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Impact of Financial Market Development on Industrial Growth in Nigeria (1986 – 2023)

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Abstract

Financial market development is vital for industrial growth in Nigeria, as it enhances capital formation, efficient resource use, and investment, thereby strengthening industrial performance and competitiveness. The study examined the impact of financial market development on industrial growth in Nigeria from 1986 to 2023. The study adopted ex post facto research design while Auto-regressive distributed lagged (ARDL) model Error Correction Model (ECM) estimation technique was used for analysis by relying on secondary data sourced from the Central Bank of Nigeria Statistical Bulletin. Short run result reveled that all share index and private sector credit has negative impact on industrial growth while stock market capitalization and money supply have positive impact on industrial growth in Nigeria. However, the long run result revealed that all share index (ASI), stock market capitalization (SMC), private sector credit (PSC), treasury bills (TB) and interest rate are found to have direct relationship with industrial growth while money supply is found to have an indirect relationship with industrial growth. However, the paper concluded that there is a long run relationship between financial market development and industrial growth in Nigeria for the period of study. Therefore, the paper recommended that Government through Security and Exchange Commission (SEC) and Nigerian Deposit Insurance Corporation (NDIC) should create awareness by educating Nigerians on basic knowledge of shares, debentures and bonds to trade or invest in the financial market to encourage capital formation for the expansion and growth of their business. The government through the Central Bank of Nigeria and the Ministry of Finance should promote stable and effective monetary policies management that will stabilize money supply as well as boosting private sector demand deposits in Nigeria. In addition, financial market should be used to finance and invest, in developing physical and social infrastructure such as roads, hospitals, housing and real estate that will create job opportunities for Nigerian citizens.

Keywords: *Industrial Growth, Financial Market Development, Stock Market Capitalization, Private Sector Credit, Monetary Policy*

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Background to the Study

Financial markets play a major role in the economic growth and stability of any country through facilitating the efficient allocation of capital, risk management, and price discovery. According to Yakubu (2023), financial market is a crucial component that offers an effective means of distributing, managing, and allocating long-term capital. They enable both corporations and the government to raise long-term and short-term capital which enables them to finance new projects and expand other operations. The performance of the economy is boosted when capital is supplied to productive economic units. In addition to giving industry working and financial capital, capital market finances the federal, state, and local governments' medium- and long-term borrowing. It deals in bonds, government securities, common stocks, and corporate shares and debentures (Emenike, 2021).

In Nigeria, the financial market comprising the money market, capital market, and foreign exchange market serves as a crucial intermediary between investors and industries. The capital market, in particular, provides long-term financing through instruments like equities and bonds, allowing industries to undertake large-scale projects. Similarly, the money market ensures short-term liquidity for firms to finance their operational needs. The primary aim of capital markets is to provide avenues for the effective allocation of idle funds from excess economic entities to underfunded entities for the purpose of long-term investment objectives. Since the government rarely provides the market with money, private individuals and corporations make up the bulk of fund suppliers (Irejeh *et al.*, 2024).

The development of financial markets is one of the salient features of industrial growth in Nigeria by providing the necessary capital, improving investment efficiency, and enhancing economic stability. A well-functioning financial market facilitates access to funding for industrial enterprises, enabling businesses to expand, modernize production, and improve competitiveness. Developing economies that is working towards the enhancement of their economy is anticipated to increase the provision of financial services by taking on financial policies such as financial liberalization, efficient intermediation process and other financial reformation process that boost the financial development of the country and have positive upshot on economic growth (Albert *et al.,* 2021).

The industrial sector in Nigeria has undergone various phases, oscillating between periods of growth and stagnation. According to Ewetan and Ike (2014), the sector's contribution to the Gross Domestic Product (GDP) was about 4% in the 1960s to 17.78% in 1990. It later declines to 13.93% and 6.55% in the year 2000 and 2010 respectively. Sector's contribution to GDP later rose to 12.67% and 15.36% in 2020 and 2023 respectively. This growth trajectory can be linked to several policy reforms that aimed to diversify the economy away from an over-dependence on oil. Industries such as manufacturing, construction, and services have benefited immensely from these policies, resulting in increased output, employment, and contributions to national income. Therefore, in an ideal economic setting, the industrial sector serves as a significant engine of growth, an antidote for unemployment, and a potent creator of wealth. The manufacturing sector, in particular, stands out as an indispensable component of this industrial engine**,** with its capacity to innovate, scale, and drive economic transformation.

Countries with thriving manufacturing sectors often witness exponential growth, job creation, and significant contributions to their GDP (Aiyedogbon *et al.* 2024).

However, despite these commendable policy interventions, the manufacturing sector has continued to grapple with underperformance. This is evident in the declining figures despite the introduction of several policy measures. Therefore, given the universally acknowledged role of manufacturing sectors in fostering real growth and development, Nigeria's industrial underperformance is deeply concerning. As such, the focus of this research is to investigate how financial market development on industrial growth in Nigeria.

The specific objectives which are to:

i. Examine the impact of all share index on industrial sector growth in Nigeria.
ii. Investigate the impact of stock market capitalization on industrial sector growth in Nigeria.
iii. Evaluate the impact of treasury bills on industrial sector growth in Nigeria.
iv. Assess the impact of interest rate on industrial sector growth in Nigeria.
v. Investigate the impact of money supply on industrial sector growth in Nigeria
vi. Examine the impact of private sector credit on industrial sector growth in Nigeria.

Literature Review

Conceptual Clarification

Financial market development

Financial market development is generic term used to refer to a range of alternative financial institutions including microfinance institutions, community development financial institution and revolving loan funds. Financial market development refers to the growth and enhancement of financial systems that facilitate the efficient allocation of resources, risk management, and economic stability and it encompasses the expansion and sophistication of financial institutions, instruments, and markets, enabling better access to capital for businesses and individuals (Levine, 2021).

Developed financial markets are characterized by robust regulatory frameworks, high levels of liquidity, and the availability of diverse financial products. These markets play a crucial role in economic growth by channeling savings into productive investments and fostering innovation and entrepreneurship (Levine, 2021). Recent advancements in financial technology have further accelerated market development by improving transaction efficiency and expanding access to financial services, particularly in underserved regions (Ozili, 2023). Moreover, the integration of environmental, social, and governance (ESG) criteria into financial markets has introduced new dimensions of sustainability and ethical investment, contributing to long-term economic resilience (Nguyen *et al.,* 2022).

All-Share Index (ASI)

The All-Shares Index (ASI) is a composite indicator reflecting the overall performance of the stock market. Kenny & Moss (2018) highlight its significance in providing insights into the general market trends. An upward trend in ASI is often associated with economic expansion,

as observed by Siong & Thing (2018) in their study on the Nigerian Stock Exchange. The ASI becomes a valuable tool for investors and policymakers, offering a snapshot of the market's health and potential economic growth. All-share index tracks the general market movement of all listed equities on the stock market, regardless of capitalization (Malika, 2021*)*. In another study, Saibu (2014) opined that all share index refers to a series of numbers that show the changing average of the share prices of all companies on a stock exchange, which is used as a measure of how well a market is performing. From a different perspective.

Stock Market Capitalization

Stock market capitalization refers to the total value of all shares of stock that are traded on a particular stock exchange. It is calculated by multiplying the current market price of a company's shares by the total number of shares outstanding. This figure provides a comprehensive snapshot of the size and value of a stock market, offering insights into the overall scale and worth of the companies listed on that exchange. According to Anderu (2020), stock market can be used by consumers, companies, and governments to finance long-term investments. The exchange for equities and long-term debt instruments, many of which have original maturities of a year or longer, is what Nwamuo (2018) characterizes as capital market.

A group of financial organizations gathered to offer medium- and long-term loans is known as capital market. This market is used to trade long-term financial products like government securities, corporate shares, corporate bonds, and mortgage loans. On the other hand, to put it another way, it is a market for long-term investment mobilization and deployment for development (Algaeed, 2021). According to Taiwo *et al.* (2016), the market for long-term loans is known as capital market. The capital market funds the medium- and long-term borrowing of the federal, state, and local governments in addition to providing working and fixed capital to industry.

Treasury Bills

A Treasury bill (T-bill) is a short-term government security issued by a country's central bank or treasury department to finance its operations and manage liquidity in the economy. The CBN issues Treasury bills, which are debt instruments that the government guarantees will be used to cover expenses. Treasury notes, as defined by Omodero and Agege (2022), are sovereign debts with a period of one year or less. The government issues these short-term securities in a variety of terms to fund its activities.

An investor is lending money to the government when they purchase a Treasury note. Their maturity in no more than twelve months and can be reclaimed at par after being offered at a discount. To put it another way, the government issues Treasury notes to pay down its deficit. According to Orji et al. (2023), Treasury bills are regularly listed and transacted on the Financial Market Dealer's Quotation (FMDQ) network after being issued through a competitive bidding procedure. With regard to their accessibility, affordability, and government assurance, such bills are arguably the greatest marketable and liquid money market asset. After the 1959, Treasury bill Act, Nigeria was the first nation to issue it. The remarkable achievements of the procedure served as a catalyst for the continuous issuing of this type of financial debt instrument (Orji et al., 2023).

Interest Rate

Interest rate affect stock market by affecting discount rate that randomly used in valuation techniques. According to Ogundajo *et al.* (2019) interest rate is the addition to the borrowed amount or principal usually expressed in percentage. This definition clearly shows that interest is a concept which can mean different things depending from the perspective it is viewed. Interest rate can therefore be seen as a nebulous concept, a position affirmed by the availability of different types of this rate. Some of which are; savings rate, discount rate, lending rate and Treasury bill rate. According to Casadas (2015) interest rate is a cost of borrowing money, expressed as a percentage of the amount borrowed.

Interest rate refers to the rental fee for the borrower's use of credit or the lender's return for giving up liquidity. It is the price of money and, like other prices; it tries to perform a rationing role in the market by making it easier to distribute the limited supply of credits among the many competing requests for it. Interest rate is the amount charged by banks when they advance loans to their customers. This rate varies according to perceived risks, the duration of loans (short, medium or long term), the cost of loanable funds and lending margins (Ismaila, 2016).

Money Supply

Money supply is the quantity of cash that is accessible for use in an economy throughout a specific period (Batuo, 2015). There are three perspectives on money supply; the first view, M1 means money held by general society as well as demand deposit with commercial banks. It can likewise be called high-powered money or narrow money. The subsequent view is alluded to as (M2) and is otherwise called broad money. It is related with modern quantity theorist headed by Friedman and M2 comprise of M1 plus time and saving deposits. The third view is the broadest and is related with M3.

Money supply refers to the total quantity of money in existence within an economy at a particular point in time. Money supply is one of the most important monetary policy tools that can be used by central banks to regulate inflation and stimulate economic growth (Khan et al., 2015; Hansen, 2022). It is a variable captures the percentage rate of changes in Nigerian money. Broad money M2 is the broadest form of money supply currently reported by the Federal Reserve and it was initiated that large changes in it coincide with stock market volatility. The level of money supply accessible in a budget can contract, due to inflation. When this happens, the value of Stock price is negatively affected.

Private Sector Credit

Private sector credit refers to the financial resources provided to the private sector by banks and other financial institutions, such as loans, purchases of non-equity securities, and trade credits. This concept is crucial in understanding how private sector development and investment can contribute to economic growth and poverty reduction. Credit to private sector refers to financial resources provided to the private sector, such as loans and advances, purchases of non-equity securities, trade credits and other accounts receivable, which establish a claim for repayment. In this regard, credit can be viewed from two angles; namely: trade or commercial credit and banking system credit (Olowofeso *et al.*, 2015).

The term credit has been defined as the extension of money from the lender to the borrower. Credit is of vital importance for the working of an economy. It is the oil of the wheel of trade and industry and helps in the economic prosperity of a country (Ugoani, 2013). The duty of managing credit cannot be extricated from the banking industry because banks serve as a conduit for funds to be received in the form of deposits from the surplus units of the economy. Those funds are passed on by banks to the deficit units who need them for productive and other purposes.

Industrial Sector Growth

The industrial sector's growth pertains to the expansion and evolution of industries within an economy, signified by increased production, innovation, and the diversification of products and services. This growth is crucial as it often serves as an indicator of a nation's overall economic progression. Several scholars and institutions have provided insightful definitions and explanations of this growth over recent years. Industrial sector's share of total production remained meager, suggesting that despite these drivers of industrialization, the efforts did not appear to be fruitful (Olarinre *et al.*, 2023).

The industrial sector in Nigeria is made up of manufacturing companies, extractive companies, and power generating companies (Uruakpa, 2019). Therefore, industrial output can be described as the amount of goods and services produced by these companies within a specific period of time usually a year. In Nigeria, the industrial sector is dominated by the manufacturing sub-sector and as such, it is often used as a representative of the industrial sector. Industrial output can be measured by various indices such as manufacturing capacity utilization, index of industrial production, share of industry in the GDP and so on.

Theoretical Framework

The Strategic trade theory stands as the theoretical framework of this study, there are many theories that are related to this study; however, they may vary depending on their variables under study. Strategic trade theory was propounded by Brander and Spencer in 1983. This theory proposed strategic interactions between firms in an international oligopoly and industry dominated by a small number of firms. Much of world trade is in differentiated products (i.e. manufactures) characterized by increasing returns to scale, the government could become an important player in form of subsidies, such as outright grants, loans at lower-than-market interest rates, promises to purchase a large volume of production, etc. However, the aid could also be more innovative--such as setting industry standards to benefit your home country firms.

Strategic use of export subsidies, import tariffs and subsidies or investment for firms facing global competition can have strategic effects to their development in the international market. Since intervention by more than one government can lead to cases resembling the Prisoners dilemma, the theory emphasizes the importance of trade agreements that restrict such interventions. International trade policy is one of the most ancient subject areas in economics, having generated serious debates at least since the classical period of ancient Greece, over two thousand years ago.

Empirical Review

Eke-Jeff and Okonkwo (2025) examined the impact of Capital Market Dynamics on Industrial Growth in Nigeria from 2000 to 2023. This study adopted an ex-post facto research design; OLS statistical analysis was used. Findings revealed that market capitalization had positive and no significant impact on industrial growth, all share index had negative and no significant impact on industrial growth, turnover ratio had negative and significant impact on industrial growth, and trading volume had significant positive effects on industrial growth in Nigeria. The study therefore, suggests that developing the capital market technologically and digitally can enhance industrial and economic growth in Nigeria.

Aiyedogbon *et al.* (2024) investigated the impact of capital market development on the growth of industrial sector in Nigeria between 1986 and 2022 with the aid of ARDL estimation technique. The findings revealed that Stock Market Capitalization had a significant and positive impact on industrial sector growth, suggesting that as market capitalization increased, the industrial sector flourished. In the same vein, Turnover Ratio, which is the value of traded shares divided by market capitalization, was found to enhance industrial sector growth positively and significantly. These positive relationships underscored the pivotal role the capital market plays in boosting the industrial sector by mobilizing and channeling resources efficiently. However, the All-Share Index exhibited a negative relationship with the industrial sector growth, indicating that while general market sentiment might be positive, it might not always translate to growth in the industrial sector.

Ekwunife *et al.* (2024) investigated Financial Development and Manufacturing Sector Performance in Nigeria. The study used the Ex-post facto research design and annual time series from 1986 to 2021, which was sourced from CBN Statistical Bulletin and WDI. Principle component analysis was employed to construct index for the independent variables. The study employed Unit Root Test, the Error Correction Model (ECM) and ARDL Estimator were used in testing the hypotheses. The Results of the study revealed, Financial Liberalization explained -31% of changes that take place in manufacturing sector through exchange rate liquidity ratio and nominal interest rate with a t-test of 6.366. While Financial Intermediation explained 85% of changes that take place in Manufacturing Sector in Nigeria (MOG) through total loan and advance, loan to deposit and private sector credit with a t-test of 6.8150.

Irejeh *et al* (2024) examined the effect of capital market on industrial development in Nigeria for the period of 33 years spanning from 1990-2022. ARDL was used for analysis. The study concluded that MCAP, TV have significant relationship with INDOPT both on the short & long run respectively, meanwhile GFCF has significant relationship with INDOPT only on the long run. The study thereby recommends that positive impact of total volumes calls for proper policies to be implemented so as to attract more investors to invest in the market.

Olarinre *et al.* (2023) examined the impact of Capital Market Dynamics on Industrial Growth in Nigeria from 2000 to 2023. The study adopted an ex-post facto research design, descriptive statistics, unit roots tests, granger causality tests and regression (OLS) statistical analysis were

used. Findings revealed that market capitalization had positive and no significant impact on industrial growth, all share index had negative and no significant impact on industrial growth, turnover ratio had negative and significant impact on industrial growth, and trading volume had significant positive effects on industrial growth in Nigeria. The study therefore, suggests that developing the capital market technologically and digitally can enhance industrial and economic growth in Nigeria.

Peia *et al.* (2023) evaluated the impacts of financial development and industrial structure on environmental sustainability in China from 1995 to 2020 using the A.R.D.L. approach. The result indicated that financial development negatively impacts CO2 emissions and greenhouse gas emissions in the long-run. The impact of industrial structure is also enormous. The results also suggested that industrial structure negatively impacts environmental sustainability by decreasing CO2 emissions and greenhouse gas emissions in the long-run.

Yakubu (2023) examined the nexus between capital market capitalization and economic growth in Nigeria using annual time series data for the period 1990-2021. By applying OLS. The results indicate that there is a positive and significant relationship between capital market capitalization and economic growth, there is a long-run relationship between the variables and also unidirectional causality was found from MCAP to GDPG. Subsequently, the paper recommends that policy makers should concentrate on implementing short-term and long-term policies that will develop the Nigerian financial system especially the capital market since it is capable of boosting economic growth in Nigeria.

Joseph (2022) analyzed the causal relationship between financial sector development and industrialization in Tanzania from 1990 to 2020 using Granger causality and autoregressive distributed lag (ARDL) estimation. Granger causality results showed domestic credit to the private sector, and broad money Granger-caused industry value added. The ARDL estimation results showed a significant negative short-run effect of broad money on manufacturing and industry value-added. Furthermore, domestic credit to the private sector significantly positively affected manufacturing value-added in the short-run. In the long-run, there is a significant positive effect of domestic credit to the private sector on industry value-added, and a significant negative effect of broad money on industry value-added.

Effiong and Ekong (2021) examined the influence of the financial sector on industrialization in Nigeria from 1981 to 2019. The study utilized the Augmented Dickey-Fuller unit root test, Autoregressive Distributed Lag (ARDL) Bounds test for cointegration, and Error Correction Model. The result indicated that financial sector development exerted a negative and significant effect on industrialization in Nigeria; while a negative and significant effect of deindustrialization on economic growth was also observed. The ARDL Bounds test for conintegration validated the existence of a long-run equilibrium relationship between financial sector development and industrialization; and between industrialization and economic growth in Nigeria. The error correction model revealed that 56.98% of the short-run distortions in industrial productivity is corrected annually so that equilibrium is restored in the long-run; while 93.06% of the short-run distortions in economic growth is corrected annually.

Oyewole and Olaniyi (2018) examined the interplay between macroeconomic factors, stock market performance, and industrial growth. Their study covered data from 1995 to 2016. Adopting a Vector Auto regression (VAR) method for their analysis, the findings highlighted that while stock market activities have significance, other macroeconomic and policy factors can sometimes overshadow the effects of stock market metrics like the turnover ratio on industrial growth. Critics of this research argue that the study's broad scope, while comprehensive, might spread its focus too thin, potentially sidelining the importance of sector-specific policies on industrial growth. Vikas (2018) determined the causal relationship between industrial growth and financial development during the post economic reforms in India (1991-2014). The long run relationship between financial development and industrial growth is tested by using ARDL (Auto Regressive Distributed Lag) model while causal relationship has been investigated with the help of Granger Causality Test. The empirical results of ARDL model found strong evidence in the long run between financial development and industrial growth and Granger Causality test indicated the bi-directional causality exists between industrial growth and financial development in India. The results of the study supported the significant role of financial development in the industrial growth.

Durojaiye and Ibrahim (2016) studied the relationship between stock market indicators and industrial performance, with a particular focus on African nations from 1990 to 2014. The findings highlighted that stock market indicators can sometimes be a double-edged sword for economic sectors in Africa. While these indicators might depict a prospering economy on the surface, they might concurrently be signifying inherent vulnerabilities in specific sectors, such as the industrial sector. One criticism of their study, however, is that while it encapsulated multiple African countries, the unique economic circumstances of each country were not individually addressed, potentially leading to overgeneralizations.

Chukwunonso and John (2016) explored stock market activities and their impact on industrial production in Nigeria from 1985 to 2014. The duo discovered that while stock market activities generally support industrial production, the inherent market volatilities in Nigeria sometimes dampen this positive impact. They emphasized the need for stable economic policies to harness the full potential of the stock market in driving industrial growth. Critics of their study argue that the research might have been more comprehensive if it had considered the global economic dynamics that invariably influence emerging markets like Nigeria.

Olayemi and Michael (2016) investigated the impact of financial reforms on industrial productivity growth in Nigeria. A vector auto-regression analysis was employed, using a time series data from of 1986 and 2013. The study however found out that the various financial services reforms put in place since the introduction of the Structural Adjustment Programme (SAP) in Nigeria have not significantly brought about the needed improvement in the level of industrial productivity growth in the country. It is imperative for the financial reform operations to specifically target the industrial sector of the economy through a growth engendering reform policy capable of ensuring a sizeable and economically viable lending interest rates regime. The provision of expansionary grants for the real sector of the economy

would also serve as opportunity to increase the percentage contribution of industrial sector to the country's gross domestic product.

Nwaolisa and Chijindu (2016) assessed the casual relationship between index of industrial production and Nigeria stock market liquidity and the effect stock market liquidity has on industrial production, from 1981 to 2015. The OLS regression reports that stock market liquidity has not positively influenced index of industrial production. The error correction model indicates that 21% of the error generated in the last period is corrected in the current period. The granger causality test discloses that stock market liquidity has no significant effect on index of industrial production rather it is the index of industrial production that has significant effect on stock market liquidity in Nigeria production. From our findings, we recommend relaxation in some of the stringent requirements for entry into the market to ensure that more companies are listed as industries are the large user of external fund and they grow faster in countries with high level of stock market development and efficient legal system.

Methodology

Research Design

This paper adopts *ex-post facto* design. The ex-post facto design is particularly suited for studies aiming to decipher statistical associations between dependent and independent variables, primarily to establish cause-and-effect relationships. It is a design that not only allows for the testing of hypotheses about these relationships but also effectively integrates theoretical review with empirical findings (Kerlinger & Howard, 2013).

Model Specification

The Autoregressive Distributed Lag Model (ARDL) was used in this study to examine the long-term and short-term effects. A modified model developed by Ekwunife *et at.* (2024) serves as the foundation for the model adapted for this study. The original model is stated as:

$$INO = f(SMC, TOR, ASI) \quad - - - - - - \quad 1$$

Where: INO = Industrial outputs, SMC = Stock Market Capitalization TOR = Turnover ratio, ASI = All share Index

This model failed to add relevant control variables of interest rate, money supply, private sector output and treasury bill. This limits the pass-through effect of development finance institutions its on industrial growth. Hence, this study improves on its model by modifying it. Thus, the modified functional relationship version of this study is:

$$INO = f(ASI, SMC, TB, INTR, MS, PSC) \quad - - - - \quad 2$$

Explicit, equation 2 can be written as:

$$INO_t = \beta_0 + \beta_1 ASI + \beta_2 SMC + \beta_3 TB + \beta_4 INTR + \beta_5 MS + \beta_6 PSC + \varepsilon_t \quad - \quad 3$$

Where;

INO	=	Industrial Output
ASI	=	All Share Index
SMC	=	Stock Market Capitalization
TB	=	Treasury Bill
INTR	=	Interest Rate
MS	=	Money Supply
PSC	=	Private Sector Credit
t	=	Time Period (annually)
β_0	=	Intercept term
$\beta_1 - \beta_6$	=	Parameters for the Variables respectfully

Nature and Sources of Data

Secondary data which include data from Central Bank Statistical Bulletin, will be used and the data will be arranged with the vast ways of data collection in order to easily extract new meaning from them in such a way that every presentation of data will be supported by an analysis. The area of location is Nigeria and the variables to be used are industrial growth (INO) as the dependent variables while all-share index (ASI), stock market capitalization (MC), treasury bills (TB), interest rate (INTR), money supply (MS) and private sector output (PSC) as the independent variables.

A priori Expectation

$a_1 > 0, a_2 > 0, a_3 < 0, a_4 < 0, a_5 > 0$ and $a_6 > 0$

Based on the a priori expectation of the model, it is expected that the coefficients of all share index ASI, stock market capitalization (SMC), money supply (MS) and private sector credit (PSC) are expected to have meaning, that they are to have a significant impact on industrial growth proxied by (INO). While the coefficient of treasury bill (TB) and interest rate are expected to be negative, that they are to have insignificant impact on industrial growth proxied by (INO).

Method of Data Analysis

In examining the impact of financial market development on industrial growth in Nigeria, this study adopted Auto regressive Distributed Lagged (ARDL) model estimation technique, notwithstanding other preliminary analysis will also be carried out. Below are details of these techniques

Variables Description and Measurement

The study makes use of following variables: Industrial Growth, All Share Index, Stock Market Capitalization, Treasury Bills, Interest Rate, Money Supply and Private Sector Credit.

Table 1: Variables Description and Measurement

Variable	Acronym	Description	Measurement	Source
Industrial Sector Output	INO	The expansion and development of an economy's industrial sector, leading to increased output, efficiency and overall economic advancement	Annual ₦' Billion	CBN Statistical Bulletin, 2023
All Share Index	ASI	All share index tracks the performance of all companies listed in the Nigerian Stock Exchange.	Annual ₦' Billion	CBN Statistical Bulletin, 2023
Stock Market Capitalization	SMC	Market capitalization is a measure of company's total value. It is calculated by multiplying the current share price by the number outstanding shares	Annual ₦' Billion	CBN Statistical Bulletin, 2023
Treasury Bill	TB	Are short term instruments issued by Central Bank of Nigeria (CBN) on behalf of Federal government of Nigeria (FGN) at a discount rate	Annual ₦' Billion	CBN Statistical Bulletin, 2023
Interest Rate	INTR	The cost of borrowing for individuals, businesses and government in the country.	Annual (Percentages)	CBN Statistical Bulletin, 2023
Money Supply	MS	The total amount of money circulating in an economy at a given time, including cash, coins and balances in bank accounts.	Annual ₦' Billion	CBN Statistical Bulletin, 2023
Private Sector Credit	PSC	Private sector credit refers to financial resources like loans and investments, provided by financial institutions to businesses and individuals in the private sectors	Annual ₦' Billion	CBN Statistical Bulletin, 2023

Source: Researchers' Compilation, 2025

Results and Discussions

Table 2: Descriptive Analysis Results

	LINO	LASI	LSMC	LTB	LINTR	LMS	LPSC
Mean	8.220824	9.030428	7.176620	6.310775	3.159411	7.608525	7.288027
Median	8.664303	10.04255	7.814057	6.571049	3.139680	7.771237	7.388114
Maximum	11.24356	11.03632	11.22795	8.782936	3.586016	11.05899	10.87587
Minimum	4.175085	5.009412	1.916923	2.831801	2.484907	3.169954	2.724412
Std. Dev.	2.062811	1.818737	2.925729	1.665349	0.208729	2.471859	2.566888
Skewness	-0.439542	-0.993786	-0.420978	-0.599650	-0.620669	-0.323811	-0.282608
Kurtosis	2.055006	2.670478	1.799907	2.367374	4.208098	1.778130	1.712059
Jarque-Bera	2.637517	6.426794	3.402759	2.911018	4.750663	3.027934	3.132247
Probability	0.267467	0.040220	0.182432	0.233282	0.092984	0.220035	0.208853
Observations	38	38	38	38	38	38	38

Source: Eviews 10

From the above table 2, the descriptive statistics results show the mean values of 8.220824, 9.030428, 7.176620, 6.310775, 3.159411, 7.608525 and 7.288027 for industrial output, all share index, stock market capitalization, treasury bills, interest rate, money supply and private sector credit respectively. Their median values are 8.664303, 10.04255, 7.814057, 6.571049, 3.139680, 7.771237 and 7.388114 respectively. The maximum values are given as: 8.664303, 10.04255, 7.814057, 6.571049, 3.139680, 7.771237 and 7.388114 for industrial output, all share index, stock market capitalization, treasury bills, interest rate, money supply and private sector credit respectively. While their minimum values are 4.175085, 5.009412, 1.916923, 2.831801, 2.484907, 3.169954 and 2.724412 respectively.

The values of standard deviation industrial output, all share index, stock market capitalization, treasury bills, interest rate, money supply and private sector credit are given as: 2.062811, 1.818737, 2.925729, 1.665349, 0.208729, 2.471859 and 2.566888 respectively. Industrial output, all share index, stock market capitalization, treasury bills, interest rate, money supply and private sector credit are all found to be negatively skewed. The probability of the Jarque- Bera statistics of 0.267467, 0.182432, 0.233282, 0.092984, 0.220035 and 0.208853 industrial output, stock market capitalization, treasury bills, interest rate, money supply and private sector credit are normally distributed at 5% level of significance. While 0.040220 for all share index is not normally distributed at 5% level of significance.

Table 3: Unit Root Test Results

Variables	ADF	1% CV	5% CV	10% CV	Order	P - Value
LINO	-4.478811	-3.632900	-2.948404	-2.612874	I (1)	0.0011
LASI	-4.258979	-3.632900	-2.948404	-2.612874	I (1)	0.0019
LSMC	-4.752056	-3.626784	-2.945842	-2.611531	I (1)	0.0005
LTB	-5.537210	-3.626784	-2.945842	-2.611531	I (1)	0.0000
LINTR	-4.528192	-3.621023	-2.943427	-2.610263	I (0)	0.0009
LMS	-4.162908	-3.626784	-2.945842	-2.611531	I (1)	0.0025
LPSC	-4.482435	-3.626784	-2.945842	-2.611531	I (1)	0.0010

Source: Eviews 10

Based on the result of the unit root test in table 3 above revealed that industrial output, all share index, stock market capitalization, treasury bills, money supply and private sector credit were not found to be stationary at level, as their ADF statistic values are lesser than their critical value with their respective probabilities greater than 5% level of significance. However, they became stationary at first difference. Thus, their order of integrations are *I* (1). On the other hand, interest rate was to be stationary at level as the absolute value of their ADF statistic was greater than their critical value at 5% level of significance. Thus, its order of integration is *I* (0).

Table 4: The Result of Bound Test - Co-integration Analysis

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	4.063911	10%	2.53	3.59
k	6	5%	2.87	4
		2.5%	3.19	4.38
		1%	3.6	4.9

Source: Eviews 10

From the co-integration test result in table 4 above, it could be seen that F-statistic value of 4.063911 is greater than the lower bound [*I* (0)] and upper bound [*I* (1)] critical values of 2.87 and 4 respectively at 5% level of significant. Therefore, the variables are found to be co-integrated, and as such, there is a long-run equilibrium relationship between financial market development and industrial growth for the period of study.

Table 5: ARDL Model Results of the Short-Run, Long-Run ECM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.345051	0.541147	6.181406	0.0000
@TREND	0.117578	0.018626	6.312696	0.0000
D(LINO(-1))	0.425726	0.145051	2.935002	0.0102
D(LASI)	-0.209857	0.118558	-1.770081	0.0970
D(LSMC)	0.335840	0.100691	3.335340	0.0045
D(LMS)	0.185618	0.237148	0.782710	0.4460
D(LPSC)	-0.411895	0.185549	-2.219868	0.0423
CointEq(-1)*	-0.982270	0.155649	-6.310810	0.0000
R-squared	0.827938			
Adjusted R-squared	0.721424			
F-statistic	7.773006			
Prob(F-statistic)	0.000023			
Durbin-Watson stat	2.159878			
LONG RUN				
LASI	0.124579	0.189975	0.655763	0.5219
LSMC	0.334655	0.313076	1.068927	0.3020
LTB	0.322718	0.122312	2.638481	0.0186
LINTR	0.032069	0.274547	0.116808	0.9086
LMS	-1.146302	0.476192	-2.407226	0.0294
LPSC	0.727385	0.528460	1.376424	0.1889

Source: Eviews 10

The table presents the results of the Auto-Regressive Distributed Lag (ARDL) model, focusing on both the short-run dynamics and the long-run relationship between the dependent variable, (industrial growth), and the independent variables (all share index, stock market capitalization, treasury bills, interest rate, money supply and private sector credit) and the Error Correction model.

The error correction term (CointEq(-1)) has a coefficient of -0.982270, significant at the 5% level (p = 0.0000). This negative and significant coefficient confirms the existence of a long-run equilibrium relationship between the variables. The magnitude of the coefficient indicates that approximately 98.23% of the deviation from the long-run equilibrium is corrected each period, reflecting a relatively moderate speed of adjustment.

The R-squared value of 0.827938 indicates that approximately 82.7938% of the variation in industrial growth is explained by the model, while the adjusted R-squared value of 0.721424 suggests a good fit, accounting for the number of predictors. This means that only 17.2062% changes in industrial growth are other factors outside the model. The F-statistic of 7.773006 and its associated p-value (0.000023) indicate that the overall model is statistically significant, confirming the joint significance of the independent variables. The Durbin-Watson statistic of 2.159878 indicates that there is no evidence of significant autocorrelation in the residuals, suggesting that the model is well-specified.

Table 6: Serial Autocorrelation, Heteroskedasticity and Normality Tests

	X^2	**Probability**
Breusch-Godfrey Serial Correlation test	0.387652	0.6862
Heteroskedasticity test	1.266590	0.3049
*Jarque-Bera test	3.381275	0.184402

Source: Eviews 10

Breusch-Godfrey Serial Correlation Test: Given the F-statistic value of 0.387652 with a probability of 0.6862, which is not statistically significant at conventional levels of significance. This revealed that the model is free from autocorrelation. The normality test result reveals that the sample variance is normally distributed since Jaque-Bera probability is not significant.

Discussion of Findings

The short run, the coefficient of lagged industrial growth is 0.425726 and is statistically significant at the 5% level (p = 0.0102), indicating a strong positive relationship with current industrial growth. The coefficient of ASI is -0.209857, which is negative and statistically insignificance at 5% level as suggested by the probability value of 0.0970. This indicates an inverse relationship with industrial growth in the short run. While in the long run, the long-run coefficient for ASI is 0.124579, but it is statistically significant (p = 0.5219). This suggests that, in the long run, all share index have a significant impact on industrial growth. The coefficient of stock market capitalization is 0.335840 and is statistically significant at the 5% level (p = 0.0045). This indicates that an increase in stock market capitalization will lead to an increase in industrial growth in the short run. However, in the long run, stock market capitalization has a positive coefficient of 0.334655 but statistically insignificant at the 5% level (p = 0.3020). This indicates that stock market capitalization has direct relationship with industrial growth in the long run.

The coefficient of money supply is 0.185618 but is statistically insignificant at the 5% level (p = 0.4460). This indicating a positive relationship with industrial growth that an increase in money supply will lead to an increase in industrial growth in the short run. However, in the long run, money supply has a negative coefficient of -1.146302 but statistically significant at the 5% level (p = 0.0294). This indicates that money supply has an inverse relationship with industrial growth in the long run. An increase in money supply will lead to a decrease in industrial growth in the long run.

The coefficient of private sector credit is -0.411895 and is statistically significant at the 5% level (p = 0.0045). This indicates inverse relationship between private sector credit and industrial growth an increase in private sector credit will lead to a decrease in industrial growth in the short run. However, in the long run, private sector credit has a positive coefficient of 0.727385 but statistically insignificant at the 5% level (p = 0.1889). This indicates that private sector credit has a direct relationship with industrial growth in the long run. The coefficient of treasury bill is 0.334655 and is statistically significant at the 5% level (p = 0.0186). This indicates a direct relationship between treasury bill and industrial growth an increase in treasury bill will lead to an increase in industrial growth in the long run. The coefficient of interest rate is 0.032069 but statistically significant at the 5% level (p = 0.9086). This indicates a direct relationship between interest rate and industrial growth an increase in interest rate will lead to an increase in industrial growth in the long run.

Conclusion and Recommendation

The study used the ARDL technique to examine impact of financial market development on industrial growth in Nigeria. This was achieved using annual data from 1986 to 2023. The ARDL bounds test to co-integration result proves a long-run association among the variables. The paper concluded that there is evidence of long run relationship between financial market development and industrial growth in Nigeria for the period of study. However, a short-run result revealed that all share index is and statistically insignificant in influencing industrial growth in Nigeria. Stock market capitalization is positive and statistically significant on industrial growth; money supply is positive but not statistically significant and private sector credit is negative but statistically significant on industrial growth in Nigeria for period under review.

Based on the results above the study therefore recommended that, Government through Security and Exchange Commission (SEC) and Nigerian Deposit Insurance Corporation (NDIC) should create awareness by educating Nigerians on basic knowledge of shares, debentures and bonds to trade or invest in the financial market to encourages capital formation for the expansion and growth of their business. The government through the Central Bank of Nigeria and the Ministry of Finance should promote stable and effective monetary policies management that will stabilize money supply as well as boosting private sector demand deposits in Nigeria. In addition, financial market should be used to finance and invest, in developing physical and social infrastructure such as roads, hospitals, housing and real estate that will create job opportunities for Nigerian citizens.

References

Anderu, K. S. (2020). Capital market and economic growth in Nigeria. *Jurnal Perspektif Pembiayaan dan Pembangunan Daerah,* 8(3), 295–310

Aiyedogbon, J. O., Abayomi, A., & Okoroike N. J., (2024). Impact of Capital Market Development on Industrial Sector Output in Nigeria, *International Journal of Research and Innovation in Social Science* (IJRISS) ISSN No. 2454-6186 | DOI: 10.47772/IJRISS

Algaeed, A. H. (2021). Capital market development and economic growth: An ARDL approach for Saudi Arabia, 1985–2018, *Journal of Business Economics and Management,* 22(2), 388–409

Batuo, M. E. (2015). The role of telecommunications infrastructure in the regional economic growth of Africa, *The Journal of Developing Areas*: 313-330.

Chukwunonso, E., & John, K. (2016). Stock market activities and industrial production: the Nigerian experience. *African Economic Review*, *28*(2), 150-167.

Durojaiye, B. O., & Ibrahim, G. (2016). Stock Market Indicators and Industrial Performance: An African Perspective, *African Journal of Economic Studies*, *5*(2), 44-61.

Effiong, U. E., & Nyong, E. C. (2021). Global Trends in Financial Sector-Led Industrialization: How did Nigeria Fare? *Asian Journal of Economics, Finance and Management*, *3*(1), 745–768. Retrieved from https://www.journaleconomics.org/index.php/AJEFM/article/view/43

Eke-Jeff, O. M., & Okonkwo, I. V. (2025). Impact of capital market dynamics on industrial growth in Nigeria: 2000 – 2023. *African Banking and Finance Review Journal*, *19*(19), 84–106.Retrieved from http://www.abfrjournal.com/index.php/abfr/article/view/296

Ekwunife, F. C., Onwumere, J. U. J., Uche, D. B., Nnate, E. C., & Ejinkonye, R. C. (2024). Financial Development and Manufacturing Sector Performance in Nigeria, 1986–2021, *Seybold Report Journal, 19(01)*, 04-24. DOI: 10.5110/77. 1093

Emenike, K. O. (2021). Interdependence among West African stock markets: A dimension of regional financial integration, *African Development Review, 33*(2), 288–299.

Ismaila, M. (2016). Exchange rate depreciation and Nigeria economic performance after structural adjustment programmes (SAPs). *Nigeria Journal of Social Development*, 5(2).1-21

Irejeh E. M., Markwe H. S. & Okoro L. O. (2024) The Effect of Capital Market on Industrial Development of Nigeria, *European Journal of Accounting, Auditing and Finance Research*, 12(5), 31-45

Joseph, E. (2022). Financial sector development and industrialization in Tanzania. *Tanzania Journal of Development Studies,* 20(2), 1–26.

Levine, R. (2021). Finance, growth, and inequality, *Journal of Economic Perspectives*, 35(3), 29-52.

Nguyen, T. T. H., Ngo, T. Q., & Nguyen, D. T. (2022). ESG and financial performance: The role of financial market development, *Journal of Sustainable Finance & Investment*, 12(4), 789-805.

Nwamuo, C. (2018). Impact of capital market on the economic growth in Nigeria: An empirical analysis, *IOSR Journal of Economics and Finance, 5*(9), 48-

Olarinre, O. T., Oladunni, U. A., & Omobosola, A. O. (2023). The impact of capital market on the economic growth of Nigeria, Global *Journal of Business, Economics, and Management: Current Issues,* 13(2), 126–140.

Orji, J. O., Ezema, C. A., Uduakobong, I. & Emediong, I. A. (2023). Impact of treasury bills on economic growth in Nigeria, *International Journal of Social Sciences and Management Review,* 6(1), 215-227.

Oyewole, O. S., & Olaniyi, T. (2018). Macroeconomic factors, stock market performance and industrial growth: unraveling the nexus in Nigeria, *African Economic Studies*, 30(1), 12-28.

Ozili, P. K. (2023). Financial inclusion and sustainable development: An empirical analysis. *Journal of Cleaner Production*, 398, 136523.

Peia, Y., Wub, Z., Cukurovalic, A. & Yue, X. (2023). Financial development, industrial structure and environmental sustainability: new evidence from Japan, *Economic Research-EkonomskaIstraživanja, 36*(3), 1-12.

Siong, H. C., & Thing, L. T. (2018). The relationship between stock market and economic growth: The Case of Malaysia, *International Journal of Economics, Commerce, and Management*, 6(1), 25-38.

Taiwo, J. N., Adedayo, A., & Evawere, A. (2016). Capital market and economic growth in Nigeria, *Account and Financial Management Journal*, 4(2) 497-513.

Vikas, T. J. (2018). Financial development and industrial growth in India: An empirical investigation, *Journal of Commerce and Accounting Research, 7*(3), 1-7.

Yakubu, M. M. (2023). Capital market capitalization and economic growth in Nigeria: An econometrics analysis, *Journal of Global Economics and Business,* 4(12), 91–109.