' lending rate at time t

p. = stochastic or error term

t = time series

Po = Constant

Pi - 06 = Coefficients of the explanatory variables

Explanation of Variables

Dependent variables

Real gross domestic product (RGDP): This is the total monetary value of goods and services produced within a country usually a year. Gross domestic product is an aggregate of all the goods and services produced in a country during a year and measured in monetary terms while economic growth is referred to as a positive change in the national income or the level of production of goods and services by a country over a certain period of time, (Ibrahim, Akano and Kazeem 2015). Gross Domestic Product is an index for measuring the health of an economy. It has been chosen because of its wide application by scholars and researchers alike as it serves a useful parameter for economic growth. The values are in billions of Naira (N'B) and in percentages for descriptive and estimation analyses respectively.

Agricultural gross domestic product (AGDP): It is a subset of Gross Domestic Product. It reflects the contribution of the agricultural sector to gross domestic product. This is the total monetary value of goods and services from crop production; livestock; forestry and fishing. Agricultural output is a significant contributor of the Nigerian Gross Domestic Product. Growth in agricultural output is affected by Bank credit to agriculture; Government expenditure on agriculture; Agricultural Credit Guarantee Scheme Loan; inflation and lending rates. The values are in billions of Naira (N'B) and in percentages respectively for descriptive and estimation analyses.

Industrial gross domestic product (IGDP): Industrial Gross Domestic Product GDP is another important dependent variable that shows the contribution of the industrial sector to aggregate gross domestic product. It represents an aggregate monetary value of goods and services arising from Crude Petroleum and Natural Gas; Solid Minerals (coal mining, metal ores, quarrying and other mining activities); and Manufacturing (oil refining, cement and other manufacturing). Growth in industrial gross domestic product is a function of Banks' credit to the manufacturing; solid minerals; quarrying; crude petroleum and natural gas production; inflation and lending rates. The values are in billions of Naira (N'B) and in percentages respectively for descriptive and estimation analyses.

Independent variables

The independent variables in this study comprised of the distribution of Commercial Banks' credits to real sectors of the Nigerian economy. The activity sectors that will serve as independent variables in our study have been categorized by CBN in its Statistical Bulletin of various years. The sectors have been considered to be the economic hubs of the country. Banks' credits to these sectors are expected to have a positive impact on economic growth of the Nigerian economy. The variables are Commercial banks' credit expressed in billions of Naira (N'B).to the:

- i. Agricultural sector symbolized as Bagr.
- ii. Industrial sector denoted by Bind and it is comprised of Commercial Bank Credit to Mining/Quarrying/oil and gas and Solid Minerals (Bmq) and Commercial Banks' Credit to the Manufacturing (Bmfg) sector.

Control variables

Referring to the works of Younes and Chtioui (2006), Okwo, Eze and Ugwunta (2012) posit that control variables are other determinants of economic growth. Control variables are important variables that are indicators of macroeconomic stability, (Imoughele, Ehikioya, Ismaila and Mohammed, 2013). Neelam (2014) used interest rate and inflation as control variables in the study of the impact of Banks' Credit on Economic Growth in Nepal while Eyas (2014) used government expenditure as a control variable in a similar study in Saudi Arabia.

The control variables that were employed in our study aside bank credit include:

- i. Government expenditure on agriculture (Gagr) - Government on annual basis spends on agriculture through its capital expenditure in the realization of the fact that the private sector alone cannot bring out the desired investment in this highly productive and capital intensive sector. Government expenditure on agriculture is the total amount spent by the government on the agricultural sector over a period of time. It is measured in N'Billion. An increase in the level of government expenditure on agriculture is expected to bring about an

increase in the level of the nation's output as well as agricultural output. Hence, government's expenditure on agriculture is expected to have a positive relationship with economic growth.

- ii. Agricultural Credit Guarantee Loan (Acgl) - This window of credit was set up by the Federal Government of Nigeria and Central Bank of Nigeria to provide credit to the agricultural sector in the ratio of 60:40. The Scheme started operation in 1978 and the loan is managed by Central Bank of Nigeria. The scheme is meant to share the risks of banks in agricultural lending and hence encourage them to continue to extend credit to the agricultural sector.
- iii. Inflation (infl) - Inflation, is a factor that affects endogenous growth model. Increases in inflationary rate leads to decline in employment because with a rise in inflation, marginal value of the present day unit of consumption is reduced hence, people are induced to work less. With less labour, the marginal product of capital is permanently reduced, resulting in a slower rate of capital accumulation and output. It is included in the model to determine its effect on credit availability and output.
- iv. Bank lending rate (lend) -Lending rate is a factor that affects bank credit. Lending rate is a proxy for interest rate (cost of funds). Obamuyi, Edun and Kayode (2012) stresses that lower interest rate motivates investment, productivity, hence brings about economic growth. The high lending rate, on the other hand, discourages demand for bank credit which also retards growth.

Test of Hypothesis

This hypothesis states as follows;

H₀₁: Significant impact does not exist between Commercial Banks' credit to the Agricultural sector and Growth in Agricultural output in Nigeria.

The impact of banks' credit to the agricultural sector on agricultural growth in Nigeria was carried out with the inclusion of lags of the dependent and independent variables as regressors in the study as reported in table 4.9.5 using the Autoregressive Distributed Lag approach (ARDL) method.

The result in table 4.9.5 below revealed that one and four lag periods observed in growth in agricultural outputs (AAGdp) are statistically significant at 1% and 10% with p-values (0.0000) and (0.0609) respectively. Government expenditure on agriculture (Gagr) at one lag period was significant at 5% cut off rate, having a p-value of (0.0361). Also, Agricultural credit guarantee loan (Acgl) was statistically significant, respectively at 1% current and one-lag period with p-values (0.0000) and (0.0001); inflation (infl) at one and two-lag periods had significant impact at 5% (0.0584) and 10% (0.0720) levels while banks' lending rates (lend) at current

and one-lagged period are statistically significant with p-values of (0.0174) and (0.0072) respectively.

Table 4.9.5: Summary of the ARDL Regression Estimation results for Lead Hypothesis 2 on the Relationship between Commercial Banks' Credit to the Agricultural Sector and Agricultural Growth in Nigeria

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|------------|-------------|----------|
| AAGDP(-1) | 1.046762 | 0.083397 | 12.55159 | 0.0000** |
| AAGDP(-2) | -0.132312 | 0.122294 | -1.081921 | 0.2815 |
| AAGDP(-3) | -0.148990 | 0.120678 | -1.234608 | 0.2195 |
| AAGDP(-4) | -0.152294 | 0.080487 | -1.892161 | 0.0609 |
| LBAGR | 0.700588 | 0.760555 | -0.921154 | 0.3589 |
| LGAGR | 0.775542 | 0.532654 | 1.455995 | 0.1481 |
| LGAGR(-1) | -1.134370 | 0.535107 | -2.119893 | 0.0361* |
| LACGL | 14.42716 | 3.173438 | 4.395702 | 0.0000** |
| LACGL(-1) | -13.26687 | 3.173438 | -4.180600 | 0.0001** |
| INFL | 0.048741 | 0.036635 | 1.330453 | 0.1860 |
| INFL (-1) | -0.120782 | 0.063182 | -1.911649 | 0.0584* |
| INFL (-2) | 0.065476 | 0.036063 | 1.815589 | 0.0720 |
| LEND | -0.199649 | 0.082777 | -2.411873 | 0.0174* |
| LEND(-1) | 0.228802 | 0.083646 | 2.735367 | 0.0072** |
| C | 2.928000 | 0.868677 | 3.370642 | 0.0010 |
| R-squared | 0.880341 | | | |
| Adj R-squared | 0.866023 | | | |
| F-statistic | 61.48422 | | | |
| Prob(F-statistic) | 0.000000 | | | |
| Durbin-Watson stat | 1.831484 | | | |

Source: Researcher's compilation from E-view 9.0

*NB: ***, **, * = Significant @ 1%; 5% and 10% respectively*

The results from ARDL regression estimates in table 4.9.5 above and appendix 8b showed that one lag period of agricultural growth had positive coefficient value in the growth of agricultural output in Nigeria during the period of study, 1981-2016. This implies that one percent increase in agricultural growth will proportionately lead to 46.76 percent increase in growth of agricultural output in Nigeria, while growth of agricultural output in Nigeria will decrease respectively by 13.23 percent, 14.9 percent and 15.23 percent in the second, third and fourth lag periods of agricultural growth. Commercial Banks' credit to agriculture (Bagr) has positive coefficient value and an insignificant impact on agricultural growth which means that growth in agricultural output will increase by 70.06 percent with one percent increase in Commercial Banks' credit to the agricultural sector. However, government expenditure on agriculture (Gagr) has positive coefficient value during

the current period and negative coefficient value in one lag period. This means that growth in agricultural output increased by 77.55 percent with one percent increase in government expenditure on agricultural sector while growth retarded in agricultural output by 113.43 percent in one lag period with an increase in government expenditure on agricultural sector. Agricultural credit guarantee loan during the study period has positive coefficient value (14.43) and statistically significant on agricultural growth. The implication is that one unit increase in Agricultural credit guarantee loan increased growth in agricultural output by 14.43 units. Inflation during the current period is incorrectly signed and impacts insignificantly on growth in agricultural output but on the contrary, one lag period in inflation was correctly signed with negative coefficient value (-0.120782) and significantly impacted on growth in agricultural output during the study. Bank lending rate was correctly signed and significantly impacted on agricultural growth during the current period while it was wrongly signed in one lag period but had insignificant impact on dependent variable. While bank lending enhanced growth in agricultural output by almost 20% with one percent decrease in lending rate, it retarded it by 22.9% with one percent increase in lending rate during the study period.

The strong coefficient of determination (R^2) value of 0.880341 means that about 88% of the total variation in the dependent variable (growth in agricultural output), was explained by the explanatory variables (Bank credit to Agriculture, Government expenditure on agriculture, Agriculture credit Guarantee Loan, inflation and lending rates) while the unexplained variation of about 12% was left to stochastic variables.

Durbin Watson's test of autocorrelation gave a tolerable value close to 2, which depicts that the variables in model 2 are devoid of autocorrelation.

The negative coefficient value (-0.386800) of the co-integration equation CointEq (-) was correctly signed and statistically significant. The result signifies the existence of long-run co-integrating relationship as well as short-run adjustment mechanism of 38.68% back to long run equilibrium.

Discussion of Findings

Commercial banks' credit to the agricultural sector and agricultural growth in Nigeria.

From the ARDL regression estimation results in table 4.9.5 and appendix 8b, the study found that the model agreed to the production theory's assertion that input factors of production most times do not reflect on economic growth in the short or current period but impacts on it after a long time. That could be the reason why the lags of growth in agricultural output; government expenditure on agricultural sector; agricultural credit guarantee loan; inflation and commercial banking lending rates

made positive impacts on growth in agricultural output in Nigeria during the period of study. Hence, the economic implications that hold in model 1, was obtainable in model 2 with regard to past values of agricultural growth statistically impacting on agricultural growth.

The negative coefficient value of bank credit to agricultural is not in conformity to apriori expectation. The finding violated economic postulation which states that the higher the credits to economic units, the greater the growth in output and vice versa. However, our findings showed that even as banks' credit to the agricultural sector increased over the study period numerically, growth in agricultural output decreased during the study period. This finding could reveal that either commercial banks' credit to the agricultural sector was not perhaps monitored for proper channeling or credit was diverted for other uses. The poor performance of commercial banks' credit to the agricultural sector becomes more worrisome when compared with Agricultural Credit Guarantee Loan that irrespective of its poor volume over the years maintained both positive coefficient values and significant impact on the predictor variables of economic growth and growth in agricultural output. The insignificant impact of credit to the agricultural sector revealed in the study agreed with the study of Omosibi and Saheed (2016) and Chisasa and Makina (2015) on Agricultural credit and economic growth nexus in Nigeria and Bank credit and agricultural output in South Africa respectively. The finding is equally confirmed by the study carried out by Oni, Akinlo and Elumilade (2014) using Vector Error Correction Model. However, contrary to the findings of this study, Udoka, Mbat and Duke (2016) found a positive and significant relationship between Commercial Banks credit to the agricultural sector and agricultural production in Nigeria.

Model 2 is further re-written hence;

$$AGDP_t = p_0 + (p_1(Bagr_t) + p_2(Gagr_t) + p_3(Acgl_t) + p_4(infl_t) + p_5(intr_t) + p_6$$

Table 4.9.5, shows that only three explanatory variables (government expenditure on agriculture, agriculture credit guarantee loan and bank lending) met the apriori expectations respectively with their positive, positive and negative coefficients. Also, the changes in the explanatory variables taken together have been able to explain at least 88% of the total variations in the dependent variable, agricultural growth, thus leaving about 12% to chance occurrence.

Conclusion

On the basis of the above-stated findings, the study therefore concludes as follows; That commercial banks' credit to the economy has not performed satisfactorily, given the insignificant nature of most of the explanatory variables under all the models. Also, it is instructive to note that under all the models, most of the key explanatory variables failed the apriori expectation test.

Recommendations

Based on the findings of this study and discussions thereto, we make the following recommendations:

i. That government as a strong force in creating an enabling environment for the thriving of the agricultural sector should strongly assist through its institutions and agencies in the provision of modern agricultural equipment; introduction of new methods and processes of farming; provision of improved seedlings and livestock breeds; and the introduction of value-chain processes in the sector. This will help in curbing high unemployment level in the country as it will lead to increased productivity; food sufficiency; improve living standards as well as reduction on the dependence on oil as a major source of revenue to the government. Government's should show sufficient commitment in the agricultural sector in order to make it attractive to young and teeming graduates at all levels as well as discourage peasant traditional methods of agriculture.

With a revelation of a significant influence of bank credit to the mining, quarrying and solid minerals sector on the growth of industrial output in Nigeria during the study period, the study recommends that; Central Bank of Nigeria as the apex bank should encourage commercial banks to look inwards by forming a consortium with domestic banks and foreign financial institutions, with the aim of providing medium - long term credit to investors in this sector rather than the usual short term credit. Bank credit of long-term nature will help investors acquire capital equipment needed in this sector that is capital intensive. If this is done, jobs will be created, output will increase, revenue generated and the economy will blossom. Further, to encourage reasonable investments in the sector, government should endeavour to grant tax holiday to investors in the sector in order to give them sufficient time to recoup their investments and pay off the loans.

The study recommends that since agricultural credit guarantee loan impacted positively on economic growth and agricultural output in Nigeria as showed from the result, funds approved through this window should hence be reasonably and regularly increased as records show that it is inadequate compared to commercial banks' credit to the agricultural sector. The positive impact of agricultural credit guarantee loan on the economy depicts efficient utilization of funds directed to the sector.

As the study revealed a significant impact of inflation rate on economic growth during the study period, we advise that monetary authorities should step up its fiscal policy measures to maintain the status quo while deficit financing of government budget in recent years should be used strictly and cautiously to avoid high inflationary rate that will erode the stability and economic benefits enjoyed over the years from a growing economy.

v. The study found that banks' lending rate to the Nigerian real sector during the period of study was high since it violated the apriori expectation. High lending rate is an impediment in boosting the appetite for bank credit by the productive economic units and by extension a disincentive to economic growth. In the light of this, the study recommends to both the apex bank and policy makers to advise commercial banks to raise interest rate on savings deposit so that it will be competitive in attracting idle funds from surplus units, hence, increase funds for investments. Further to this recommendation, the study advocates financial inclusion policy of Central Bank of Nigeria aimed at enhancing access to bank credit and increasing productive activities especially among those at the lower rung of the income ladder should be sustained with the aim of increasing investible funds and reducing high lending rates. The study additionally proposes that financial regulatory authorities should come up with policies that will ensure the emergence of sector-oriented development banks through government-private partnership initiatives. This is because highly capitalized banks and robust development banks will reduce lending rate; enhance competition and promote medium to long-term credits to the real sector.

1. With a revelation of an insignificant impact of bank credit to the industrial sector on Nigerian economic growth during the study, it is therefore, recommended that government's capital expenditure on social services other than bank credit should be tailored at providing basic infrastructures like power and good transportation networks that will attract potential and existing industrialists into the industry because the sector remains very vital to any economy. Equally important is the need for the government to revive our moribund textile industry that constitutes a reasonable chunk of our industries as well as either place a ban or increase the tariff on the importation of textiles into the country. These efforts will go a long way to reviving and creating jobs in the industry.

References

- Adekunle, O.A., Salami, G.O., & Adedipe, O. A. (2013). Impact of financial sector development on the Nigerian economic growth. *American Journal of Business and Management*, 2(4).
- Agbada, A.O., & Osuji, C.C. (2013). An empirical analysis of trends in financial intermediation and output in Nigeria. *Global Journal of Management and Business Research in Finance*, 73(13), 18-27.
- Ajibola, J.O., Ishola, R.A., & Samuel, O.D. (2014). Commercial bank credit and sectoral growth in sub-Saharan Africa: Evidence from Nigeria. *Global Advanced Research Journal of Management and Business Studies*, 3(9).
- Akanji, O.O. (2010). The central bank of Nigeria: The liquidity and the sectoral credit allocation. *Bullion Publication of the Central Bank of Nigeria*, 34(1), 3-6.
- Aliyu, M. & Yusuf, A.H. (2013). Impact of private sector credit on the real sector of Nigeria. *International Journal of Business and Social Research (IJBSR)*, 3(5), 105-116.

- Asuamah, S.Y., Kwarteng, E., & Awuah, J. B. (2012). What is the link between finance and economic growth? A review. *European Journal of Business and Management*, 4(13), 12- 19.
- Atseye, F.A., Edim, N.O., & Ezeaku, H.C. (2015). An empirical investigation of the impact of bank credit on economic growth in Nigeria. *Indian Journal of Applied Research*, Vol. 5, Issue 11,268-271.
- du, N.P., & Okumoko, T.P. (2013). Financial development and economic growth in Nigeria. *European Journal of Business and Management*, 5(19), 69-81.
- Avinash, R., Tanisha, M-R. & Daryl, C. (2012). An assessment of sectoral distribution of commercial bank credit on economic growth and development in Trinidad and Tobago, 1970-2008. *Central Bank of Barbados Working Paper*, 1-21.
- Ebi, B.O. & Emmanuel, N. (2014). Commercial bank credits and industrial subsector's growth in Nigeria. *Journal of Economics and Sustainable Development*, 5(10), 1-11.
- Egbetunde, T. (2012): Banks' credit and rural development in Nigeria, (1982-2009). *International Journal of Finance and Accounting* 2012.
- Ekpenyong, D. B., & Acha, I. A. (2011). Banks and economic growth in Nigeria. *European Journal of Business and Management*, 3(4), 155-166.
- Ihemeje, J.C., Umeh, J.C., & Ogbanje, C.E. (2011). Thesis writing and defense: The intricacies and rudiments for academic and professional studies. Onitsha, Anambra State: ERI Print Ltd.
- Imoughele, E., Ismaila, L., & Mohammed (2013). Commercial bank credit accessibility and sectoral output performance in a deregulated financial market economy: Empirical evidence from Nigeria. *Journal of Finance and Bank Management*, 1(2), 36-59.
- Iwedi, M., Igbani, D.S., & Onuegbu, O. (2015). Bank domestic credits and economic nexus in Nigeria, (1980-2013), *International Journal of Finance and Accounting*, 4(5), 236-244.
- Kai, G. & Vahram, S. (2011). Determinants of bank credit in emerging market economies. *IMF Working Paper WP/11/51*, 1-20.
- Nnaji, C.E; Chukwu, E. & Nnaji, M. (2013). Electricity supply, fossil fuel consumption, CO2 emissions and economic growth: Implications and policy options for sustainable development in Nigeria. *International Journal of Energy Economics and Policy*, 5(3).
- Nnamdi, I, S. (2015). Private vs public sector bank credits and economic growth nexus in Nigeria: Where does efficacy rest? *Research Journal of Finance and Accounting*, 6(13), 226-237.
- Nuno, C. L. (2012). Bank credit and economic growth: A dynamic panel analysis. *The Economic Research Guardian*, 2(2), 256-267.
- wakanma, P.C., Nnamdi, I.S., & Omojefe, G.O. (2014). Bank credits to the private sector: Potency and relevance in Nigeria's economic growth process, *Accounting and Finance Research*, 3(2), 23-35.
- waru, N.M., & Okorontah, C.F. (2014). Banks' credit as an instrument of economic growth in Nigeria. *International Journal of Business and Law Research*, 2(2), 25-33.
- Nwite, S.C. (2014). Determinants of financial intermediation and its implications on economic growth in Nigeria. *British Journal of Marketing Studies*, 3(9), 49-56.
- Nwosa, P.I., Ajibola, M.A., & Olufemi, M.S. (2011). Causal relationships between financial development, foreign direct investment and economic growth - The case of Nigeria. *International Journal of Business Administration*, 2(4), 93-102.

- Obademi, O. E. & Elumaro, A. (2014). Banks and economic growth in Nigeria: A reexamination of the financial repression hypothesis. *American Journal of Business and Management*, 3(1), 1-9.
- Obamuyi, M.O., Edun, A. T. & Kayode, O.F. (2012). Bank lending, economic growth and the performance of the manufacturing sector in Nigeria. *European Scientific Journal*, 8(3), 19-36.
- Oduyemi, A.O. (2013). Understanding monetary policy series No 33: The real sector. Central Bank of Nigeria 10th Commemorative Anniversary.
- Oni, O., Akinlo E., & Elumilade, O. (2014). Impact of bank credit in the real sector: Evidence from Nigeria. *Global Journal of Business Research (IJBSR)*, 3(5), 39-47.
- Onuorah, A. C., & Ozurumba, B. A. (2013). Bank credits: An aid to economic growth in Nigeria. *Information and Knowledge Management*, 3(3), 41-50.
- Oriavwote, V. E., & Eshenake, S. J. (2014). An empirical assessment of financial sector development and economic growth in Nigeria. *International Review of Management and Business Research*, 3(1), 139-149.
- Osman, E. G. A. (2014). The Impact of private sector credit on Saudi Arabia economic growth (GDP): An econometrics model using (ARDL) approach to co-integration. *American International Journal of Social Science*, 3(6).
- Ozor, K.C. (2018). Commercial banks' credit to the real sector on economic growth of Nigerian Economy. A Ph.D dissertation submitted to the department of banking and finance, Michael Okpara University of Agriculture, Umudike, Abia State.
- Sackey, F. G., & Nkrumah, E. M. (2012). Financial sector deepening and economic growth in Ghana. *Journal of Economics and Sustainable Development*, 3(2), 122-139.
- Safdar, H. T., Iqra, S., Ishfaq, A., & Muhammad, R.U. (2015). Impact of bank lending on economics growth in Pakistan: An empirical study of lending to private sector. *American Journal of Industrial and Business Management*, 5, 565-576.
- Sanusi, L.S. (2011). Growing Nigeria's real sector for employment and economic development: The role of Central Bank of Nigeria. *A paper delivered at the inaugural memorial lecture in honour of the late Professor Uzoaga at the University of Nigeria, Nsukka*, 1-26.
- Sharon, B., Yvonne C. & Martiniqua M. (2014). An empirical analysis of the nexus between private sector credit, economic growth, government expenditure, interest rate and inflation: A case of Bahamas (1989 - 2014). *Research Department of Central Bank of The Bahamas*.
- Udoka, C. O., Mbat, D. O., & Duke, S. B. (2016). The effect of commercial banks' credit on agricultural production in Nigeria. *Journal of Finance and Accounting*, 4(1). 1-10.
- Ugbaje, D. O., & Ugbaje, H. E. (2014). Empirical study of financial sector development on economic growth in Nigeria, (1990-2010), *International Journal of Public Administration and Management Research*, 2(3), 122-137.
- Vighneswara S. (2010). Bank-based financial intermediation for financial inclusion and inclusive growth. *Banks and Bank Systems*, 5(4), 63-73.
- Were, M., Nzomoi, J., & Rutto, N. (2012). Assessing the impact of private sector credit on economic performance: Evidence from sectoral panel data for Kenya. *International Journal of Economics and Finance*, 4(3), 182-190.
- Yakubu, Z., & Affoi, A. Y. (2014). An analysis of commercial banks' credit on economic growth in Nigeria. *Current Research Journal of Economic Theory*, 6(2), 11-15.