CAPITAL MARKET AND INDUSTRIAL OUTPUT GROWTH NEXUS IN NIGERIA

EZEANYEJI, Clement I.
Department of Economics,
Chukwuemeka Odumegwu Ojukwu University,
Anambra State, Nigeria
ci.ezeanyeji@coou.edu.ng

USIFOH, Kingsley Stanley
Delta Institute for Advance Studies,
Agbor Delta State, Nigeria
deltainstitute2022@gmail.com

OYELADE O. OLAYINKA
Department of Economics,
Chukwuemeka Odumegwu Ojukwu University,
Anambra State, Nigeria

EJEFOBIHI Ugochukwu Frank
Department of Economics,
Chukwuemeka Odumegwu Ojukwu University,
Anambra State, Nigeria
lambatzfrank@gmail.com

ABSTRACT

The study specifically seeks to investigate the extent of the relationship that exists between the capital market and industrial output growth in Nigeria; to identify the drivers of industrial output growth in Nigeria. This research work is informed by the need to revive the sinking Nigerian industrial sector. The Augmented Dickey-Fuller (ADF) test, Autoregressive Distributed Lag (ARDL) technique and the stability and the short-run diagnostics and stability for ARDL Model were employed in the analysis. The variables employed include – industrial output growth, stock market capitalisation (% GDP), broad

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money supply (% GDP), credit to private sector (% GDP), investment expenditure (% GDP), prime lending rate, official exchange rate of Naira vis-à-vis the US Dollar, inflation rate and labour force (% GDP). The results show that all the variables are not stationary of the same order of co-integration, hence the need for the use of Autoregressive Distributed Lag model (ARDL). Also, ARDL Bound test indicates that there is a unique long run relationship between dependent and independent variables used in the study. However, the study acknowledged in the hypothesis one of the study that capital market has positive significant effect on industrial output growth in Nigeria. The study also admitted in the hypothesis two that, prime lending rate, inflation rate and labour force are not a significant factor that drives industrial output growth in Nigeria. While exchange rate is a significant factor that drives industrial output growth in Nigeria. Some of the recommendations made in this study are that – policies guiding capital market should be maintained since they foster growth of the industrial sector in Nigeria. The funds raised by government in the form of government securities in the capital market should be put into productive sectors of the economy that will necessitate to growth in all facets of the economy.

1. INTRODUCTION

There is a symbiotic relationship between the financial sector and the real sector. The financial sector provides credit facilities and financial service to the real sector for production of goods and services activities (Karimo & Ogbonna, 2017) while the real sector makes productive use of the funds to create income for the expansion of the real sector an economy at large (Akinlo, 2019). According to Akinlo, Yinusa and Adejumo (2021) the financial sector is the backbone of other sectors because it mobilises funds from surplus sectors and allocate them efficiency among deficient sectors through a process called financial intermediation (Adeyeye, Fapetu, Aluko & Migiro, 2015).

However, there are two opposite views about the cause-effect relationship between the financial sector and the real sector. The two views are the supply-leading hypothesis and the demand-following hypothesis (Karimo & Ogbonna, 2017; Adeyeye, et al., 2015; Akinlo, 2019). The supply-leading theory also known as finance-led growth hypothesis states that the financial sector drives productivity in the real sector which subsequently leads to economic growth (Adeyeye, et al., 2015). Hence, supply-leading hypothesis postulates that financial development triggers economic growth through efficient capital allocation and increased investment (Karimo & Ogbonna, 2017). On the other hand, the demand-following theory also known as growth-led finance hypothesis states that increased productivity in the real sector drives financial development (Adeyeye, et al., 2015). Therefore, the demand-following hypothesis postulates that causality runs from the real sector to the financial sector meaning that financial development is as a result of increased productivity in the real sector (Adeyeye, et al., 2015; Karimo & Ogbonna, 2017).

The Nigerian financial sector is made up of capital market and money market. The capital market is the market where long-term capital is raised (Abina & Lemea, 2019; Josiah, Samson & Akpeti, 2012) while the money market is the market for short-term funds. The capital market consists of the Nigeria Stock Exchange, commercial banks, insurance companies, finance houses, mortgage banks and so on (Abina & Lemea, 2019) while the money market consists of commercial banks, discount houses, microfinance banks and so on. Nigeria's real sector is made up of agriculture, transportation and communication, and industry (CBN, 2018a). The industry comprises manufacturing companies, extractive companies, and power generating companies. These industries require long-term funds to finance capital projects. Such funds are sourced from the capital market mostly through the banks in the form of credit facilities and from the stock exchange in the form of stocks and bonds (Mokuolu, 2019). In the bid to accelerate growth in the real sector and the economy, several sub-Sahara African countries including Nigeria have implemented a lot of reforms in financial sector (Onyango, 2011; Akinlo, et al., 2021). Some of the financial reforms that have been implemented in Nigeria are foreign exchange reforms, monetary policy reforms, pension reforms, capital market reforms (Oke & Adeusi, 2012; Onyango, 2011). The prominent capital reforms are the banking sector reforms; however, reforms were also implemented in the stock market (Oke & Adeusi, 2012). The banking sector reforms were implemented to enhance the banks' operations, improve their quality and safety of the system in order to boost financial intermediation (Onyango, 2011) while the stock market reforms were implemented to address issues concerning operational inefficiencies, risk management and so on (Oke & Adeusi, 2012). It is imperative to examine the relationship between the capital market and the industrial output in Nigeria.

1.2 Statement of the Problem

Despite the achievements that have achieved in the Nigerian capital market, the country's industrial output remains low and stagnant. There seems to be any significant relationship between the capital market and the industrial sector in Nigeria. However, several factors have been attributed to the low industrial output in the country. For instance, Uma, Eboh, Obidike and Ogwuru (2013) revealed that Nigeria's industrial sector is confronted by a few problems which include bad roads, epileptic power supply, high cost of capital, inconsistent policies, corruption and so on. Mokuolu (2019) argue that the poor performance of the manufacturing sub-sector is due to low investment, high inflation, unfriendly business environment, inadequate infrastructure, capacity underutilisation, policy reversals, insufficient capital financing among others. According

to Josiah, et al., (2012), the financial challenges facing the industrial sector of the country is as a result of the fact the capital market is not actively used to raise long-term capital due to economic instability, low yields of capital market instruments, and government interference. Edame and Okoro (2013) highlighted both endogenous and exogenous problems that facing the Nigerian capital market and they include small size, illiquidity, weak growth of securities, delay in issuance of securities title, double taxation, macroeconomic instability and so on.

The poor performance of the industrial sector, as reflected by low industrial output, manifests in other macroeconomic problems such as unemployment (Akinlo, et al., 2021). If there is dearth of capital financing in the industrial sector, many productive firms such as manufacturing companies would not have access to funds to finance their operations and would collapse eventually and lay-off their workers, which would increase the unemployment rate in the country (Akinlo, et al., 2021). It is evident that the industrial sector is an important sector that determines the growth of the economy. Given the disappointment performance of the industrial sector despite the achievements that have been recorded in the capital market, it is necessary to examine empirically, the relationship between the capital market and the output of the industrial sector.

1.3 Research Questions

1. To what extent does the capital market impact on industrial output growth in Nigeria?
2. What are the economic factors that determine industrial output growth in Nigeria?

1.4 Objectives of the Study

1. To determine the extent of the relationship that exists between the capital market and industrial output growth in Nigeria.
2. To identify the drivers of industrial output growth in Nigeria.

1.5 Hypotheses

1. That there is no significant relationship between capital market and industrial output growth in Nigeria.
2. That Nigeria's industrial output growth is not determined by the performance of the capital market and other economic variables.

2. REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

The two main concepts in this study are the capital market and industrial output.

2.1.1 Capital Market

Capital market is an integral part of the financial market (Owui, 2019). It is a market where long-term funds are bought and sold (Idyu, Ajekwe & Johnmark, 2013; Owui, 2019). It is like every other market but in this case, what is traded is financial instruments such as securities, bonds, treasury bills and certificate, development stock industrial loans and so on (Idyu, et al., 2013). Capital market has been defined in various ways. For instance, Owui (2019) defined capital market as the market where equity obligations and long-term debts are transacted. Oke, et al., (2012) defined capital market as the market where medium to long-term finance can be raised. According to Uruakpa (2019), capital market helps to channel long-term capital to firms through financial intermediation by linking the deficit sector with the surplus sector thereby facilitating productivity

and economic growth and expansion. According to Hayatudeen and Adamu (2017), the capital market which includes the stock market is the platform through which low cost funds are mobilised to finance medium to long term projects such as infrastructure and other crucial projects that are capable of transforming the economy. Kwode (2015) describes capital market as a part of the financial market, which is a collection of financial institutions that mobilises and allocates long-term funds among the sectors of the economy. Some of the financial institutions that make up the capital market include banks, stock market, finance houses, mortgage banks, insurance companies, pension fund institutions and so on (Abina & Lemea, 2019).

2.1.2 Industrial Output

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 utilisation, index of industrial production, share of industry in the GDP and so on. The goal of industrialisation is industrial development, which can be described as persistent increase in the industrial output. Hence, industrial development is often used interchangeably with industrial output in the literature. Industrial development also encompasses the replace of traditional method of production with advanced production methods. It is a deliberate and consistent application of modern production technologies and technology management techniques (Egbuche & Nzotta, 2020). It is believed that the modern production techniques do not only increase productivity but also reduces costs and saves time and energy. This is known as industrial efficiency. Industrial development or efficiency is prerequisite for economic development (Uruakpa, 2019). This is because economic development can only be achieved if there is quantitative and qualitative increase in production, improved quality of life, creation of employment opportunities, poverty alleviation and the application of advanced technology and so on (Offum & Ihuoma, 2018). All these can be achieved through industrial development.

2.2 Theoretical Review

2.2.1 Efficient Market Hypothesis

The capital market provides long-term funds to facilitate production activities in the industrial sector. This is done through capital mobilisation and capital allocation. Hence, capital is transferred from savers to borrowers. However, it is important that the market is efficient for the process to be carried out effectively. One of the theories that is related to the capital market is the Efficient Market Hypothesis (EMH). This theory was propounded by Pender in 1974. It is used to explain the relationship between securities prices and the information that drive them (Salam, 2013). According to the Efficient Market Hypothesis (EMH), a capital market can be said to efficient if it reflects fully all the available information about the quoted companies at every point in time. Under this hypothesis, it is believed that when there is new information, the stock prices will adjust instantly to reflect the information. Hence, it is believed that the stock prices do not lag. If new information is instantly priced-in and reflected in the stock prices, then, it is not possible to predict future stock prices and as such, no trader can profit on the new information. According to Fama (1991), the capital market is efficient if the marginal benefit of trading on new information is the same as the marginal cost of accessing the information. Since it is believed that security

prices reflects fully all the available information in the market, then the marginal benefit will be zero and as a result, the marginal cost of accessing the information is also expected to be zero. However, since there are positive informant and trading cost (Fama, 1991), this means that there different versions of EMH. The weaker version of EMH assumes that prices reflect the available to the point where the marginal benefit would not exceed the marginal cost while for the extreme version; it is assumed that prices reflect the available to the point where the marginal benefit would be equal to the marginal cost and equal to zero (Fama, 1991). However, there are three versions of EMH and they are Weak- form market efficiency, Semi-strong market efficiency and Strong market efficiency (Omuchesie, et al., 2014)

i. **Weak Form:** The weak form of EMH assumes that securities prices reflect fully all the past available information in the market (Dritsaki, 2011). This means that it is assumed that all available information about the securities are price-in and the securities prices would not change until there is new information that can drive it. The implication of this hypothesis is that trending following would not make any profit as the next direction of securities prices is determined by past information but by new information, which is unpredictable (Dritsaki, 2011). Since all traders and investors are aware of the publicly available information and have already adjusted their portfolio accordingly, no one can profit from such past information and the securities prices would not change considerable until new information become available to the market (Dritsaki, 2011).

ii. **Semi-strong Form:** The semi-strong form of EMH assumes that securities prices reflect instantly the available public information on the securities. This means that the capital market is assumed to highly responsive to new information such that as soon as they are made public, the securities prices change immediately and accordingly reflecting the latest information in addition to the historical data.

iii. **Strong Form:** This is the extreme version of EMH. It states that securities prices reflect both public and private information. This means that under this hypothesis, insider trading can not be used to make profit in the market because it is believed that the private information that the insider have access to has been priced-in the securities prices already. However, this version of the hypothesis is controversial because sensitive private information can indeed be used to make profit in the market which is reason the regulatory bodies

Assumptions of Efficient Market Hypothesis

The preconditions for efficient market hypothesis are as follows:

1. Public and private information on securities are available and accessible to all market participants. Hence, there is no opportunity for arbitrage on the market. Therefore no trader or investor have edge over other traders or investors in terms of access to market information..
2. It is assumed that investors make rational decisions. Since investors are risk averse, it is expected that they would prefer the investment with lower risk.
3. It is assumed that no one can beat the market in the long run. This means that no trader can make returns that are higher than the market average consistently.
4. It is assumed the securities prices do not have a definite trend or pattern rather moves randomly.

Implications of Efficient market Hypothesis

The implications of the EMH are as follows:

1. The market forces determine the prices of securities efficiently.
2. Investors make rational investment decisions.
3. It is impossible to outperform the market
4. It is very difficult to predict future stock performance because it is difficult if not possible, to predict the future.
5. The market is highly liquidity that it is not too difficult to find buyers and sellers.

2.2.2 Random Walk Theory

Random walk theory is closely related to the weak form of EMH. It was developed by Kendall (1953) building on the work of the early 20th century writer Bachelier. It is based on the argument that the capital market does not have memory and as such, it is not influenced by past events. In line with the weak form of EMH, it is believed that securities prices are reflection of past information and the future prices are determined by future information which is unpredictable. The proponents of this theory postulate that securities prices are evolve in random walk or pattern. Since the future information would be random with a mix a good and bad, expected and unexpected, then the pattern or trend of future securities would also be stochastic in nature or random. Hence the past trend or pattern of securities can not be used to predict trend (Egbuche & Nzotta, 2020). Therefore, the attempts to predict future securities prices using technical analysis and fundamental analysis are not possible. This is an indication that the security prices are not sequential and are independent of past returns.

Assumptions of the Random Walk

1. Schochasticity: it is assumed that the variance of securities prices is minimum, independently, and identically distributed.
2. Finite Variance: it is assumed that the variance of the securities prices is finite and not important.
3. Price-Value Correlation: it is assumed price is closely related to its fundamental value.
4. Unconditional Expectations: it is expected that the market return is a time-invariant probability weighted average.
5. General Equilibrium: it is assumed that price equilibrium is obtained when traders mutually agree to trade.
6. Informational Efficiency: It is assumed that there is free flow of information such that all relevant information are available in the market
7. Normality: it is assumed that the distribution of price changes is normal with stable mean and finite variance.

The Random Walk Implications

The implications of the random walk theory are stated thus:

1. Although information is the major determinant of securities price on the market, its sequence or pattern is irrelevant.
2. Trends and patterns of the securities prices in short-term would be detected and corrected eventually

3. That current prices of securities is a reflection of past prices, which are fully disclosed and sufficiently static and accessible to all traders.

2.3 Empirical Literature

The role of capital as a factor of production in the industrial sector can not be over-emphasised. This is because huge capital outlay is needed to procure the required equipment and machinery and for the running of the factory. Kazeem, Abiodun and Kehinde (2021) used an Autoregressive Distributed Lag (ARDL) model procedure was employed for data analysis to examine the potential of domestic industrial output on economic growth in Nigeria. The results revealed that the contribution of the domestic industrial output to economic growth was appalling which was necessitated by the worrisome image of "Made-in-Nigeria" goods. It was also showed that the results that domestic industrial output and domestic savings have positive relationships with real gross domestic product in the long run. This implies that a rise in the level of each of domestic output and domestic savings necessitated an increase in real gross domestic product. Also, Egbuche and Nzotta (2020) note that the performance of Nigeria manufacturing sector has been on a downward trend as a result of lack of long term funds to support the capacity of the sector. They maintain that the needed funds can be raised on the capital market, which is the market where such funds can be sourced. They conducted a unit root test, co-integration test, ECM and OLS regression analysis to examine the effect of stock market operations on the output of the manufacturing sector in Nigeria. A multivariate regression model was used for the analysis with the dependent variable as manufacturing sector output while the independent variables include market capitalisation, total new issues, volume of transaction and equity stock with time series data spanning from 1981 to 2018. The results of the analyses showed that the stock market has a significant positive impact on manufacturing sector output in Nigeria. Further analyses showed that market capitalization, total new issues and value of transactions have significant positive impact on the output of the manufacturing sector in Nigeria while equity stock has significant negative effect on the sector.

Using ARDL Co-integration, Ayodeji and Ajala (2019) investigate the effects of capital market performance on sectoral output growth in Nigeria within a temporal scope 1984-2018. The study found that, on the effects of capital market performance on agricultural sector output, all share index, market capitalisation, value of transactions and number of listed equities exerted significantly positive long-run effects on agricultural sector output in Nigeria. It, also, found that, on the effects of capital market performance on industrial sector output, market capitalisation and Number of Deals exerted significantly positive long-run effects on industrial output in Nigeria. It, further, found that, on the effects of capital market performance on construction sector output, only market capitalisation exerted significantly positive long-run effects on construction sector output in Nigeria. Moreover, it found that, on the effects of capital market performance on trade sector output, only market capitalisation exerted significantly positive long-run effects on trade sector output in Nigeria while all share index, value of transactions and number of deals exerted insignificantly positive long-run effects on it. Lastly, it found that, on the effects of capital market performance on service sector output, none of the capital market performance indicators exerted significantly positive long-run effects on service sector output in Nigeria. However, Ayodeji and Ajala (2019) concluded that, capital market performance exerts heterogeneous long-run effects on sectoral output.

3. RESEARCH METHODOLOGY

3.1 Theoretical Framework

The relationship between capital market and industrial sector output in Nigeria can be examined through the production function, which shows how and the extent to which changes in inputs affects the output. The inputs are the factors of production while the output is the goods and services produced. In the traditional production function, the inputs are labour, management, land, capital, and technology. Algebraically, the function can be expressed thus:

$Q = \int (L, M, N, C, T)$ ----------(1)

Where Q - Output per unit of time
L - Labour
M - Management
N - Natural resources (Land)
C - Capital
T - Technology
$\int$ - functional relationship

The production function can be expressed mathematically thus

$Q = a_0 + a_1 L + a_2 M + a_3 N + a_4 C + a_5 T$---------- (2)

However, it is difficult to solve such an equation with many independent variables. Therefore, Economists often classify the inputs to two i.e. capital and labour. Hence the production function is expressed thus:

$Q = a_0 + a_1 L + a_2 C$ ---------- (3)

Where Q - Output per unit of time
L - Labour
C - Capital

In equation 3, the capital comprises all the production inputs except labour. However, equation 3 does not depict the production function accurately because it is a linear equation and does not reflects the law of variable proportion. A more realistic production function is Cobb-Douglas production function which is expressed thus:

$Q = A C^{\beta} L^{1-\beta}$ ---------- (4)

Where Q - Output
L - Labour
C - Capital
A and β - Positive constants

Since the focus of this study is to examine the impact of capital market on industrial sector output, Q in equation 4 stands for industrial sector output, which is the dependent variable, while the C is the capital financing i.e. long-term funds raised on the capital market, which is the independent variable. However, the capital financing is captured by the indicators of the Nigeria capital market.

3.2 Model Specification

Two models were specified to achieve the specific objectives stated in this study. The first model seeks to examine the relationship that exists between the capital market and industrial output

growth in Nigeria while the second model was to identify economic factors that determine industrial output growth in Nigeria.

Model I:
The first model is to achieve the first and second objectives, which is to investigate the extent of the relationship that exists between the capital market and industrial output growth in Nigeria. In formulating the model, insights were drawn from the works of Ayodeji and Ajala (2019). However, some adjustments were made to their works to allow for the inclusion of other variables such as the industrial output growth, stock market capitalisation (% GDP), broad money supply (% GDP), credit to private sector (% GDP) and investment expenditure (% GDP). The functional form of the model formulated afterwards is stated below:
IOg = *f*(MCAP, MS, CPS, INV) ----------(5)

The econometric form of the model can be expressed as:
$IOg_{t-1} = \alpha_0+\alpha_1 MCAP_t + \alpha_2 MS_t + \alpha_3 CPS_t + \alpha_4 INV_t + \mu_t$----------(6)
The logarithm of the model is;
$LnIOg_{t-1} = \alpha_0+\alpha_1 MCAP_t + \alpha_2 MS_t + \alpha_3 CPS_t + \alpha_4 INV_t + \mu_t$----------(7)

Where:
LnIOg = Log of industrial output growth
MCAP = Stock market capitalisation (% GDP)
MS = Broad money supply (% GDP)
CPS = Credit to private sector (% GDP)
INV = Investment expenditure (% GDP)
α_0= Constant
$\alpha_1 - \alpha_4$ = Estimation parameters
μ_t = Stochastic error term
t = Time period (1981-2021)

A' priori expectation: $\alpha_0 > 0$, $\alpha_1 > 0$, $\alpha_2 > 0$, $\alpha_3 > 0$, and $\alpha_4 > 0$, based on theoretical justifications, it is expected that the estimation parameters will turn out with signs and magnitude that would conform with economic theory. It is expected that, stock market capitalisation (% GDP), broad money supply (% GDP), credit to private sector (% GDP) and investment expenditure (% GDP) are expected to have a positive relationship with industrial output growth in Nigeria.

Model II:
The second model aims to achieve the second objective, which is to identify economic factors that determine industrial output growth in Nigeria. The formulation of the model was based on the works of Ayodeji and Ajala (2019) which were also modified to in order to include other variables such as industrial output growth, prime lending rate, official exchange rate of Naira vis-à-vis the US Dollar, inflation rate and labour force (% GDP). The functional form of the model can be stated thus:

IOg = *f* (PLR, EXR, INF, LAB)----------(8)
The econometric form of the model is stated below as:
$IOg = \beta_0 + \beta_1 PLR + \beta_2 EXR + \beta_3 INF + \beta_4 LAB + \mu_t$----------(9)

The logarithmic conversion of the model yields the structural form stated below:
$LnIOg = \beta_0 + \beta_1 PLR + \beta_2 EXR + \beta_3 INF + \beta_4 LAB + \mu_t$ ----------(10)

Where:
LnIOg - Log of industrial output growth
PLR - Prime lending rate
EXR - Official exchange rate of Naira vis-à-vis the US Dollar
INF - Inflation rate
LAB - Labour force (% GDP)
β_0= Constant
$\beta_1 - \beta_4$ = Estimation parameters
μ_t = Stochastic error term
t = Time period (1981-2021)

A priori expectation: $\beta_0 > 0$, $\beta_1 > 0$, $\beta_2 < 0$, $\beta_3 < 0$, and $\beta_4 < 0$. Again, it is expected that the estimation parameters would turn out with signs and magnitude that would conform to economic theory. According to theoretical explanation, it is expected that official exchange rate of Naira vis-à-vis the US Dollar and labour force (% GDP) would have direct impact on industrial output growth while prime lending rate and inflation are expected to have negative impact on industrial output growth in Nigeria.

3.3 Method of Analysis
As a contribution to existing literature, this study broadens the analytical framework by applying Autoregressive Distributed Lag (ARDL) approach for cointegration to estimate the parameters of the regression models in combination with co-integration technique to confirm the long run relationship among the variables in the models. The Augmented Dickey Fuller (ADF) unit root test was used to hedge against spurious regression as well as heteroscedasticity test. The data analysis was restricted to the period from 1981 to 2021. Although there are various econometrics techniques that can be used estimate the parameters in the economic relationships based on statistical observations (Koutisyannis, 2003), the ARDL approach for cointegration was employed in this study. There are a number of reasons for adopting this approach. Firstly, the parameter estimates derived through adopting ARDL have some optimal properties (Blue Properties i.e. Best, Linear, Unbiased and Estimator). Secondly, the computational procedure of ARDL is simple compared with other Econometric techniques. Besides, the data requirements are not excessive. Thirdly, ARDL is an essential part of most other estimation techniques.

In the light of the foregoing, the empirical investigation conducted in this study involves three step procedures, namely (1) Unit Root Test (Stationarity Test) and (2) ARDL approach for cointegration. These procedures are explained in detail below:

3.7 Sources of Data and Econometric Software
Secondary data are used in this study. They were sourced mostly from the publications of the Central Bank of Nigeria (CBN) such as CBN Statistical Bulletin, vol. 32, 2021 and World Development Indicators, 2021. The variables for which data were sourced include: industrial output growth, prime lending rate, official exchange rate of Naira vis-à-vis the US Dollar, inflation rate, labour force (% GDP), stock market capitalisation (% GDP), broad money supply (% GDP),

credit to private sector (% GDP) and investment expenditure (% GDP) for the period between 1981 and 2021. The econometric software packages used for the analysis are the E-View 9 software, while Microsoft Excel 2007 was used to prepare the data for analyses.

4. PRESENTATION AND ANALYSIS OF RESULTS

4.1 Unit Roots Test Result

The importance of a priori check of the existence of unit roots in the panel data comes from the already known effect that the presence of unit roots in time series may cause a misinterpretation of estimated results (Barreira & Rodrigues, 2005). In light of this, this study conducted some stationarity tests to check if the statistical properties of a time series do not vary with time. The study tests the variables for the time series properties of stationarity using the Augmented Dickey and Fuller (1981) and Phillip and Perron (1988) tests were used to determine the order of integration for each series. It is always important for time series to be stationary (that is having constant mean and variance over time) so as to be of practical value because if it is non-stationary, each set of time series is only useful for a particular period and it will be impossible to generalize it to other time periods. A time series that is not stationary is known as a series that contains unit root and it can be made stationary by differencing or detrending. For convenience, table 4.1 is a tabular presentation of the abridged unit-root test carried out on the variables.

Table 4.1: Abridged ADF and Philip-Peron (PP) Unit Root Test for the Models Respectively

Model(s)	Variables	ADF-Statistic	Critical Value			Order of Integration	Durbin-Watson stat.
			1%	5%	10%		
ADF Unit Root Test							
Model I	LnIOg	-4.453159	-3.615588	-2.941145	-2.609066	1(1)	1.788844
	MCAP	-7.228455	-3.615588	-2.941145	-2.609066	1(1)	1.950304
	MS	-5.715037	-3.615588	-2.941145	-2.609066	1(1)	1.983290
	CPS	-5.761473	-3.621023	-2.943427	-2.610263	1(1)	2.107354
	INV	-5.223082	-3.610453	-2.938987	-2.607932	1(0)	1.666326
	Philip-Peron (PP) Unit Root Test						
	LnIOg	-4.279849	-3.615588	-2.941145	-2.609066	1(1)	1.788844
	MCAP	-7.215384	-3.615588	-2.941145	-2.609066	1(1)	1.950304
	MS	-5.950625	-3.615588	-2.941145	-2.609066	1(1)	1.983290
	CPS	-6.577993	-3.615588	-2.941145	-2.609066	1(1)	1.830207
	INV	-5.094822	-3.610453	-2.938987	-2.607932	1(0)	1.666326
Model II	**ADF Unit Root Test**						
	LnIOg	-4.453159	-3.615588	-2.941145	-2.609066	1(1)	1.788844
	PLR	-5.946992	-3.621023	-2.943427	-2.610263	1(1)	1.872829
	EXR	-3.850555	-3.615588	-2.941145	-2.609066	1(1)	1.668483
	INFR	-5.897143	-3.632900	-2.948404	-2.612874	1(1)	1.756932
	LAB	-4.421610	-3.615588	-2.941145	-2.609066	1(0)	1.990737
	Philip-Peron (PP) Unit Root Test						
	LnIOg	-4.279849	-3.615588	-2.941145	-2.609066	1(1)	1.788844
	PLR	-9.669572	-3.615588	-2.941145	-2.609066	1(1)	2.145376
	EXR	-3.875842	-3.615588	-2.941145	-2.609066	1(1)	1.668483
	INFR	-12.38542	-3.615588	-2.941145	-2.609066	1(1)	1.893423
	LAB	-4.828553	-3.610453	-2.938987	-2.607932	1(0)	1.212691

Source: Author's Compilation with the use of *E-views 9 Output*

A result of diagnostic test for unit root is presented in table 4.2 above. The ADF and PP tests result indicates that investment expenditure (INV) and labour force (LAB) is stationary at levels, that is 1(0) in the models, while industrial output growth (LnIOg), stock market capitalisation (MCAP), broad money supply (MS), credit to private sector (CPS), prime lending rate (PLR), official exchange rate of Naira vis-à-vis the US Dollar (EXR) and inflation rate (INFR) were stationary at first difference, that is 1(1) both in the models. Moreover, to confirm the reliability of this result, the Durbin Watson statistic value at each point is significant at approximately 2.00. This also

shows the absence of traits of autocorrelation in the time series data in the respective models. Based on the ADF test the condition for Johansen cointegration test is not met. This kind of conflict between the outcomes of the two tests is common in practice (Shahbaz & Rahman, 2012). According to Ouattara (2004), the bounds test approach is valid only when the variables are I(0) and/or I(1). Therefore, we can safely go ahead with the bounds test. Consequently, this research would employ the ARDL – Bound testing method of co-integration analysis rather than the Johansen method.

4.2 The Results of ARDL Cointegration Test

Co-integration test is used to detect or check for the presence of long-run relationship between or among the series. Since it has been established that some variables are not stationary at level, there is need to check whether there is existence of similar trend properties between or among the series as a regression models on co-integrated series is said to be super consistent. Thus, given the unit root test result above, an appropriate co-integration test is the Bounds test since the test allows combination of fractionally integrated variables that is, combines variables of different orders of integration. The critical value of the ARDL Bound testing depends on selected lag length; for this reason, the optimal lag (p) was determined empirically based on Hannan Quinn Criterion (HQC). The critical values reported in Pesaran, *et al.*, (2001) are equally adopted. The table 4.2 abridged of ARDL bound tests for the models respectively.

Table 4.2: Abridged ARDL Bound Tests for the Models Respectively

Null Hypothesis: No Long-run Relationships Exist			
Model(s)	**Test Statistic**	**Value**	**K**
Model I	F-statistic	6.885496	4
	Critical Value Bounds		
	Significance	10 Bound	11 Bound
	10%	2.45	3.52
	5%	2.86	4.01
	2.5%	3.25	4.49
	1%	3.74	5.06
Model II	F-statistic	5.834994	4
	Critical Value Bounds		
	Significance	10 Bound	11 Bound
	10%	2.45	3.52
	5%	2.86	4.01
	2.5%	3.25	4.49
	1%	3.74	5.06

Source: Author's Compilation Using E-views 9 Output

From the result from table 4.2 above, it can be viewed that the bound test F-statistics of the models are 6.885496 and 5.834994 respectively were greater than the critical values of both the lower and the upper bounds at all level of significance. This indicates that there is a unique long run relationship among the variables. In other words, the calculated F-statistic exceeds the upper critical bound. Therefore, the null is rejected and the alternative hypothesis of the existence of a long-run relationship accepted. Hence, the null hypothesis of no long-run relationship shall be rejected based on this empirical finding.

4.3 Estimation of Long-run Elasticities and Short Run Dynamics of the Models

The findings for the long-run and short-run coefficient of the variables under investigation are estimated using the optimal ARDL model selection according to the AIC criterion. The discussion of results were based on research questions stated in chapter one.

4.3.1 The Relationship between Capital Market and Industrial Output Growth in Nigeria

To determine the extent of the relationship that exists between the capital market and industrial output growth in Nigeria. The table 4.3 shows estimation of the long-run and short – run parameters of the ARDL (4, 2, 3, 0, 4).

Table 4.3 Long-run and Short-run relationship that exists between the capital market and industrial output growth in Nigeria.

Regressor	Coefficient	Std. Error	t-Statistic	Prob.
Cointegrating Form				
D(LnIOg(-1))	-0.386306	0.177224	-2.179765	0.0428*
D(LnIOg(-2))	-0.142806	0.137763	-1.036606	0.3136
D(LnIOg(-3))	-0.572498	0.193428	-2.959745	0.0084*
D(MCAP)	0.011586	0.004680	2.475687	0.0235*
D(MCAP(-1))	-0.013868	0.006134	-2.260839	0.0364*
D(MS)	0.072253	0.021179	3.411452	0.0031*
D(MS(-1))	-0.036951	0.015450	-2.391570	0.0279*
D(MS(-2))	0.035863	0.011438	3.135466	0.0057*
D(CPS)	-0.105940	0.022401	-4.729193	0.0002*
D(INV)	0.000924	0.014554	0.063463	0.9501
D(INV(-1))	-0.021171	0.016397	-1.291156	0.2130
D(INV(-2))	0.005960	0.015438	0.386069	0.7040
D(INV(-3))	0.038672	0.011624	3.326962	0.0038*
CointEq(-1)	-0.094840	0.030596	-3.099788	0.0062*
Long Run Coefficients				
MCAP	0.446028	0.117061	3.810202	0.0013*
MS	1.200384	0.264390	4.540198	0.0003*
CPS	-1.117041	0.342591	-3.260572	0.0043*
INV	-0.151976	0.141716	-1.072395	0.2977
C	3.472324	1.944191	1.785999	0.0910
R-squared =0.583915 Adjusted R-squared =0.190946 F-statistics = 4.485905 Prob (F-statistics) = 0.006175 Durbin Watson = 2.135507				

Source: Author's Compilation Using E-views 9 Output

Note: * denote statistical significance at the 1% and 5% levels.

Analysis of the short run coefficients of stock market capitalisation D(MCAP), broad money supply D(MS), lagged two period of broad money supply D(MS(-2)), and lagged three period of investment expenditure D(INV(-3)) has significant positive impact on industrial output growth in Nigeria. While investment expenditure D(INV) has insignificant positive impact on industrial output growth in Nigeria as theoretically expected. Specifically, a one per cent increase in D(MCAP), D(MS), D(MS(-2)), D(INV(-3)) and D(INV) will cause 1.15%, 7.22%, 3.58%, 3.86%, and 0.09% improvement in industrial output growth in Nigeria, ceteris paribus. The implication of this is that while the financial sector shows no interest in enhancing the industrial output growth in the short run, such would change in the long run if the present trend of industrial funding can be improved upon and structural rigidities pertaining to credit allocation to the industrial sector is removed. Contrary to expectation, the coefficient of lagged one period of stock market capitalisation D(MCAP(-1)), lagged one period of broad money supply D(MS(-1)), credit to private sector D(CPS) has negative but significant impact on industrial output growth in Nigeria. Similarly, lagged one period of investment expenditure D(INV) has negative and insignificant impact on industrial output growth in Nigeria. From the results, a one percent increase in

D(MCAP(-1)), D(MS(-1)), D(CPS) and D(INV(-1)) led to declines in industrial output growth by 1.386%, 3.69%, 10.59% and 2.1% in Nigeria, ceteris paribus.

In terms of the signs and magnitude of the coefficients, the long-run result indicates that, stock market capitalization (MCAP) and broad money supply (MS) exerted significant positive effects on industrial output with their respective coefficients of 0.446028 and 1.200384, and p-values of 0.0013 and 0.0003. From the results, a one percent increase in MCAP and MS led to improvement in industrial output growth by 44.6% and 120.03% in Nigeria, ceteris paribus. Contrary to expectation, credit to private sector (CPS) has negative but significant impact on industrial output growth while investment expenditure (INV) exerted insignificant negative impact on industrial output. This indicates that one percent increase in CPS and INV will declines industrial output growth by 111.7% and 15.19% respectively. Level of capital in the economy was found to have negative relationship with industrial output growth. By implication, it means that available capital stock has not been judiciously utilised to achieve the desired industrial output growth.

The coefficient of ECM_{t-1} shows the speeds of adjustment from short run towards long run equilibrium path. If speed of adjustment is higher than greater would be correction in deviations from short run towards long run (Bannerjee, et al., 1993). It is also pointed by Bannerjee, *et al*., (1998) that we can validate our established long run relationship between the variables through the statistical significance of error correction term. More so, it is noteworthy that the CointEq(-1) that is, error correction model (ECM), is negative and significant in the model. This indicates a movement towards attainment of long-run equilibrium in our model. In addition, the ECM incorporates the long run information and the residual (ECM) coefficient is -0.094840, shows that any deviation from long run expected values is adjusted by 9.48 percent annually. Thus, the implication of the result is that, there is long run established relationship between capital market and industrial output growth in case of Nigeria. The high values of R-squared of 0.583915 and adjusted R-squared of 0.190946 showed that the estimated short run model has a good fit and a very high explanatory power. Specifically, the adjusted R-squared showed that about 19 percent of the total variation in the industrial output has been explained by variations in its determinants. In similar manner, the high value of F-statistics of 4.485905 showed that the estimated short run model is statistically significant. This means that the independent variables have a joint effect on the dependent variable. The Durbin-Watson statistics value of 2.135507 indicates that there is absence of serial autocorrelation. This implies that the statistical estimates can be relied upon and hence the model is well-behaved.

4.3.2 Long-run and short-run of Factors that Derives Industrial Output Growth in Nigeria

To identify the drivers of industrial output growth in Nigeria, the table 4.4 shows estimation of the long-run and short – run parameters of the ARDL (1, 2, 4, 2, 2).

Table 4.4 Long-run and short-run economic factors that determine industrial output growth in Nigeria.

Regressor	Coefficient	Std. Error	t-Statistic	Prob.
Cointegrating Form				
D(PLR)	0.030033	0.009839	3.052444	0.0063*
D(PLR(-1))	0.012780	0.010403	1.228536	0.2335
D(EXR)	-0.003683	0.001142	-3.225301	0.0042*
D(EXR(-1))	0.003490	0.002086	1.673577	0.1098
D(EXR(-2))	0.002900	0.002153	1.347237	0.1930
D(EXR(-3))	-0.004624	0.001820	-2.540594	0.0195*
D(INF)	-0.001479	0.001807	-0.818622	0.4226
D(INF)	-0.002786	0.002202	-1.264916	0.2204
D(LAB)	-0.001983	0.009291	-0.213417	0.8332
D(LAB(-1))	-0.024823	0.008037	-3.088635	0.0058*
CointEq(-1)	-0.613833	0.263940	-2.325654	0.0012*
Long Run Coefficients				
PLR	0.222277	0.271937	0.817384	0.4233
EXR	0.024474	0.006690	3.658150	0.0016*
INF	0.024761	0.024200	1.023196	0.3184
LAB	0.026329	0.066151	0.398008	0.6948
C	1.735769	1.782405	0.973836	0.3418
R-squared =0.735581 Adjusted R-squared =0.559302 F-statistics = 4.172814 Prob (F-statistics) = 0.001656 Durbin Watson = 2.209553				

Source: Author's Compilation Using E-views 9 Output
Note: * denote statistical significance at the 1% and 5% levels.

In the short run, the study disclosed that coefficient of prime lending rate D(PLR), has significant positive impact on industrial output growth in Nigeria while lagged one period of prime lending rate D(PLR(-1)), lagged one and two period of official exchange rate of Naira vis-à-vis the US Dollar D(EXR(-1)) and D(EXR(-2)) has positive but insignificant impact on industrial output growth in Nigeria. This indicates that one percent increase in D(PLR), D(PLR(-1)), D(EXR(-1)), and D(EXR(-2)) will improve industrial output growth in Nigeria by 3.0%, 1.27%, 0.349%, and 0.29% respectively. Contrary to expectation, official exchange rate of Naira vis-à-vis the US Dollar D(EXR), lagged three period of official exchange rate of Naira vis-à-vis the US Dollar D(EXR(-3)) and lagged one period of labour force D(LAB) has negative but significant impact on industrial output growth in Nigeria. Similarly, inflation rate D(INF) and labour force D(LAB) has insignificant negative impact on industrial output growth in Nigeria. This probe that one percent increase in D(EXR), D(EXR(-3)), D(LAB(-1)), D(INF) and D(LAB) will definitely declines industrial output growth in Nigeria by 0.29%, 0.46%, 2.48%, 0.14%, 0.27 and 0.19% respectively.

In the long run, the coefficient of prime lending rate (PLR), inflation rate (INF) and labour force (LAB) has positive but insignificant impact on industrial output growth in Nigeria. The analysis further disclosed that official exchange rate of Naira vis-à-vis the US Dollar (EXR) have significant positive impact on industrial output growth in Nigeria. This indicates that one percent increase in PLR, INF, LAB and EXR will bring 22.22%, 2.47%, 2.63% and 2.44% improvement in industrial output growth in Nigeria.

The error correction estimate shows evidence of convergence in the system such that 61.38 percent of the errors associated with the system are corrected in the short-run. This indicates a very moderate speed of adjustment and further implies that in the incidence of external shocks, the

system would revert to its long run steady state within one year. However, the coefficient of determination (R^2) is the summary measure that tells us how well the sample regression line fits the data. The R^2 of 0.735581 this implies that having removed the influence of the explanatory variables, the dependent variable is still explained by the equation with 73.55%, and the remaining 26.45% was explained by variables not included in the model. The adjusted R^2 takes account of more number of regressors if included and it still explains 55.9% variation in the dependent variable. The goodness of fit of the regression is low after adjusting for the degree of freedom. The *f*-statistics of 4.172814, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant at 1 percent level as indicated by the corresponding probability value 0.001656. This indicates that the model is of good fit and some variables are significant. The Durbin Watson estimate value is 2.209553 which is around 2 indicates that there was no presence of autocorrelation in the variable of interest.

4.4 Evaluation of Research Hypotheses

Hypotheses of the study were evaluated based on regression results obtain from estimated models. Conclusion was arrived based on relevance of target coefficient through its corresponding probability value. However, based on the hypotheses stated in chapter one, the long-run t-statistics is shown in table 4.7 below.

Hypothesis 1: ***That there is no significant relationship between capital market and industrial output growth in Nigeria.***

Table 4.5: Test of hypothesis to determine the extent of the relationship that exists between the capital market and industrial output growth in Nigeria.

Table 4.5 Research hypothesis I

Variables	t-statistic	p-value	Observation	Decision
MCAP	3.810202	0.0013*	*p-value<0.05*	*Reject null*

Source: Author's Compilation Using E-views 9 Output

From the table 4.5 present the regression results, which revealed that there is positive significant relationship between capital market and industrial output growth in Nigeria. This implies that the estimated t-statistic value of stock market capitalisation is 3.810202 with p-value of 0.0013; it indicates that, it is statistically significant at 5% level. This is in consonance with the findings of Kaka, Eveh and Kaka (2021) who established that there is positive relationship exiting between market capitalization and economic growth. Therefore, the implication is that if the public consensus on the value of a company's equity is positive, investment in shares and stocks of such companies will increase, this will enhance industrial output growth in Nigeria.

Hypothesis 2: ***That Nigeria's industrial output growth is not determined by the performance of the capital market and other economic variables.***

Table 4.6: Test of hypothesis for Nigeria's industrial output growth is not determined by the performance of the capital market and other economic variables.

Table 4.6 Research hypothesis 2

Variables	t-statistic	p-value	Observation	Decision
Prime Lending Rate (PLR)	0.817384	0.4233	*p-value>0.05*	*Accept null*
Official exchange rate of Naira vis-à-vis the US Dollar (EXR)	3.658150	0.0016*	*p-value<0.05*	*Reject null*
Inflation rate (INF)	1.023196	0.3184	*p-value>0.05*	*Accept null*
labour force (LAB)	0.398008	0.6948	*p-value>0.05*	*Accept null*

Source: Author's Compilation Using E-views 9 Output

It is observed that prime lending rate (PLR) has a positive but statistically insignificant given its t-statistic of 0.817384 and a p-value of 0.4233 which is greater than 5% significance level. Consequently, the study accepts the null hypothesis and concludes that prime lending rate have insignificant positive impact on industrial output growth in Nigeria. Therefore, prime lending rate is not a significant factor that drives industrial output growth in Nigeria.

The research finding further demonstrates that official exchange rate of Naira vis-à-vis the US Dollar (EXR) said be positive and statistically significant given its t-statistic of 3.658150 and a p-value of 0.0016 which is less than 5% significance level. Consequently, the study fails to accept the null hypothesis and conclude that exchange rate have positive and significant impact on industrial output growth in Nigeria. However, exchange rate is a significant factor that drives industrial output growth in Nigeria.

In view of the foregoing, the estimated t-statistic value of inflation rate (INF) is 1.023196 with p-value of 0.3184; it indicates that, it is statistically insignificant at 5% level. The research rejects the alternative hypothesis and concludes that inflation responds positively but insignificant impact on industrial output growth within the period studied. However, inflation is not a significant factor that drives industrial output growth in Nigeria.

The study established that labour force (LAB) has positive but insignificant impact on industrial output growth within the period studied. This was indicated by the estimated t-statistic value of 0.398008 with corresponding probability value of 0.6948, which is more than 0.05 critical values. Consequently, the study concludes that labour force is not a significant factor that drives industrial output growth in Nigeria.

4.5 Policy Implications of the Research Findings

Given that, the study found that capital market has a significant positive effect on industrial output growth in Nigeria. The finding is in line with the study of Ayodeji and Ajala (2019) that established that there is positive relationship exiting between market capitalization and economic growth. It is evident that the capital market plays a crucial role in the industrial growth of Nigeria. This reveals to us that the role of the capital market in the growth of the industrial sector and the economy at large cannot be over-emphasized. This result conforms to the theoretical underpinning of the model formulation which is based on the fact that industries need long-term fund to carry out their operations. This long-term capital can only be raised in the capital market which is set up primarily

for this purpose. The implication of this is that, the funds mobilization capacity of Nigeria's capital market has both short-run and long-run effects on the contributions of industrial output growth in Nigeria. The need for effective capital market stems from the realization that, through it, savings can be mobilized and channeled for production investment. Apart from that, the ability to mobilize funds easily and cheaply on the capital market has also been found to be an incentive for enterprises to expand their operations and diversify into large scale enterprises. Furthermore, the implication is that if the public consensus on the value of a company's equity is positive, investment in shares and stocks of such companies will increase, this will enhance industrial output growth in Nigeria.

Having revealed that prime lending rate is not a significant factor that drives industrial output growth in Nigeria. The positive impact implies that an increase in inflation increases industrial output growth. The key implication is that prime lending rate is effective channels for monetary policy transmission in Nigeria, and a policy action should be put in place to effectively harness these key channels to stimulate the real sector of the economy and boost economic activities.

The study probe that exchange rate is a significant factor that drives industrial output growth in Nigeria. The implication of this is that an official exchange rate pronouncement is insignificant to impact on industrial output growth in Nigeria. Lack of confidence and the perceived risk, inconsistency in the policies and non-impact of the official exchange rate movement on the real economic growth is a major problem facing the economic policy makers and is making Nigeria to become non-attractive for investment purposes and there will not be any meaningful GDP growth that will be felt by ordinary Nigerians.

Again, the study revealed that inflation is not a significant factor that drives industrial output growth in Nigeria. This implies that an increase in the values of the inflation rate in Nigeria will bring about an improvement in the industrial output growth in Nigeria. The results suggest that strict inflation targeting is needed to make the discipline effect of the disinflation process outweigh the output costs of promoting high interest rates to attract capital flows in a global world. These findings are robust to the treatment of endogenous globalization measures.

Having probed that labour force in the economy maintained positive but insignificant relationship with industrial output growth in Nigeria, however, labour force is not a significant factor that drives industrial output growth in Nigeria. This implies that industrial output growth was accounted for by insignificant growth rate of work force.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study investigated empirically, the capital market and industrial output growth nexus in Nigeria between the period 1981 and 2021. Specifically, the study evaluates the economic factors that determine industrial output growth in Nigeria. Considering the behavioral pattern of the variables used for estimation, Augmented Dickey-Fuller (ADF) test, Autoregressive Distributed Lag (ARDL) technique as well as the stability and diagnostic test were employed in the analysis. The results show that all the variables are not stationary of the same order, hence the need for the use of autoregressive distributed lag model (ARDL). The critical value of the ARDL Bound testing depends on selected lag length; for this reason, the optimal lag (p) is determined empirically based on Akaike Information Criteria (AIC). This indicates that there is a long run relationship among

the variables in the models. And this result qualifies us to move on with the estimation of the ARDL models. However, the study acknowledged in the hypothesis one of the study that capital market has positive significant effect on industrial output growth in Nigeria. The study also admitted in the hypothesis two that, prime lending rate, inflation rate and labour force are not a significant factor that drives industrial output growth in Nigeria. While exchange rate is a significant factor that drives industrial output growth in Nigeria.

5.2 Recommendations.

1. Given that, the study found that capital market has a significant positive effect on industrial output growth in Nigeria. Policies guiding capital market should be maintained since they foster growth of the industrial sector in Nigeria. The funds raised by government in the form of government securities in the capital market should be put into productive sectors of the economy that will necessitate to growth in all facets of the economy.

2. It was concluded in the study that prime lending rate is not a significant factor that drives industrial output growth in Nigeria. It was recommended among others that deposit money banks should reduce the stringent conditions on lending but cautiously in order to avoid increase in non-performing loans.

3. Given that exchange rate is a significant factor that drives industrial output growth in Nigeria. The effort of the government should be geared towards maintaining stable and sustainable exchange rates, since the stability of this could enhance industrial output. In other words, more policy attention should be given to proper management of the exchange rate in Nigeria. In addition, efforts must be put in place to ensure the existence of consistent monetary and fiscal policy.

4. Since, inflation is not a significant factor that drives industrial output growth in Nigeria, aggressive steps to ensure price stability in the country through effective control of money supply in order to boost industry sector performance in Nigeria.

5. Having ascertained that labour force is not a significant factor that drives industrial output growth in Nigeria, the study, thus, recommends that the government should implement a broad set of employment generating policies with the ultimate aim of fostering a sustained improvement in industrial output growth in Nigeria

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