Trend Analysis of Financial Intermediation Nexus: Catalyst for Sustainable Development in Nigeria

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Abstract
This study examined trend analysis of financial intermediation nexus: Catalyst for sustainable development in Nigeria from 1990 to 2025. Time series data were collected from secondary sources such as Central Bank of Nigeria statistical bulletin to proxy bank intermediation nexus: bank customer deposit, credit allocation, private sector credit, credit to core private sector, loan to deposit ratio, credit to agricultural sector and credit to manufacturing sector. The study found that movement in financial intermediation variables are in line with fluctuation in monetary policy variables. The study employed descriptive research analysis to explain the relationship between financial intermediation variables. The study concludes that monetary policy variables determine the fluctuation in financial intermediation variables within the periods under review. The study concludes that monetary and macroeconomic policies determine fluctuation of financial intermediation variables within the time scope of this study. The implication is that financial intermediation nexus can serve as a catalyst for sustainable development when savings and credit are channeled towards productive enterprises infrastructure, agriculture, renewable energy. Health, and other activities that generate employment reduce poverty and strength sustainable development. The study recommends strengthening financial inclusion, expanding productive sector lending, and deepening digital finance

Keywords: *Trend Analysis, Financial Intermediation, Bank Customer Deposit, Credit Allocation, Private Sector Credit, Credit to Core Private Sector, Loan to Deposit Ratio, Credit to Agricultural Sector, Credit to Manufacturing Sector.*

Introduction

The role of financial intermediation in economic growth has been widely recognized as a leading issue in the world. This attention is well-justified, since a better understanding of how the financial sector contributes to economic growth has important regulatory implications. Central Bank of Nigeria (2017) opined that financial system is a set of rules, regulations and the aggregation of financial arrangements, institutions, agents, that interact with each other and the rest of the world to foster economic growth and development of a nation. Thus, well-functioning financial institutions enhances overall economic efficiency, create and expand liquidity, mobilize savings, promote capital accumulation, transfer resources from traditional (non-growth) sectors to the more modern growth-inducing sectors, and also encourage a competent entrepreneur response in these modern sectors of the economy (Kolawole, 2020; Akani,2026; Akani &

Lenyie, 2023). The efficiency of financial systems cannot be taken for granted, especially as information gathering is one of their key functions. Financial institution facilitates the channeling of funds between lenders and borrowers indirectly. That is, savers (lenders) give funds to an intermediation institution (such as a bank), and that institution gives those funds to spenders (borrowers). Adewole, Dare and Ogunyemi (2019) stated that financial intermediation involves the transformation of mobilized deposits liabilities by banks and non-banks institutions into assets or credits such as loans and overdraft. This means that financial intermediation is the process of taking in money from depositors and lending same to borrowers for investments which in turn help the economy to grow (Manasseh, Okoh, Abada, Ogbuabor, Alio, Lawal, Nwakoby & Asogwa, 2021, Akani, 2025).

According to Nwaogwugwu (2016) financial intermediation involves the transformation of mobilized deposits liabilities by financial intermediaries such as banks into bank assets or credits such as loan and overdraft. It is simply the process whereby financial intermediaries take in money from depositors and lend same out to borrowers for investment and other economic development purposes (Andrew & Osuji, 2013). Financial intermediation is a productive activity in which an institutional unit incurs liabilities on its own account for the purpose of acquiring financial assets by engaging in financial transactions on the market. Therefore, through the process of financial intermediation, certain assets or liabilities are transformed into different assets or liabilities (Weerakkody, 2016; Akani & Rogers-Banigo, 2023). Financial intermediation is the process by which intermediaries provide a linkage between surplus units and deficit units in the economy.

The link between financial sector development and the growth of an economy have been widely discussed both theoretically and in empirics. The potential contribution of financial institutions to fostering economic growth and development has, however, sparked renewed interest in light of the development of fresh endogenous growth theories. Through investment, saving, capital productivity, and efficient information management, Greenwood and Jovanovich (1990), Pagano (1993), and King and Levine (1993) all demonstrated that financial sector development does have promising impact on economic growth. Nigeria's financial sector was relatively shallow and focused on international trade financing at the time of independence prior to reforms and liberalization in the financial sector (Gelbard & Leite 1999; Akani, 2024, Akani & Lucky, 2022). Since Nigeria's banking industry was completely nationalized and the issuance of credit was viewed as a potent tool to accelerate growth and development, financial development suffered greatly even after independence. This was witnessed in the provision of credit subsidies and granting of selective credit distribution to a small number of sectors that only exhibited growth. These actions led to poor financial resource allocation, inflation, and large non-performing loans, which actually made the pace of growth achieved during those times pretty worse. Nigeria adopted the structural adjustment programmes presented by the IMF and World Bank in 1986 as a useful channel to enhancing the financial sector and then expansion. Other events during the period included the restructuring of state-owned banks, which made it possible for foreign banks to operate in the banking sector thereby allowing domestic banks to buy foreign assets; removing credit ceilings, and liberalizing interest rates (Moyo, Nandwa, Council, Oduor, & Simpasa, 2014; Otchere, Senbet & Simbanegavi, 2017). While existing literature has examined the general effects of financial intermediation on economic growth (Kishan & Opiela, 2000; Onyeoma & Ozor, 2022; Gambacorta & Mistrulli, 2004). Relatively few studies have explored how financial intermediation variables have fluctuated over the years. This study therefore examined the trend analysis of financial intermediation nexus: catalyst for sustainable development

Literature Review

Financial Intermediation

Financial intermediation relates to the process whereby the financial institutions creating financial assets within the framework of the financial markets brings together the surplus and the deficit economic units in order to resolve their financial imbalance by means of a price related compensation mechanism called interest rate (Ezirim *et al,* 2012). This for deposit money banks involves deposit mobilization and credit allocation. The process involves the inflow side characterized with fund mobilization and the outflow which is referred to fund utilization (Ezirim, 2005). One of the intermediate functions of deposit money banks is bank lending. Bank lending is a major factor input to the growth and development of the economy. It is a mechanism for promoting the developing economy and remains very important despite the diverse opinions of researchers on the relationship between finance and economic growth and economic growth and finance. Banks constitute the medium for the implementation of the government monetary policies aimed at achieving the macro-economic goals of full employment, economic growth stability and Balance of payment equilibrium (Odior, 2013).

Research on financial intermediation and its impact on bank performance has received limited attention in the extant literature. While there have been a number of studies on the impact of financial intermediation on economic growth and development, there has not been much work on the relationship between financial intermediation and bank performance. Akoto and Nubieu (2014), however, did their work on the impact of financial intermediation on bank profitability using data on Ghana. Also, most of the few existing works have been done outside Sub Saharan Africa (SSA). Again, most papers examine the extent of financial deepening of the banking sector by analyzing financial deepening indicators. In this research, bank performance is measured using two criteria: the health status of banks and return on assets. The health status is measured, by using the solvency index which is determined by the provision for loan loss as a percentage of total loans and advances. This is understood to represent how efficient banks are in recovering their loans and advances which is expected largely to influence bank profitability.

Bank Credit

Chester (1920) defines Bank credit as credit extended by banks to borrowers. He stressed further that, Bankers frequently use the term in the plural, meaning advances made to their borrowing customers. Whether the borrower withdraws the amount of the proceeds of his loan in cash at once or leaves it on deposit with the lending bank, the loan in either case constitutes credit extended. Just as a merchant extends credit to he who pays for his purchase at a later time, so the banker extends credit to the business man who borrows money. Whether the money is taken from the bank at the time the loan is made, the next day, or ten days later, makes no essential difference; bank credit may take even the form of an overdraft.

Credit has been described as a device for facilitating transfer of purchasing power from one individual or organization to another. As indicated by Oyatoya, (1983) credit provides the basis for increased production efficiency through specialization of functions thus bringing together in a more productive union the skilled labor force with small financial resources and those who have substantial resources but lack entrepreneurial ability. Likewise, Abayomi and Oyerinola, (2018) put forward that credit can be defined as the transfer of money or a resource from the lender to the borrower. In general, total domestic bank credit can be sub divided into two: credit to the private sector and credit to the public sector. It has been empirically proved that credit to the public sector is weak in generating growth within the economy because they are prone to waste

and politically motivated programmes which may not deliver the best result to the populace while private credit had been observed to be the dynamic instrument of accelerated growth (Beck et al 2000; Levine et al 2000; Odedokun 1998; King & Levine, 1993; Islam, 2013). Private sector credit is decomposed into two categories: short-term credit that has contractual maturity of one year or less and long-term credit that has contractual maturity longer than one year. Some countries, most notably many of the transition economies, provide more detailed data on credit maturity up to one year, one to five years and longer than 5 years. Some countries report maturity longer than 7 or even 15 years.

Deposits of Financial Institutions

Deposits from customers remain the main source of funding for the banking sector, accounting for 75 percent of the total funding liabilities. As at December, 2016, the total bank deposits amounted to CBN1, 488,168 trillion (CBN, 2016). According to data gathered from Central Bank of Nigeria supervision reports between the years 2001 and 2016, there has been an upward trend in the level of deposits. Commercial banks facilitate mobilization of savings, diversification and pooling of risks and allocation of resources. However, since the receipts for deposits and loans are not synchronized, intermediaries like banks incur certain costs Ngugi, 2001). They charge a price for the intermediation services offered under uncertainty, and set the interest rate levels for deposits and loans. The difference between the gross costs of borrowing and the net return on lending defines the intermediary costs (information costs, transaction costs (administration and default costs and operational costs) (Rhyne, 2002). Interest rate spread is defined by market microstructure characteristics of the banking sector and the policy environment (Ngugi, 2001). Risk-averse banks operate with a smaller spread than risk-neutral banks since risk aversion raises the bank's optimal interest rate and reduces the amount of credit supplied. Actual spread, which incorporates the pure spread, is in addition influenced by macroeconomic variables including monetary and fiscal policy activities (Emmanuelle, 2003).

Bank customer deposits consist of money placed into banking institutions for safekeeping. These deposits are made to deposit accounts such as savings accounts, checking accounts and money market accounts. The account holder has the right to withdraw deposited funds, as set forth in the terms and conditions governing the account agreement. The deposit itself is a liability owed by the bank to the depositor (i.e., the account is a liability to the bank). Bank deposits refer to this liability rather than to the actual funds that have been deposited. When a person opens a bank account and makes cash deposit, he surrenders the legal title to the cash, and it becomes an asset of the bank. Obamuyi (2013) contends that for the banking sector to remain profitable, banks must efficiently mobilize more deposits in order to issue more loans and advances. This implies that deposit mobilization and bank lending are related. Banks that can effectively execute the mobilization role are more likely to be profitable.

Bank Interest Rate

As indicated above, loanable funds theory assumes that interest rates are determined by supply of loanable funds and demand for credit (Fry, 1995). Liquidity preference was introduced by Keynes in his General Theory. According to this theory, the interest rate is the reward for parting with liquidity for a specified period, rather than a return to saving or waiting; as such, it is a monetary phenomenon rather than a real phenomenon. Economic theory postulates that low real interest rates serve as a disincentive to savings, and therefore economists are of the view that a liberalization of the financial sector would increase real interest rates thus encouraging the

intermediation function. Lower prices, on the other hand, are thought to fuel investment by today's economists who believe in a private-sector-led economy. Even though this may seem to be a contradiction between proponents of low interest rates and proponents of high interest rates, the truth is that each side is right, although on opposite sides of the same coin. What they don't mention is the spread, which is the contrast between the two sides. Deposit rates should be high enough to draw depositors, while lending rates should be low enough to promote business borrowing, resulting in the spread narrowing.

Theoretical Review

Financial Intermediation Theory of Banking

Financial intermediation is defined as the process of mobilization financial resources through financial institutions/ intermediaries which comprise of the surplus saving units of an economy for lending or allocation to the effectual deficit spending units. Financial intermediation theory was first formalized in the works of Goldsmith (1969) Mckinnon (1973) and Shaw (1973) who see financial markets as playing a pivotal role in economic development attributing the differences in economic growth across countries to the quantity and quality of services provided by financial institutions. This contrast with Robinson (1952) who argued that financial market are essentially handmaidens to domestic industry and respond passively to other factor that produce cross- country differences in growth. There is general tendency for the supply of finance to move with the demand for it. It seems to be the case that where enterprise leads, finance allows. The same impulses within an economy, which set enterprises on foot, make owners of wealth venturesome, and when a strong impulse to invest is fettered by lack of finance, devices are invented to release it and habits and institutions are developed.

The Robinson school of thought therefore believes that economic growth will lead to the expansion of the financial sector. Goldsmith (1969) attributed the positive correlation between financial development and the level of per-capita GNP to the positive effect that financial development has in encouraging more efficient use of the capital stock. In addition, the process of growth has feedback effects on financial markets by creating incentives for further financial development.

Supply Leading Hypothesis

This theory was authored by Schumpeter (1911) and later adopted by scholars such as McKinnon (1973); Shaw (1973); Gupta (1984); Fry (1988); Greenwood and Jovanovich (1990) and Bencivenga and Smith (1991). This theory postulates that financial development in any country causes economic growth. In an economy with no friction in the transaction, information and monitoring costs, no financial intermediaries are needed. According to the theory, if transaction, information and monitoring costs are sufficiently high, then, no exchange among economic agents is necessary. These desires led to the emergence of financial institutions and markets that make up the financial sector. According to this theory, a well-developed financial sector will ensure reduced transaction, information and monitoring costs thereby increasing the efficiency of intermediation. The theory postulates that a well-developed financial intermediary facilitates the development of the economy through mobilization of savings, facilitation of trading and the diversification of risks among others. These important services lead to efficient allocation of resources; a more rapid accumulation of physical and human capital; and a faster technological innovation which eventually leads to a faster and long-term economic growth (Schumpeter, 1911). This theory fits this study since it provides one of the possible explanations of how

development in the financial sector affects the disbursement of credits to the private sector and drives economic growth.

Demand Following Hypothesis

This phenomenon is supported by intellectuals such as Robinson (1952), who have argued that an increase in economic growth typically leads to intensified financial development. Reading Robinson (1952) it seems that she expressed where business enterprises lead, finance follows. Similarly, the work of Kuznets (1955) explained that financial markets begin to grow as the economy approaches the intermediate stage of the growth path and develop once the economy matures. In other words, this reading argued that the expansion of economic activity within each economy requires the emergence of financial institutions to provide services essential to economic growth. 10 As primary economic growth creates demand for financial instruments, and financial market arrangements will respond effectively to these demands and changes. Empirical studies supporting the demand-following hypothesis include Robinson (1952), Kuznets (1955), Stern (1989), Singh (1997), Beck et al. (2000a), Odhiambo (2008), Nazlolu et al. (2009), Ductor and Grechyna (2015). They jointly argued that doubling growth gradually leads to financial sector development. Recently, Bist's (2018) study revealed this demand-following relationship for the case of some African and other low-income countries, in agreement with the demand-following hypothesis.

Financial Repression Theory

Governments and particularly developing country governments have intervened extensively in order to divert large amount of funds to the priority sectors such, state owned enterprises, small and medium scale firms and to a lesser extent housing, exports and underdeveloped regions. One way that government's finance expenditures in excess of tax revenues is to force the private sector, insurance companies, pension funds, commercial banks and other public financial institutions to buy government securities at below market yields as generally returns on government securities is much below the market rates of interest.

Another way in which government can borrow at low rates of interest is by setting high liquid asset ratios and ensuring that government securities are the only eligible assets that satisfy this requirement. Also, by setting high reserve requirements, the government can borrow indirectly from the banking system at a zero. Finally, governments may set ceilings on interest rates to limit competition from the private sector for loanable funds (Fry, 1997 and Giovannini and de Melo, 1990). Thus; financial repression is not a precise concept since the controls imposed on financial markets are a combination of price and quantity restrictions.

Loan Pricing Theory

This theory postulates that banks cannot always give high rates of interest. Loan pricing is the process of determining the interest rate for granting a loan, typically as an interest spread (margin) over the base rate, is conducted by the managers in loan distribution (Pecunica, 2000). Banks should consider the challenges of moral hazard and adverse selection because it is very difficult to predict the type of borrower at the beginning of the banking relationship (Stiglitz & Weiss, 1981). The loan price is the interest rate the borrowers must pay to the bank and the amount borrowed which is the principal amount. The interest rate is determined by the true cost of the loan to the Bank (base rate) plus profit/risk premium for the bank's services and acceptance of risk. Since the past performance of a sector, industry, or company is a strong

indicator of future performance, risk premiums are generally based on the historical quantifiable amount of losses in that category Loan pricing isn't a precise science; it's influenced by a variety of qualitative and quantitative factors that influence demand for and supply of cash (Edunote, 2021).

Empirical Review

Olorunfemi *et al.* (2025) applied a Structural Vector Autoregression (SVAR) framework to assess the impact of economic uncertainty on monetary transmission in Nigeria. Incorporating the Nigerian Economic Policy Uncertainty Index (NUI), the study revealed that uncertainty amplifies the effects of monetary policy on credit and inflation dynamics. Smaller banks were disproportionately affected, highlighting the importance of accounting for institutional fragility and macroeconomic volatility in policy design. Okaro (2016) explored the transmission mechanism of monetary policy and bank credit in Nigeria, emphasizing the role of credit pricing over quantity. By analyzing bank-level pricing data, the study disentangled loan supply from demand shifts, revealing that credit availability is highly sensitive to monetary tightening. Smaller banks, with limited access to alternative funding, were found to be more reactive to policy shocks, reinforcing the relevance of bank heterogeneity in Nigeria's monetary framework. Afolabi (2023) examined the impact of SMEs financing on economic growth in Nigeria from 1980 and 2020. The study analyzed the data using ordinary least square method. The study found that SME output (measured as wholesale and retail trade to GDP) and banks' credit have a positive impact on the economic development (measured as real GDP) while lending rate has a negative influence on the growth. Okere, Njoku, & Nwosu (2023) studied Small and Medium Enterprises (SME's) Funding and Deposit Money Banks in Nigeria. This study theoretically investigated the reasons why banks are reluctant in granting credit facilities to the Small and Medium Enterprises (SMEs) in Nigeria. The study reveals that banks provide finances to SMEs, but a decline has been recorded over the years which made impossible for the SMEs sector to contribute meaningfully to economic growth of Nigeria.

Akinola, Efuntade and Efuntade (2020) examined the impact of bank funding on the growth of Nigeria's industrial sector. The researchers employed a linear regression model and the ordinary least square approach to evaluate the influence of domestic money supply, bank credit, and maximum bank lending rates on the performance of the industrial sector. The results revealed a robust and positive correlation between bank loans, the amount of money circulating within the country, and the expansion of the industrial sector. In addition, Okere, Cletus & Ugonma (2020) utilised an Autoregressive Distributed Lag (ARDL) methodology to examine the correlation between bank credits and the production of the industrial sector in Nigeria. The study analysed time series data spanning from 1981 to 2018. Their investigation found a clear correlation between commercial bank credit allocated to the manufacturing sector and interest rates. The augmentation of bank credit resulted in a short-term surge in manufacturing production, whereas an escalation in interest rates had a comparable impact. The study highlighted the necessity of implementing long-lasting laws, particularly in the banking sector, to facilitate the provision of credit to the manufacturing and other sectors of the Nigerian economy.

Akujuobi and Nwezeaku (2015) examined the effect of bank lending activities on economic development in Nigeria, they proxy economic development with the human development index and the industrial gross domestic product. Their results revealed a significant relationship between bank lending activities and economic development in Nigeria. Onyishi and Ifiorah (2015) found that interest rate has a significant effect on the agricultural sector and economic

growth. Another study by Ajibola (2015) looked at the effects of commercial bank lending on economic growth in Nigeria. The linear regression model revealed a positive correlation between economic growth and commercial bank loans for a one-year lagged period showing some slowness in the transmission mechanism between the financial and the real sectors of the economy. Alex (2012) used variables that include; commercial banks' deposit liabilities, maximum lending rate, commercial Banks' credit, investment by banks in Nigeria, fixed capital formation (gross) and gross domestic product. The findings of the study revealed that commercial Banks' credit exerts a positive impact on the gross fixed capital formation. Ekpenyong and Acha (2011) studied the contribution of banks to the growth of the Nigerian economy using annual time series data. During the study, contribution of banks was proxied by bank savings mobilization and credit to the real sector while GDP growth was used as proxy to economic growth. The study employed ADF diagnostic test to establish stationarity and method of Regression analysis to estimate the relationship of the variables. The findings of the research showed that the variables that were used to proxy banks' intermediation insignificantly impacted on economic growth.

Ali, Nwakoby and Okonkwo (2020) examined the influence of banking sector reforms on the expansion of the manufacturing sector in emerging countries, specifically focusing on the Nigerian economy. The research investigated time series data from 1986 to 2018, derived from the National Bureau of Statistics (NBS) and the CBN statistics bulletin. The study utilised a Dynamic Ordinary Least Squares (OLS) methodology to examine the correlation between the banking sector, manufacturing sector, and overall economic growth. The Augmented Dickey-Fuller (ADF) test was used to determine the presence of a unit root, while the Johansen Cointegration test was employed to assess Cointegration. The results demonstrated a strong correlation between the model and the data, with a coefficient of determination of 61%, indicating a significant association. Furthermore, the results demonstrated that there was no serial correlation present in the model. The administration was recommended to develop novel, effective fiscal and monetary measures to enhance macroeconomic stability. Additionally, it is imperative to advocate for structural reform initiatives to enhance Nigeria's banking and manufacturing sectors.

Araoye, Aruwaji, and Obafemi (2020) investigated the effect of bank lending management on economic growth in Nigeria and sourcing data from the Central Bank of Nigeria statistical Bulletin, World Development Indicator, and National Bureau of Statistics. The regression analysis result revealed short and long-run negative impacts of bank lending management on economic growth. The F-statistic (6.67) with a p-value of 0.0007 tests the explanatory power of the model which is statistically significant at 5%, suggesting that the explanatory variables have a joint and significant effect on the economic growth of Nigeria. Akinwale (2018) evaluated the relationship between bank lending and economic growth in Nigeria. Using data sourced from the Central Bank of Nigeria Statistical Bulletin, the result proved that a unit percent decrease in bank lending rate will bring about a 118% increase in economic growth. Furthermore, the findings of Greenwood and Jovanovic's Hypothesis established that as the bank lending rate decreases, economic growth tends to increase, and it is statistically significant at a 1% level.

Ashiru *et al*., (2021) employed the Non-linear Autoregressive Distributed lag (NARDL) model and Granger causality to assess the relationship between bank credit and manufacturing sector productivity in Nigeria ranging from 1981 to 2019. The study is unique to other research studies in that it uses bank credit to the manufacturing sector as a proxy for bank credit as well as the technique adopted. The asymmetric relationship suggested in the literature was investigated

using the NARDL approach. The bound testing showed that bank credit, industrial output, and lending interest rates have a long-run relationship with the manufacturing sector in Nigeria.

Audu, Anfofum and Bilikisu (2021) aimed to assess the influence of bank loans on Nigeria's manufacturing sector. They were utilizing a time series of secondary data from 1986 to 2017. The analysis utilised the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests, together with the Autoregressive Distributed Lag (ARDL) and Granger Causality procedures. The study discovered a substantial and favourable enduring correlation between bank loans and industrial sector output, with a significance level of 1 percent. In contrast, no significant association between inflation rates and sector output was found. The investigation revealed that credit from deposit money institutions considerably impacts industrial production in Nigeria. It was found that there is a one-way causal relationship between the industrial sector and bank loans. The report suggests enhancing legislative frameworks and credit control procedures to attract investors to the industrial sector. It emphasizes the need for regulatory authorities to ensure the availability of easily accessible and affordable bank loans to boost productivity in manufacturing.

Clement, Ayodeji and Abiodun (2022) examined the commercial bank lending to Small and Medium Scale Enterprises and Nigeria economy over a period of twenty years, spanning from 1998 to 2017. Specifically, the study analyzed the effect of Average commercial bank lending rate, commercial bank loans and inflation rate to SMEs growth on Nigeria economy, and also the causal relationship between explanatory variables and Nigeria economy measured in terms of GDP. Data collated were analyzed with descriptive analysis, correlation analysis, ordinary least squares regression analysis, and Granger causality analysis. The findings revealed that commercial bank loans to SMEs (CBLSMES) had a negative and insignificant impact on a gross domestic product with a coefficient estimate of -1.015926 ($p=0.0167 < 0.05$). Average commercial bank lending rate to SMEs (ACBLRSMES) had a negative and insignificant impact on a gross domestic product with a coefficient estimate of -1911.581 ($p=0.6178 > 0.05$). Meanwhile, the study revealed that inflation rate (IFTRATE) exert an insignificant positive impact on a gross domestic product with a coefficient estimate of 1833.262 ($p=0.2400> 0.05$). The result also revealed that there is no causal relationship between exploratory variables (commercial bank loans to SMEs, Average commercial bank lending rate to SMEs, inflation rate) and Nigeria economy measured in terms of GDP and while ACBLRSMES and CBLSMES has a causal relationship to SMEs.

Hacievliyagil and Eksi (2019) conducted a study to examine the correlation between bank loans and the growth and performance of different manufacturing sub-sectors. The focal point of this examination is the industrial production index. The study utilised the ARDL model and a bound cointegration test to establish the association. The data suggest that a boost in bank lending to all sub-sectors leads to a proportional increase in industrial output, except for the machinery sub-sector. The Toda Yamamoto causality test identified different degrees of causation in all sub-sectors, except the machinery and chemical sub-sectors. The study revealed causal relationships between different parameters, including loan interest rates and industrial productivity.

Ibenyenwa, Nwakoby, Okaro, and Ogbonna (2020) examined the relationship between interest rate components and DMBs' credit to the domestic economy in Nigeria and South Africa. Their Nigerian result indicated that interest rate components showed the absence of a significant long-run and short-run relationship with the credit ratio of DMBs to the domestic economy while the South African interest rates components showed a significant presence of long-run and short run relationship with domestic credit provided by the DMBs. Ibrahim, Abdulrahman and Abubakar

(2021) analyzed Nigeria's banking and manufacturing industries. An additional approach to gathering data was employed by utilizing a statistics bulletin released yearly by the Central Bank of Nigeria and the World Bank database. During the investigation, the data was limited to the period from 1981 to 2019. The researchers employed Nonlinear Autoregressive Distributed Lag (ARDL) and Granger causality analysis methods to analyses the data. The conclusive test result indicates the presence of a sustained correlation between manufacturing production, bank credits, and interest rates. The results of the short-term experiment demonstrated a positive correlation between bank loans and manufacturing output, whereas, in the long term, the correlation was negative. Nevertheless, the Granger causality test revealed a one-way causality between the variables. Therefore, the study proposed that policymakers establish a more appealing interest rate ideal for investors, enabling them to borrow funds and provide job opportunities while enhancing the industrial sector's productive capacity in the economy.

Iganiga (2019) studied the performance of the industrial sector in connection to financial development utilizing the manufacturing index as a primary industrial sector development indicator. A structural variance autoregressive (SVAR) model with structural breaks was developed and applied to data from Nigeria from 1970 to 2015. According to the findings of the research, the continual increasing trend in official lending interest rates, as predicted theoretically, have scared off investment and, as a result, industrial production. Although not statistically significant, the amount of financial depth (M2/GDP) had a favourable impact on industrial production.

Ikpor, Nnabu, and Obaji (2017) studied the effect of small and medium-scale enterprises lending on economic growth in Nigeria. The study used the Johansen cointegration test and vector error correction model techniques showed evidence of a long-run relationship between small and medium-scale enterprises' lending and economic growth, while the vector error correction model results revealed that lending to small and medium-scale enterprises leads to economic growth in Nigeria. Also, the study found that the bank lending rate does not impact SME lending in Nigeria. These results imply that lending to small and medium-scale enterprises is crucial to the growth of the Nigerian economy. In the same vein, Ebi and Emmanuel (2014) investigated the impacts of commercial bank credit on Nigeria industrial subsectors between 1972 and 2012 using the Error Correction Model (ECM). Their study revealed the existence of a positive and significant impact of bank credit on the manufacturing sub-sector in Nigeria. Their finding points to the fact that increased bank credit is fundamental in stimulating industrial sector growth in Nigeria.

Josephine (2010) assessed the impact of deposit money banks' credit on economic growth in Nigeria, from 19922008. Gross domestic product was used as proxy for economic growth and domestic credit to the economy was substituted for deposit money banks' credit in the study. The result of the empirical work revealed that there is no significant impact of bank credit on the growth of Nigeria economy. Okpara (2010b) carried out a research to examine the influence of financial liberalization on selected macroeconomic variables that include gross domestic product, foreign direct investments, financial deepening, savings and inflation in Nigeria. The study employed the parametric paired sample statistic for ttest, nonparametric Wilcox signed rank test and the discriminant analysis to evaluate the nature and significance of the differences observed in the variables of study during pre and post financial liberalization policy regimes. The findings in the study on discriminant analysis indicated that gross domestic product gave the highest positive and significant contribution, followed by national savings; foreign direct investment was

negative and significant while the study showed an insignificant discrimination between financial deepening and inflation.

Kelechukwu, Hart, Pius and Ekene (2023) examined bank credit to the different segments of the industrial sector in the economic development of Nigeria. The specific objectives are to examine the impact of bank credit on agriculture, mining, quarrying, manufacturing, and government on economic development (HDI) in Nigeria. The study was anchored on the pecking order theory and Central Bank of Nigeria (CBN) statistical bulletin and World Bank Data Atlas report of various years from the data source which were subjected to the Auto Regressive Distributed Lag (ARDL) technique to test the interaction between independent variables and the dependent components in human development index at 5% level of significance. The findings revealed a short and long-run relationship. However, the individual short-run impact showed bank lending to the agriculture and government segment of the industrial sector showed a negative insignificant relationship with HDI. While bank credit to the manufacturing segment of the industrial sector significantly impacted HDI, bank credit to the mining and quarrying segment of the industrial sector showed an insignificant impact on HDI. Conclusively, bank lending to the different segments of the industrial sector has a short and long-run relationship but could not exact the necessary significant impact on the economic development of Nigeria. Hence, the study recommends single-digit interest rates on loans and advances (credit) to segments of the industrial sector in agriculture, manufacturing, mining, quarrying, and government as applicable to developed economies of the world.

Mesagan, Olunkwa, and Yusuf (2018) tailored their study to financial sector development and manufacturing performance in Nigeria over the period of 1981 to 2015. The study employed the Error Correction Model and the Autoregressive model to capture the short-run dynamics. Their findings showed that credit to the private sector and money supply positively but insignificantly enhanced capacity utilization and output, but negatively impacted value added of the manufacturing sector in the short run. However, in the long run, both money supply and credit to private sector exert positive impact on manufacturing output. Chimaobi (2020) examined financial inter-mediation indicators on the economic growth, The Nigerian perspective from 1990 – 2018. The variables used are credit to private sector, broad money supply, interest rate and lending rate, RDGP. Using Vector error correction model, the study showed that there is a significant relationship between financial intermediation indicators and economic growth.

De Haan, Pleninger, and Sturm (2022) estimated an unbalanced fixed-effect panel model on the role of financial development of 84 countries in the poverty gap from 1975 to 2014; and found no direct effects. Ahmed, Kousar, Pervaiz, and Shabbir (2022) used World Bank data to explain the role of financial development and institutional quality in green-growth in South Asian economies from 2000 to 2018. The study also employs fully modified ordinary least squares (FMOLS) and dynamic ordinary least squares (DOLS) and show that institutional quality and financial development are long-term drivers of green economic growth.

Joshua Dzanka Zoaka and Hasan Gungor (2023) examined effects of financial development and capital accumulation on labor productivity in sub-Saharan Africa: new insight from cross sectional autoregressive lag approach. This study aims to shed light on the effects of financial development and accumulation of capital on the productivity of labor in the sub-Sahara African region within the period of 1990–2018, in this work, used the (dynamic) common correlated effects estimator-mean group and additional techniques such as cross-section autoregressive distributed lag to calibrate the sample into the African subregion to ensure robustness. The findings reveal that financial progress in the region over time leads to an increase in productivity

of labor and also the accumulation of capital. Furthermore, financial markets have a progressive impact on the productivity of labor within sub-Saharan African regions. We extend the very limited literature on the nexus between financial development and labor productivity by incorporating capital accumulation into our model which has not been previously studied.

Literature Gap

Existing studies have focused on specific aspects of financial intermediation such as banking sector reforms, microfinance, or capital market development using econometrics analytical models without looking at the trends analysis of financial intermediation nexus. This study focused on trend analysis of financial intermediation nexus: Catalyst for sustainable development in Nigeria.

Methodology

In order to achieve the purpose of this paper, time series data were sourced from the World Bank data base and Central Bank of Nigeria Statistical Bulletin. The study adopted descriptive analysis using trends to examine the relationship between financial intermediation nexus.

Analytical Framework

Trend Analysis of Financial Intermediation Nexus

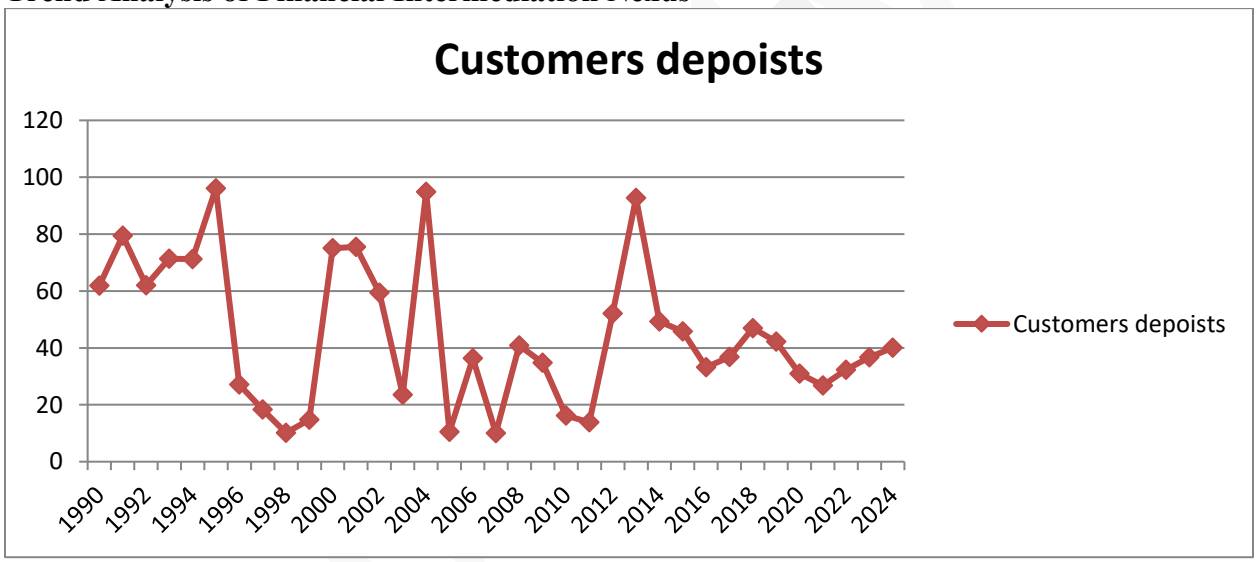


Figure 1 illustrated movement of customer deposits from 1995-2024

Deposit mobilization remains one of the important functions of banking all over the world. It is an important source of funding for both commercial and microfinance banks and has been proven by scholars such as Jhingan (2001), A gene (2002), Bakare (2011), and Orji (2012), among others, as an indispensable factor for increasing the sources of funding for banks to operate effectively. The mobilization of deposits plays a crucial role in providing satisfactory services to various sectors of the economy (Baye and Jason, 2006). However, the ability of banks to generate growth and economic development depends on the health, solidity and stability of the banking system itself (Alex, 2012). Figure 1 illustrates the trend in customer deposit, the trend proved that customer deposit fluctuates very high within periods of the study which could be traced to monetary and macroeconomic policies within the periods.

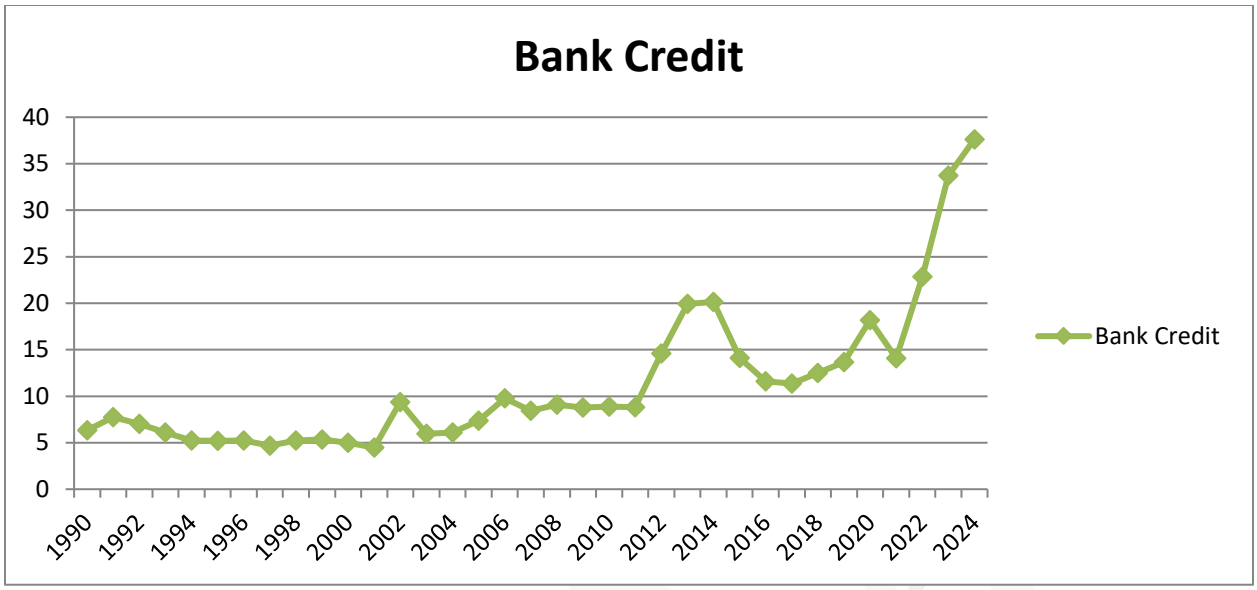


Figure 2 illustrated movement of credit allocation from 1995-2024

Commercial lending is also at an all-time low and has not returned to the pre 1990s levels see fig.5 showing that commercial banks were not lending to the private sector in a significant manner that can drive output production in the real sector. This was probably due to the riskiness of the Nigerian business environment that was probably driving interest rates up and making borrowers to be averse to borrowing because of the high tendency of likely default fears. The stringency of the borrowing process by banks on borrowers was also an issue as this was also probably discouraging private individuals and businesses from lending. Episodes of aggressive policy tightening, particularly between 2022 and 2025, have raised concerns about credit accessibility and affordability. During this period, the MPR was raised from 16.50 per cent to 27.50 per cent, while the CRR increased from 27.50 percent to 50.00 percent. This represents one of the most intense monetary tightening episodes in Nigeria's history. Such measures directly affect banks' ability to lend, their interest margins, and their willingness to take on risk. Furthermore, nonperforming loan ratios have remained high despite the many reforms introduced. This may have showed that the credit policies of banks have remained weak rather than stringent. Banks therefore face a policy dilemma, as they must comply with increasingly strict regulatory requirements while still meeting the credit needs of the economy and maintaining profitability

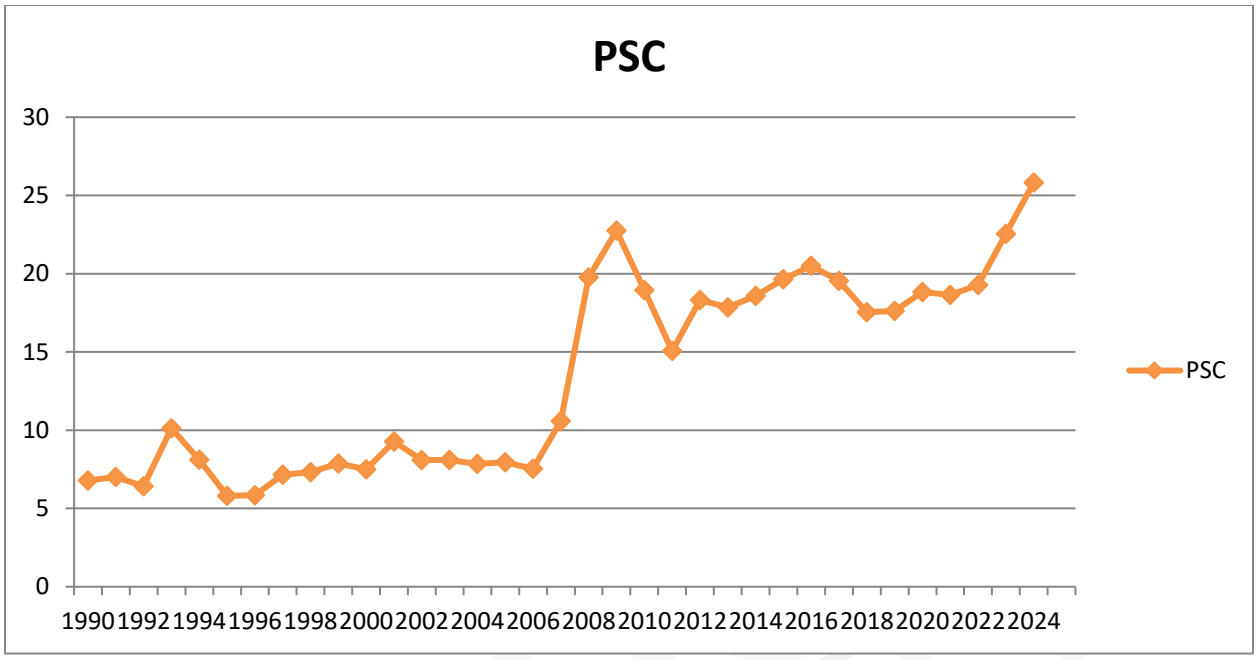


Figure 3 illustrated movement of Private sector credit from 1995-2024

The trend in figure 3 portrays that PSC was below 10 percent from 1990 – 2007 and increase slightly above that 20 percent in 2010. Within the period covered in this study, the trend shows that credit to private sector was highest in 2010 which could be traced to the multiplier effects of Nigeria banking sector consolidation but fluctuates below 20 percent and slightly above between 2022 and 2024.

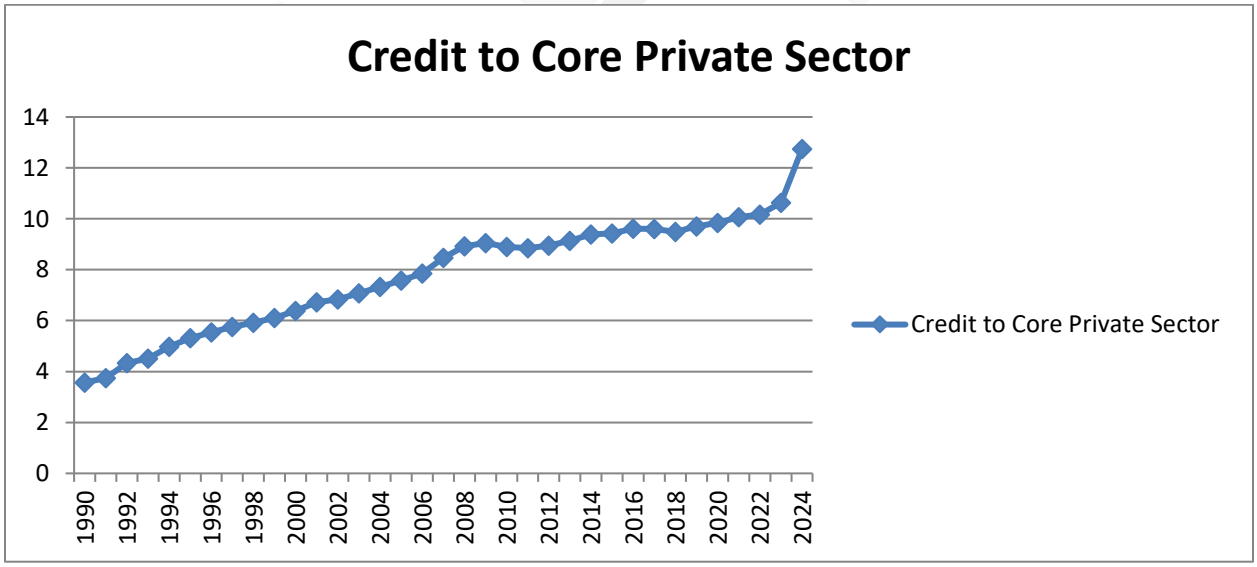


Figure 4 illustrated movement of Core Private sector credit from 1995-2024

The trend in figure 4 portrays that Core Private sector credit was on steady increase within the time scope of the study. The steady increase could be traced to monetary policy such as monetary policy rate. From 2000 to 2007, credit conditions were relatively stable, supported by moderate policy rates and rising bank lending following the 2005 consolidation exercise. The global financial crisis led to policy interventions that initially tightened credit conditions, contributing to a sharp increase in nonperforming loans, which reached 23.60 percent in 2010. In response, the CBN adopted accommodative measures, reducing the MPR to a historical low of

6.00 percent in 2010. These actions supported credit recovery and economic expansion. In contrast, recent years have been marked by pronounced tightening of credit policy. The MPR increased from 11.50 percent in 2021 to 27.50 percent in 2025, while the CRR rose from 27.50 percent to 50.00 percent over the same period. These measures, aimed at curbing inflation and stabilizing the naira, have had important implications for banks' lending capacity and behaviour. Understanding these dynamics is essential for policymakers, financial institutions, and other stakeholders in the Nigerian economy (Akani, 2024; Akani;2022 & Akani,2025).

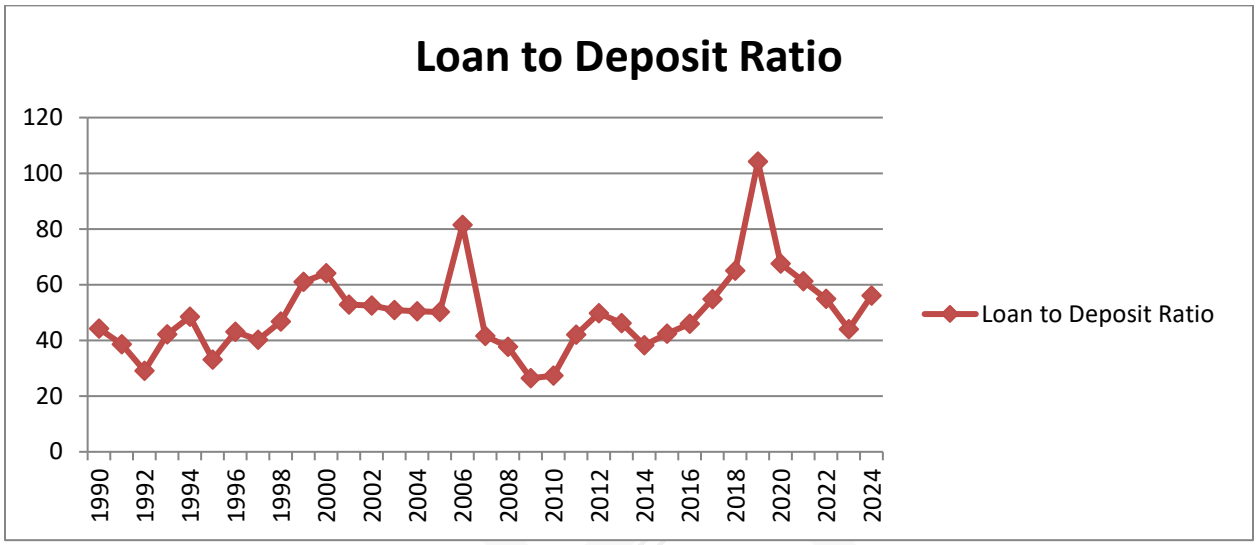


Figure 5 illustrated movement of loan to deposit ratio from 1995-2024

The trend in figure 4 portrays that loan to deposit ratio fluctuate very within the time scope of the study. This could be traced to credit policy of the Central Bank of Nigeria and interest rate within the periods under review. In addition to interest rate policy, the Central Bank relies on reserve requirements as direct tools of credit control. The Cash Reserve Ratio (CRR) requires banks to hold a fixed proportion of their deposit liabilities with the central bank. An increase in the CRR reduces the pool of loanable funds available to banks, thereby constraining credit supply even when demand remains strong. The Liquidity Ratio (LR) performs a similar function by obliging banks to maintain a defined share of their assets in liquid form, which limits their capacity to create new loans. Ikoh *et.al* (2026), Credit policy instruments serve as the operational levers through which the Central Bank of Nigeria (CBN) navigates the delicate balance between exchange rate stability, capital mobility, and monetary independence. Their effectiveness directly shapes the lending capacity of banks, influencing the flow of credit to the economy. At the same time, these instruments determine Nigeria's ability to safeguard external reserves and uphold policy autonomy, underscoring their dual role in both domestic financial intermediation and broader macroeconomic stability (Akani, & Ezebunwa, 2021& Sarakiri & Akani, 2021; Akani &lucky, 2022)

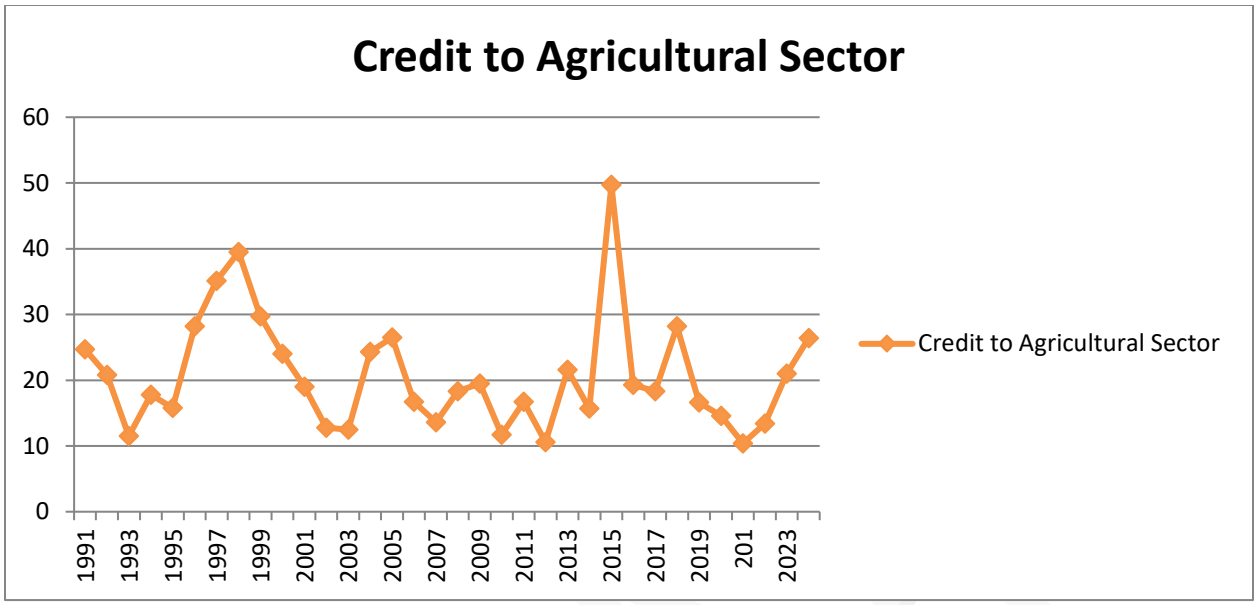


Figure 6 illustrated movement of Credit to Agricultural sector from 1995-2024

The second columns in the table reveal the percentage of commercial banks credit to agricultural sector to total credit. It is evidenced that the percentage of agricultural credit from commercial banks fall below 2% over the period covered in this study. In 2015 the percentage of commercial banks credit is not significant and falls below 0.01%, this corresponds with the decrease in productivity of agricultural sector within the period. This is contrary to the monetary policy objectives of sectorial credit allocation to the agricultural sector to boost the productivity of the sector. The decreasing rate of commercial banks credit to the agricultural sector could be traced to the high credit risk concentration in the sector. Column three and four shows the prime lending rate and the maximum lending rate within the period and it is evidenced that the variables fluctuates very high which could be traced to monetary policy regulations and variations (Akani & Lucky, 2023; Onyuku, Ohaka, & Akani, 2025 & Akani, 2022) .

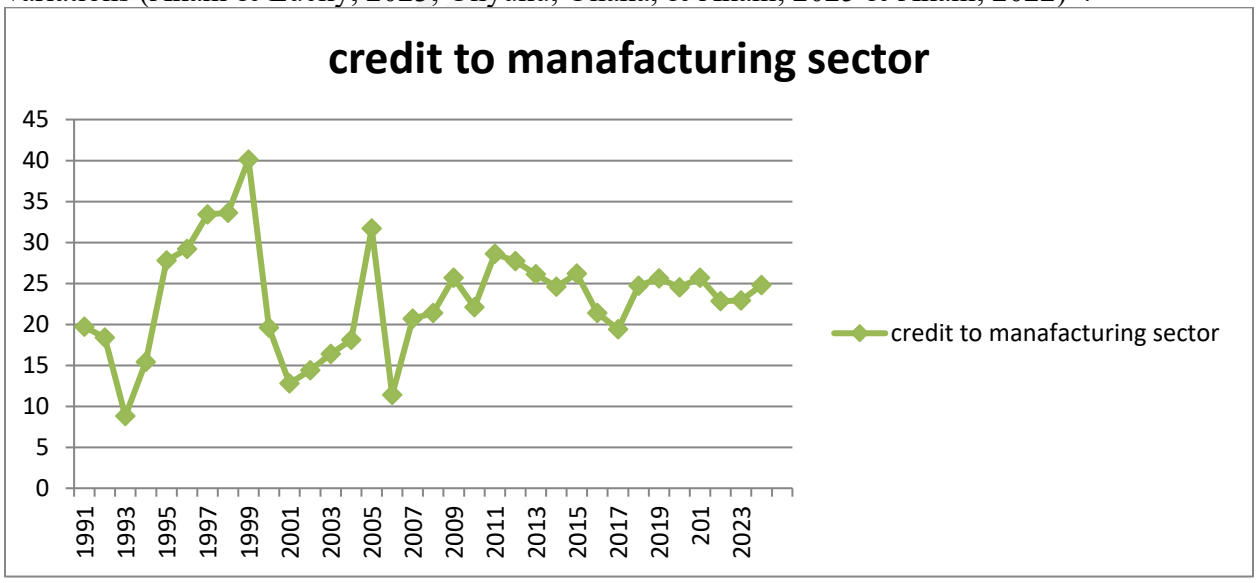


Figure 7 illustrated movement of Credit to manufacturing sector from 1990-2024

This trend showed what the manufacturing segment of the industrial sector received as bank credit in Nigeria between 1990 to 2024. The highest of its credit receipt was in 1999 when it received over 40%. The trend showed a progressive direction proving that the segment of the sector grew and performed well over time which led to increasing credit to the sector over the period. Mining and Quarrying: Solid minerals, mining, and quarrying are other major sectors of the Nigerian economy that is barely utilized. The sector was dwarfed by the oil sector which prompted major lending activities in the 60s to 80s to the sector. Thereafter, Nigeria continued international borrowing for an ambitious investment program, anticipating an increase.

Conclusion

This work examined trend analysis of financial intermediation nexus: Catalyst for sustainable development in Nigeria from 1990-2024. Time series data were collected from secondary sources such as Central Bank of Nigeria and world Bank data base on bank customer deposit, credit allocation, private sector credit, credit to core private sector, loan to deposit ratio, credit to agricultural sector and credit to manufacturing sector. The study found that movement in financial intermediation nexus are in line with fluctuations in monetary policy variables. The study concludes that monetary policy variables determine the fluctuation in financial intermediation variables within the periods under review. The implication is that financial intermediation nexus can serve as a catalyst for sustainable development when savings and credit are channeled towards productive enterprises infrastructure, agriculture, renewable energy. Health, and other activities that generate employment reduce poverty and strength sustainable development

Recommendations

i. The study recommends strengthening financial inclusion, expanding productive sector lending, and deepening digital finance

ii. There should be strict single-digit interest rates on loans and advances (credit) to key segments of the industrial sector in agriculture, manufacturing, mining, and quarrying, and government as applicable to developed economies of the world.

iii. Some of the rural communities and local government areas have no banking or financial services, therefore the Central Banks of Nigeria should re-introduce the rural banking scheme, this will enhance deposit mobilization and credit allocation from the rural communities.

iv. There is need to re-introduce mandatory sectorial credit allocation, this will enable commercial bank to extend credit facilities to the preferred sectors of the economy such as the manufacturing, agricultural and service sector. There should overall elimination of leakages of credit facilities to the industrial sector which is mostly diverted to importation activities.

v. Bank lending to both private and public sectors will be a mirage if the investment environment that encourages capital funds plus borrowing is not friendly. Finally, efficient government policy and institutional framework to facilitate the thriving of the sector should be enshrined in the economy.

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