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## INDUSTRIAL SECTOR PERFORMANCE AND ECONOMIC GROWTH IN NIGERIA

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### **Abstract**

*The paper examines the nexus between industrial sector performance and economic growth in Nigeria from 1981 to 2016. Time series data sourced from Central Bank of Nigeria (CBN) Statistical Bulletin was utilized by study. Ordinary Least Square (OLS) method of analysis was adopted to evaluate the empirical model within the framework of the classical linear regression model. The result of the empirical findings revealed that industrial sector performance proxied by industrial output exerts a significant positive effect on economic growth in Nigeria at 1% level of significance. Besides, while economic growth is positively influenced by inflation rate, interest rate does not exhibit any significant effect on growth in Nigeria. The results of the pairwise granger causality tests indicate that the causality between economic growth and industrial output, inflation rate and economic growth as well as industrial output and inflation rate in Nigeria is uni-directional. On the contrary, there seems to be no causality between interest rate and economic growth, interest rate and industrial output as well as inflation rate and interest rate in Nigeria. Therefore, there is need for government to initiate and pursue policies that will stimulate private sector-driven industrialization in Nigeria. Besides, the stringent conditions attached to loan accessibility by most of the financial institutions in Nigeria in terms of the high interest rate should be reviewed as this will induce investment and ultimately enhance improvement in economic growth.*

**Keywords:** *Industrial output, interest rate, inflation rate, economic growth*

**JEL Classification:** *L10, E40, E31, O40*

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## 1. INTRODUCTION

Industrial sector plays a critical role in modern economy and its benefits are crucial for economic transformation. As a matter of fact, industrial sector creates an avenue for increase in productivity through import replacement and export expansion, creating foreign exchange earning capacity, creation of employment and raising the per capita income, which spurs unique consumption patterns (Beckerman, 2007). No doubt, it is an essential tool for jobs creation, eradication of poverty and the promotion of regional development policies and also stimulates technological progress and innovation as well as productivity gains. Indeed, all developed countries essentially recognized the crucial role of industrialization as exemplified by the large share of manufacturing sector in GDP and sustained industrial growth through targeted policies and appropriate investments in institutions (Amar, 2014).

However, notwithstanding the introduction of the various industrialization strategies by successive governments in Nigeria such as export promotion, import substitution and local resource-based strategies; the contribution of the industrial sector to GDP has been quite unimpressive (Bennett and Anyanwu, 2015). Although the country has enjoyed a long period of sustained economic growth since 2001 yet, her industrial sector contributes very low proportion to the country's GDP. Since the bulk of the gross domestic product is from the primary sector with agriculture having the largest share. In fact, the oil and gas sector which is a major player in the economy contributes about 95% to the country's export earnings, compared to the industrial sector which only accounts for small portion of 6% while the contribution of the manufacturing sector to GDP accounts for 4% in 2015 (Aliya and Odoh, 2016). Part of the contributing factors to this abysmal performance includes restrictive access to loanable funds, inadequate funds for maintaining existing industries as well as insufficient funds for expansion. The lack of funds and enabling environment for industrialists has greatly denied the nation the capacity of achieving significant industrial growth and development in Nigeria (Bennett and Anyanwu, 2015).

To put in perspective, the Nigerian economy started experiencing serious difficulty in furthering its industrial development following the discovery of oil in the late 1960s. These difficulties can be attributed to: a weak raw material base (more attention was channeled into mining), inadequate technical manpower, poor policy implementation, poor entrepreneurship, political instability, corrupt government institutions and poor technical know-how. In fact, most of the initiated industrial policies that could promote manufacturing activities were not sustainable due to certain structural rigidities of the Nigerian economy. While the exact relationship between industrialization and economic development has been a controversial issue in the economic literature, not many economists doubt the potency of the industry to stimulate rapid economic growth. Notwithstanding, the effect of industrial sector performance on economic growth is mixed in the literature. It is in the light of the foregoing that this study seeks to examine the nexus between industrial sector performance and

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economic growth in Nigeria. The rest of the paper is organized as follows: section two reviews related works regarding the nexus between industrial sector and economic growth. Section three presents the methodology and the various estimation techniques adopted for the study while section four discusses the results of the findings. Section five concludes the study.

## **2. LITERATURE REVIEW**

### **2.1 The conceptual clarifications**

#### **2.1.1 The concept of Industrialisation**

Adejugbe (2004) defines industrialization as the process of harnessing human and material resources, with increasing application of science and technology to the production of goods and services. Beckerman (2007) and Osita (2007) conceptualized industrialization as the progressive ability of a people to harness human and material resources for the production of goods and services as a key component of economic development. It is a socio-economic process through which a society will change from pre-industrialization into industrialization phase. This is mainly a part of wide modernization process through development of new technological and production methods.

Industrial sector has equally been described as the heartbeat of every successful economy; this is due to the fact that it involves production and manufacturing of output in a large scale which simply opens up the economy to the outside world (Ayeyemi, 2013). As the production of the output of the economy increase as a result of mass production of goods and services with the use of better utilization of technologies, materials and good labour capabilities, there is incidence of capital formation which invariably increases the economic performance of the country; foreign investor are wooed into the economy and job opportunities are created which in the long run reduces the rate of unemployment to the lowest minimum and also increase the foreign earning of the country as a result of huge receipts from goods export abroad. The provision of these basic amenities will in the long-run further open up the economy for advancement and also improved the standard of living of the populace.

#### **2.1.2 Overview of the Industrial Strategies in Nigeria**

A number of industrial policies had been adopted since political independence in 1960. The changing nature of Nigeria's industrial policies is classified and discuss as follows:

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- **Import Substitution Industrialization Strategy (ISI):** Import substitution industrialization was adopted in Nigeria as far as back as 1960 and persisted till 1985 (Ayeyemi, 2013). Often described as an inward looking strategy of industrialization, ISI refers to domestic production of manufactured goods for domestic markets. It involves processing of raw materials and setting up of manufacturing factories to produce locally certain manufactured goods which were hitherto imported by a country thereby saving the country from importation of such commodities into the local markets. To get the home industries started and make them survive, it requires the imposition of protective tariffs, import quotas and exchange controls to protect the home industries from foreign competitors by making the entry of foreign goods unattractive.

The motives of adopting ISI strategy in Nigeria were to reduce the volume of imports and external dependence via increased reliance on goods manufactured locally, save foreign exchange, create favourable balance of trade and payments, encourage technological development as well as create employment (Ayeyemi, 2013). However, a wide range of fiscal, monetary and infrastructural incentives were granted to private sector in the 1960s through 1970s to reduce business cost. These incentives include tax holidays, income tax relief, capital allowance and depreciation allowance for investment in equipment, duty exemption on machinery, spare parts, raw and intermediate materials for manufacturing. Industrial Estates were established and let out to industrialists at subsidized rates, thus relieving them of part of the very heavy capital expenditure on getting their business started.

- **Export Promotion Strategy (EPI):** The urgent need to generate more foreign exchange particularly from non oil sources to meet the country's rising import bills, mounting external debt obligations, rising fiscal responsibilities of the government, and to attend to socio economic responsibilities resulted in the introduction of Structural Adjustment Programme (SAP) in Nigeria in July, 1986, and hence a shift in Nigeria's industrial policy thrust from ISI approach to export promotion industrialization. Export promotion industrialization (EPI) strategy, otherwise described as outward oriented industrialization, involves domestic production of manufactured goods for export. It is government's deliberate efforts to expand the volume of a country's exports through export incentives and other means in order to generate more foreign exchange and improve the current account of the balance of payment (Anyanwu, *et al*, 2015)).

The export oriented industrial policy was meant to achieve a broad objective of accelerating the pace of industrial development in Nigeria. Embedded in this industrial policy package were SAP induced industrial policies like new export promotion decree of 1986, interest rate deregulation policy, the privatization and commercialization policy of 1988, the new export promotion policy/incentives, the new industrial policy of Nigeria of 1989 and debt conversion (equity swap) policy. With the new export promotion law, export license

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requirements for exportation of manufactured goods was abolished, export credit guarantee and insurance schemes was introduced, Commodity Boards were scrapped to allow the markets forces to be more active and export free zones were established at several locations in the country (Effiom and Udah, 2014). The hitherto regulated interest rate in the country was deregulated to stimulate foreign capital inflow, encourage Nigerians to repatriate capital flight, induce saving and restrain credit expansion. The discount rate was raised from 11% to 14% in 1987 with minimum lending rate fixed at 14%. The new export policy/incentives permitted Nigerian exporters of non-oil (industrial) products to retain and utilized 100% of their export proceeds in foreign currency instead of 25% permitted before the introduction of new export policy.

- **Foreign Private investment Led Industrialization Strategy:** Several years of military dictatorship rule in Nigeria (1966-1979, 1983-1999, excluding of the Interim Civilian Administration of August-November, 1993) make the country unattractive to foreign investors. On the return to civil rule in 1999, there was an urgent need to reverse the trend, restore investor's confidence on Nigerian economy and convert Nigeria to an investment destination hub among committee of nations. Moreover, there was need to attract massive inflow of foreign capital but high level of corruption and mismanagement prevalence in the country posed a strong constrained on the mobilization and utilization of domestic resources for expected level of industrial development (Ayeyemi, 2013).

In pursuing objectives of this strategy, efforts had been made to handle the twin monsters, the problems of decaying infrastructures and corruption, which scarred away many potential foreign investors from Nigeria. Attempts were also made to break the bureaucratic bottlenecks which inhibited registration and establishment of foreign businesses in Nigeria through the abolition of Land Use Act and the Nigerian Enterprise Promotion Decree. In fact, a one-stop investment centre was established by the Nigerian Investment Promotion Commission to hasten the processing of application for entry into Nigeria by prospective foreign investors, and registration and establishment of businesses. However, in order to sanitize and stabilize the financial system, banking sector reforms including the universal banking of 2002 and the banking consolidation exercise of 2005 were carried out. Other measures adopted include evolvement and implementation of the strategic management of industrial development through an industrial master plan since 1999. As provided for in the plan, state owned enterprises were reviewed with the aim of completing or rehabilitating viable ones and eventually privatizing them. Again, there is provision to strengthen industrial research and commercialize research findings as well as sourcing for technical assistance for industrialists in the area of technology transfer and capacity building. In addition, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), an umbrella agency for small and medium enterprises (SMES) was established to cater for the development of SMEs.

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## 2.2 Theoretical Underpinnings

### 2.2.1 Solow Neo-Classical Growth Model

Solow's model was introduced by Robert Solow and T.W. Swan in 1956 as sighted in Jhingan (2006). The theory adopts growth accounting to estimate the separate effects on economic growth of technological change, capital, and labor. Solow extended the Harrod-Domar model by adding labor as a factor of production and capital-output ratios that are not fixed as they are in the Harrod-Domar model. These refinements allow increasing capital intensity to be distinguished from technological progress.

The key assumption of the neoclassical growth model is that capital is subjected to diminishing returns in a closed economy. Given a fixed stock of labor, the impact on output of the last unit of capital accumulated will always be less than the one. Assuming non-zero rates of labor growth, the short-run the rate of growth slows as diminishing returns take effect and the economy converges to a steady-state. In this case, per-capita output grows at the rate of technological progress.

The benchmark for the analysis of international capital flows is Solow's model for open economies with similar constant returns to scale, production and technologies. It states that, *if capital is fully mobile, then the diminishing marginal product of capital implies that capital should flow from the low-return to the high-return country until marginal products of capital converge*. Despite a cutback on barriers to capital mobility in developing countries during the last decades, poor countries receive by far not as much foreign capital as the model predicts (Tregenna, 2015). The neoclassical theorists believe that higher factor productivities in developed countries diminish the pressure on capital to look for better opportunities in capital-poor countries, while wages can stay on a high level.

### 2.2.2 Endogenous Growth Theory

This theory was established by Paul Romer (Romer, 1993) and it's an important component of the theory of development of developing countries. This theory assumes that sustained growth is determined by the production process. One of the most important drivers of this theory is the lack of response by the neo-classical theory about the reason for the different rates of economic growth among countries that have the same technological level. Modern theory also assumes increasing marginal returns on the size of production factors through the role of external effects on human capital investment, which will generate improvement in productivity. Growth depends on savings and investment in human capital on the one hand, as well as investment in research and development on the other. In addition, it is argued that the free market leads to less than optimal level of capital accumulation in human capital and research and development. Therefore, the government may improve the

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efficiency of resource allocation through investment in human capital, and encouraging private investment in high-tech industries.

### 2.3 Empirical Review

Anyanwu, Kalu and Alexanda (2015) investigated the effect industrial development on the Nigeria's economic growth 1973-2013. The result of findings reveals that the influence of industrial output on economic growth is not statistically significant. Savings has a positive relationship and also significant impact on the economy. Inflation has a negative relationship while net foreign direct investment is positively significant on the impact of economic growth.

Liu and Liu (2014) examined the determinants of economic growth and industrialization based on the Growth Identity Equation. This identity links total output growth with the performance of the three economic sectors (agriculture, industry and services) measured by their sectoral rates of output growth and weighted by each sector's output share in GDP. Using the data from 164 countries from 1970 to 2010, the study reveals that there exists a nexus between economic growth and industrialization.

Guadagno (2014) empirically analyses the determinants of industrialization in 74 countries for the period 1960-2005. Results show that industrialization is faster for larger countries with an undeveloped industrial base and development strategies based on trade openness, undervaluation, skills and knowledge accumulation. In particular, while from 1970 to the mid 90s technological backwardness and undervaluation were the main drivers of industrialization, since 1995 investments in knowledge accumulation have become increasingly crucial.

Mario, Amat and Šikić (2016) analyse industrialization pattern in Europe, implications of economic backwardness and the role of European integration in facilitating industrialization and development. The study used long-term economic development data (1952-2010) as well as a detailed industry-level panel data (1963-2011). The study finds evidence of some income convergence in Europe, but mostly in countries that were able to exploit the 'advantages of (mild) backwardness'. Regions of extensive backwardness such as the Balkans had difficulties to catch up. Membership in the European Union helped especially more backward economies to develop faster.

Aboagye (2016) used panel data from 1980 to 2015 covering 36 Sub Sahara countries, this study finds answers to this question under the standard Environmental Kuznet Curve (EKC) framework. The system Generalized Method of Moment (GMM) estimation revealed that, in the long run, both urbanization and industrialization tend to increase energy

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intensity in the 36 selected SSA countries while the contrary is established for FDI and trade openness. Inflation was also found to be associated with rises in energy intensity in SSA. In addition, the finding confirms the existence of a valid EKC hypothesis for energy intensity; the existence of an inverted U-shaped relationship between economic growth and energy intensity in SSA. Finally, it is observed that the SADC zone of the region, in particular, is exhibiting rising energy intensity as compared to the ECOWAS sub-region.

Aliya and Odoh (2016) analyze the relationship between GDP, agriculture (AR), industry (ID) and services sector (SV) in Nigeria. The Johansen co-integration testing approach demonstrates a significant long-run relationship between these three variables. The results reveal that agriculture, industry and services have a significant positive relationship with GDP. The Causality results demonstrate a bi-directional causal relationship between GDP, AR, ID and SV. It is suggested therefore that it is important to develop the agricultural sector to provide the needed support to the industrial and services sectors. Such a strategy can be expected to encourage the development and economic growth of a developing country.

**2.4 Trend of Industrial output in Nigeria.**

The trend of industrial output growth in Nigeria between 1981 and 2016 is presented in figure 1.

**Figure 1: Trend of Industrial output growth in Nigeria 1981-2016**



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Figure 1 shows that the trend of industrial output growth in Nigeria has been on a sluggish rise with high degree of instability moving upward and downward. It was evident that, despite the various industrial growth strategy of successive government, industrial output in Nigeria has been quite haphazard and unstable. Industrial output in Nigeria fell from 8.8% in 1981 to 8.6% in 1984. However, as a result of the introduction of Structural Adjustment Programme in 1986, industrial output grew from 8.7% in 1987 to 9.1% in 1991. It further witnessed a sustained growth from 9% in 2000 to 9.6% in 2013 due to the Agricultural transformation policy of the government before declining to 9.2 % in 2015 as a fall out of the economic recession experienced by the country. It is quite obvious that industrial growth in Nigeria is policy-induced.

**3. METHODOLOGY**

**3.1 Theoretical Framework**

The Theoretical framework of this study is anchored on the endogenous growth model due to Romer (1986), which was established due to the weakness of the Solow growth model. The production function under the Solow growth model implies that  $Y = f(K, L)$ , where technology is exogenously determined. Romer (1986) takes investment in research technology as endogenous factor in terms of the acquisition of new knowledge by rational profit maximization firms. His aggregate production function of the endogenous theory is as follows:

$$Y = f(A, K, L) \dots\dots\dots(1)$$

Where: Y= aggregate real output; K= stock of capital; L= stock of labour; and A= Technology (or technology advancement). Adopting this model, Y or the aggregate real output is used as a proxy for industrial output growth is expressed as a function of capital, labour employed, and the various policy instruments driving industrial growth in the society.

**3.2 Model Specification**

In order to examine the relationship between industrial sector performance and economic growth, an empirical model that is anchored on Romer (1986) specification and modified by Anyanwu, Kalu and Alexanda (2015) is specified as follows:

$$RGDP = f(IOU, INTR, INFR) \dots\dots\dots (2)$$

For the purpose of estimation, equation (1) can be expressed as:

$$RGDP = \beta_0 + \beta_1 IOU + \beta_2 INTR + \beta_3 INFR + u_t \dots\dots\dots (3)$$

Where: RGDP= Real Gross Domestic Product proxy for economic growth

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IOU= Industrial Output;  
 INTR= Interest rate;  
 INFL = Inflation rate;  
 Ut =Stochastic error term at time t.;  $\beta_1 > 0$  ;  $\beta_2 < 0$  ;  $\beta_3 > 0$ .

**3.2.2 Causality Tests**

In order to determine the causal relationship between industrial output and economic growth, the study is guided by the empirical works of Shamistha and Grabowski (2004) and Podecca and Carmeci (2002). In this regard, the following models were formulated.

$$RGDP_{t1} = \sum_{i=1} a_i Y_{t-i} + \sum_{j=1} \beta IOU_{t-j} + \mu_{t1} \dots\dots\dots 4$$

$$RGDP_{t2} = \sum_{i=1} a_i Y_{t-i} + \sum_{j=1} \beta INFR_{t-j} + \mu_{t2} \dots\dots\dots 5$$

$$RGDP_{t3} = \sum_{i=1} a_i Y_{t-i} + \sum_{j=1} \beta INTR_{t-j} + \mu_{t3} \dots\dots\dots 6$$

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## 4. FINDINGS AND DISCUSSION

### 4.1 Descriptive Analysis

Descriptive and normality test statistics were used to verify the descriptive characteristics of the data and verify if the error terms are normally distributed at the 5% significance level. The results are presented in Table 1.

**Table 1: Descriptive statistics**

	INDO	INFR	INTR	RGDP
<b>Mean</b>	9306.571	78.92222	12.14833	31757.15
<b>Median</b>	8546.755	63.55000	10.09000	22391.14
<b>Maximum</b>	13791.25	216.0000	28.02000	69023.93
<b>Minimum</b>	5264.880	1.000000	6.300000	13779.26
<b>Kurtosis</b>	1.1787138	1.772296	4.270721	2.318378
<b>Jarque-Bera</b>	2.434728	3.192598	12.55496	5.289230
<b>Probability</b>	0.296009	0.2026645	0.001878	0.071033
<b>Observations</b>	36	36	36	36

**Source: Author's Computation, (2019)**

The Table 1 above showed that the means and the median values of economic growth, industrial output, interest rate and inflation rate are within their minimum and maximum. The standard deviation of economic growth, industrial output, interest rate and inflation rate are very high indicative of large degree of dispersion around their mean values. The values of Jarque-Bera statistics for interest rates and economic growth are statistically significant at 1% and 5% respectively which implies that the variables are normally distributed around the mean values. Also, the moment coefficients of kurtosis indicate that while interest rate is leptokurtic, industrial output, inflation rate as well as economic growth are platykurtic.

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## 4.2 Unit Root Test

The results of the unit root test and the regression analysis are reported in this section. This will reasonably influence and guide the policy conclusion of the study.

**Table 2: AUGMENTED DICKEY FULLER TEST RESULTS**

<b>VAR</b>	<b>ADF TEST STATISTICS</b>	<b>P-VALUE</b>	<b>ORDER OF INTEGRATION</b>	<b>DECISION</b>
<b>LOG(RGDP)</b>	<b>-4.351</b>	<b>0.00</b>	<b>I(0)</b>	<b>Stationary</b>
<b>LOG (IOU)</b>	<b>-3.830</b>	<b>0.00</b>	<b>I(0)</b>	<b>Stationary</b>
<b>INTR</b>	<b>-5.214</b>	<b>0.00</b>	<b>I(0)</b>	<b>Stationary</b>
<b>INFR</b>	<b>-3.492</b>	<b>0.01</b>	<b>I(0)</b>	<b>Stationary</b>

**Source: Author's Computation, (2019)**

The results presented in Table 2 shows the Augmented Dickey Fuller test in order to detect the unit roots of the time series data. The test was conducted with intercept at levels. It is quite obvious from the results that all the other variables are I (0) series and by implication they are all stationary at levels. However, since the series are of the same order of integration, the conventional ordinary least square estimation can be conducted.

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### 4.3 Least Square Estimates

The Least Square estimates and the results of granger causality tests are presented in this section.

**Table 3: Ordinary Least Square Estimates**

**Dependent Variable: LOG (RGDP)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(IOU)	1.124636	0.173804	6.470714	0.0000
INTR	0.019990	0.013354	1.496935	0.1442
INFR	0.003141	0.000670	4.686632	0.0000
Constant	-0.392371	1.515711	-0.258869	0.7974
<b>R-squared</b>	0.952809			
<b>Adjusted R-squared</b>	0.948385			
F-statistic	215.3670			
Prob (F-statistic)	0.000000			
Durbin-Watson stat	1.577753			

**Source: Author's Computation, (2019)**

The OLS estimates presented in Table 3 show that industrial growth ( $\beta=1.124636$ ,  $t=6.470714$ ,  $p<.05$ ) and inflation rate ( $\beta=0.003141$ ,  $t=4.686632$ ,  $p<.05$ ) have a significant positive effect on economic growth in Nigeria while the interest rate ( $\beta=0.019990$ ,  $t=1.496935$ ,  $p>.05$ ) does not show any effect on economic growth. The result further showed that a unit increase in industrial output and inflation rate will leads to about 1.12% and 0.003% respectively in economic growth in Nigeria. The implication of this result is that industrial sector growth has significant effect on industrial growth in Nigeria.

Also, the value of the coefficient of determination implies that the independent variables were able to explain about 95% of the changes in economic growth. The remaining 5% of the changes in economic growth is explained by other factors that are not included in the regression model. The value of the F-Statistics of 215.37 indicates that the variables have a high predictive power at 1% level of significance which enhanced the reliability and

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validity of the model. Also, the value of Durbin-watson statistics shows that the problem of serial correlation is less severe.

The implication of this result is that, while industrialization has a significant positive effect on economic growth, inflation rate showed a positive significant effect on economic growth and interest rate does not have significant effect on economic growth in Nigeria. This result corroborated the findings of Liu and Liu (2014) and Aliya and Odoh (2016).

#### 4.4 Granger Causality Test

The result of pairwise Granger causality test is presented in this section.

**Table 4: Results of Granger causality Tests**

Pairwise Granger Causality Tests			
Date: 04/04/19 Time: 15:52			
Sample: 1981 2016			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
IOU does not Granger Cause RGDP	34	0.40415	0.6712
RGDP does not Granger Cause IOU		6.47005	0.0047*
INTR does not Granger Cause RGDP	34	0.47748	0.6251
RGDP does not Granger Cause INTR		1.19495	0.3172
INFR does not Granger Cause RGDP	34	3.96389	0.0301**
RGDP does not Granger Cause INFR		1.04257	0.3654
INTR does not Granger Cause IOU	34	0.33052	0.7212
IOU does not Granger Cause INTR		1.18802	0.3192
INFR does not Granger Cause IOU	34	1.93477	0.1627
IOU does not Granger Cause INFR		4.43928	0.0208**
INFR does not Granger Cause INTR	34	2.03397	0.1491
INTR does not Granger Cause INFR		0.15406	0.8579

\*significant @ 1% ; \*\* significant @ 5%.

The results depicted in Table 4 indicate that the direction of causality between industrial output and economic growth is uni-directional as it runs from industrial output to growth at 1% significance level. The implication is that industrial output granger causes economic growth in Nigeria. Besides, causality between inflation and economic growth is uni-directional as economic growth granger causes inflationary trend in Nigeria. The direction of causality between industrial output and inflation rate is also uni-directional as it runs from industrial output to inflation rate in Nigeria. However, it should be noted that there appears to be no causality observed between interest rate and economic growth, interest rate

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and industrial output as well as inflation rate and interest rate in Nigeria as the null hypothesis in each cases cannot be rejected.

## 5. CONCLUSION AND RECOMMENDATION

This study concluded that industrial sector performance has a significant positive effect on economic growth in Nigeria. This result supported the notion that industrialization is a crucial and powerful engine in the overall development process because it serves as an essential tool in jobs creation, eradication of poverty and the promotion of regional development policies and also stimulates technological progress and innovation as well as productivity gains. As a matter of fact, evidences from cross country and country specific studies suggest that industrialization is indispensable to the economic growth process of any nation. Therefore, there is need for government to initiate and pursue policies that will stimulate and enhance private sector-driven industrialization in Nigeria as this will ultimately induce improvement in economic growth. Besides, the stringent conditions attached to loan accessibility by most of the financial institutions in Nigeria in terms of the high interest rate should be reviewed. Lastly, government should equally undertake pragmatic steps aimed at addressing the challenges of power as a way of boosting industrial production in Nigeria.

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