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THE NEXUS BETWEEN ECONOMIC DEVELOPMENT AND INDUSTRIAL GROWTH IN NIGERIA

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Abstract

The study examined the relationship between economic development and industrial growth in Nigeria. The data, set for this study consists of secondary time's series data spanning from the period 1990-2021. The study made used of Granger Causality and Autoregressive Distributed Lag Model (ARDL) to explain the direction of relationship. The results shows that;the coefficient of determination (R^2) showed the percentage of variations in the dependent variable that can be explained by the independent variables. The R^2 of 0.999379 or 99% showed that Economic development can be explained by changes in the explanatory variables as shown in the model and the remaining 1% is explained by the dummy variable. The F-statistic which measures the overall significance of the model indicated that it is significant at 5%. This is indicated by the F-statistics and its probability (1288.349 and 0.000000) respectively. The study therefore concludes that there is a significant contrition of industrialization to economic development in Nigeria. This study recommends among other things; That Government through her various agencies should formulate friendly industrial policy that will encourage investors in Nigeria, and by so doing, more industries will emerge and this will generate employment to citizensand that also Agriculture should be improve for industries to source for raw material internally that will help to increase production as well.

Keywords:

Economic Development, Industrial Growth, Econometrics, Economic Growth and Nigeria.

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1. Introduction

In a developing nation like Nigeria, industries are crucial because their labor's marginal revenue product is higher than that of the agricultural sector. Therefore, the release of labor from the agricultural sector to the industrial sector raises the agricultural sector's marginal product of labor as well as the society's total revenue and output (economic growth). Thus, industrialization is essential to Nigeria's sustainable economic growth and is what the current government needs to fulfill its agenda for change. Many economists have developed theories to promote industrialization as a result of the industrial sector's propensity to spur greater economic growth.

According to Jelilov, Enwerem, and Isik (2016), industrialization is the foundation of economic growth, so the process of economic development usually starts with industrialization. Development efforts require a consciously systemized plan, and industrialization is an outcome of national planning. The efforts are usually deliberate as they aim at certain macroeconomic goals beginning with economic growth. Industry is typically grouped into primary and tertiary production.

On the other hand, industrialization is the process by which raw materials are transformed into completed goods or into more valuable products. The organized human skills and labor used to produce more valuable goods from natural resources is another common definition of industry (Ndiaya&Lv 2018). While tertiary production is focused on manufacturing—the process of converting raw materials or primary products into final consumables or tertiary products—primary production is concerned with the mining and extraction of mineral resource deposits. According to Nwogo and Orji (2019), CBN (2012) divides Nigeria's industrial production into three categories: manufacturing, solid mineral mining, and crude oil and natural gas.

The process of increasing a country's ability to transform raw materials and other inputs into finished goods for either final consumption or further production is known as industrialization. According to the classification by CBN (2015), as cited in Nwogo and Orji (2019), manufacturing, solid mineral mining, crude petroleum, and natural gas will be the closest suitable measures and indicators of industrialization in this case. The manufacturing employment rate could also be a variable to account for the human capital factor.

Nigeria and other developing nations still require additional industries, particularly manufacturing, to support economic development and growth at the best possible rate. In order to achieve the intended economic growth and development, developing nations in particular require sufficient resources to support industries' production and export of goods (Olusegun 2021). By significantly raising the value added at each link in the value chain, industrial policy may also aim to quicken the rate of industrial development (Jelilov, Enwerem&Isik 2016). According to Djeudo (2013), in order for developing economies like Nigeria to industrialize, the government must keep fostering conditions that support the private sector and enact sound laws that foster creativity.

Concern over the decline in Nigeria's manufacturing sector's output in recent years has grown, despite the government's efforts to boost industrial production and capacity utilization in the sector. The manufacturing sector's poor performance in Nigeria is primarily due to massive imports of finished goods and a lack of funding, which has ultimately resulted in a drop in the industry's capacity utilization in the country. The Nigerian government implemented industrial policies such as devaluation, privatization, commercialization, disinvestment, and SAPs in an effort to boost economic growth.

According to Kida and Angahar (2016) and CBN (2020), a 3.2% share of manufacturing value in total GDP in 1960 was attributed to the lack of skilled labor, a lack of capital to make the initial investment and to re-inject into the business in order to expand, and the lack of a good road network, which is necessary for factories to transport their raw materials and finished goods efficiently.Manufacturing's share of GDP increased from 5.4% in 1977 to 13% in 1992. However, the manufacturing sector's share of GDP decreased to 6.2% in 1993, and the manufacturing capacity utilization (MCU) rate increased by 3.4% between 2001 and 2009 and then decreased to 2.4% in 1998. Value-added manufacturing accounted for 12.67% of GDP by 2020 (World Bank, 2022).

2. Literature Review

Economic Development

Both qualitative and quantitative economic growth are the main goals of economic development. It gauges every factor, such as a nation's citizens getting richer, healthier, more educated, and having easier access to high-quality housing. More opportunities in the fields of employment, healthcare, education, and environmental preservation can be brought about by economic development. It shows that each citizen's per capita income has increased. Living standards include safe drinking water, improved sanitation systems, medical facilities, the spread of primary education to improve literacy rate, poverty eradication, balanced transport networks, increased employment opportunities, etc. Quality of living standards is the major indicator of economic development.

Accordingly, in order for an economy to become a Developed Nation, it must experience a rise in economic development (Thakur, 2023). According to Myint and Krueger (2023), economic development is the process through which low-income, simple national economies evolve into contemporary industrial economies. The phrase is typically used to describe a shift in a nation's economy that involves both qualitative and quantitative improvements, though it is occasionally used as a synonym for economic growth.

Economic development characteristics

Indeed (2023) lists the following as the main characteristics of economic development: noticeable changes in a nation's socioeconomic structure, such as shifts in income, savings, investments, and technology; quantifiable through qualitative factors like the physical quality of life, the Human Poverty Index, the Human Development Index, the Gender-related Index, the literacy rate, the balance of trade, the Gini coefficient, and infant mortality; signs of

increased revenue and an improvement in living standards; improvements in a nation's population's quality of life; a decrease in unequal resource distribution and an increase in human capital; leads to both quantitative and qualitative improvements in a nation; and factors in sustainability by taking into account issues like the depletion of natural resources that could pose problems for future generations

Factors that affect economic development

Factors that affect economic development in a country can include:

Infrastructure

The quality of a nation's infrastructure influences its economic development. Investments in roads, railroads, and seaports can increase the production of goods and services, which in turn promotes economic development.

Life expectancy

The growth of a nation's welfare state is demonstrated by an increase in life expectancy. Life expectancy rises as mortality declines and health and nutrition improve. A nation's social development is demonstrated by the long and healthy lives of its citizens.The growth of a nation's welfare state is demonstrated by an increase in life expectancy. Life expectancy rises as mortality declines and health and nutrition improve. A nationwide population with a long and healthy life indicates a country's social development.

Adult literacy

A nation's chances of developing can be enhanced by having a greater proportion of literate citizens. Finding new sources of funding for projects that can enhance a nation's infrastructure and general well-being can be facilitated by literacy. Additionally, it makes financial instruments like credit facilities and insurance accessible. When to use credit facilities to invest in projects that can improve their cash flow and, consequently, their well-being is up to the individual. People who are literate have the knowledge necessary to develop their life skills. For instance, they are able to comprehend how nutrition and health can enhance their quality of life.

GDP per capita

A nation's economic output per person is gauged by its gross domestic product (GDP) per capita. It calculates a nation's per capita income. Although more accurate measures take into account other factors like health and education levels, income inequality, and environmental quality, GDP per capita shows a nation's standard of living.

Industrialization

Industrialization is the process of shifting a country's or region's economy away from agriculture and toward manufacturing, according to investopedia (2023). A key element of this shift is the use of mechanized mass production techniques. Economic expansion, a more

effective division of labor, and a surge in technological innovation are all benefits of industrialization.

Industrialization, according to Indeed (2023), is the process of moving from an agrarian, or agricultural, economy to one that is centered on industry. Even though the Industrial Revolution in the 18th and 19th centuries was the main catalyst for the United States' transition to an industrial economy, it still has an effect on how businesses operate today.

Particularly in manufacturing and production facilities, features like assembly lines and the use of machinery to complete tasks are intended to increase productivity. Many industries, including agriculture, have become even more industrialized as a result of technological advancements. Transportation and logistics, construction, wholesale trade, healthcare, utilities, and warehousing are some additional industries that are impacted by this shift. According to Robinhood (2020), human society was primarily structured around farming and rural economies prior to the 1800s. The process by which agrarian (farm-based) economies give way to ones centered on mass production is known as industrialization.

Higher living standards, urbanization, economic growth, and advancements in infrastructure and technology are usually associated with it. In the past, it has also occasionally resulted in increased carbon emissions and pollution levels, as well as abusive labor practices. The Industrial Revolution began in Britain in the 18th century and brought about a period of industrialization in North America and the West. Many nations have followed suit, and industrialization is still going strong in many of them. According to Anjaneyula (2023), industrialization is the time of social and economic transformation that turns an agrarian human group into an industrial society, entailing a significant restructuring of an economy through manufacturing.

People cannot develop into an industrial society without a plentiful supply of these necessary components and the ability to work together. Industrialization requires several key elements to grow on a significant scale, including land, labor, capital technologies, and connections.

Industrialization in Nigeria at Independence

Nigeria had 389 industrial establishments overall when it gained independence in 1960 (Onyemelukwe, 1982). Many of these were involved in the manufacturing of textiles, soap, cement tobacco, and brewing. An estimated 50 million people lived in the nation at this time. These factories' output was woefully insufficient to satisfy the demands of the swarming populace. As a result, Nigeria kept importing a large portion of the manufactured goods it required. When Nigeria gained its independence, its level of industrialization was at this point. When combined with the previously discussed technological state, it can be said that Nigeria's industrial and technological development was at a very low level at the time of its independence.

The Rationale/Reasons for Increased Industrial Output

The majority of developing nations view higher industrial output as a primary goal of their economic policies and as a necessary component of structural change and development. In order to guarantee a higher degree of independence in the supply of industrial products, the government has consistently given it a significant pace in its numerous development plans. Increased industrial output can be attributed to the following factors (Adebayo, 2004).

a. To Reduce Poverty/Standard of Living: As industrial output rises, people's standard of living will rise or improve due to an increase in goods and services, basic amenities, and income capital.
b. To Reduce the Unemployment Rate: As more people work in the industries, the number of unemployed people in the nation will decrease.

c. To Increase Export/Import Substitution: As the nation's industrial output rises, more goods will be exported to other nations, improving the country's balance of payments and lessening its reliance on imports. Additionally, output, or GDP, will rise.
d. To Reduce Dualistic Economy: The majority of the world's less developed nations will become more developed as a result of increased industrial output, closing the gap between rich and poor nations.

e. To Reach the Global Goals, or Sustainable Development Goals: The Global Goals, also referred to as the Sustainable Development Goals (SDGS), are an international call to action to eradicate poverty, safeguard the environment, and guarantee that everyone lives in peace and prosperity.

Problems of Industrial Development in Nigeria

It has been shown that low industrial output has helped substantially in reshaping the economic structure of Nigeria. One may then ask: what are responsible problems for this slow rate of industrial development? Niche and Nwosuji (2018) address the following issues that impede rapid industrial growth: (a) Insufficient funds or capital: Their financial issues have a tendency to overshadow other issues that they face in their day-to-day fight for survival in practically every discussion of industry problems, whether by their owners or those concerned with their welfare. Owners' capital is the primary source of funding for industries worldwide.This issue is exacerbated in Nigeria, as it is in many developing nations, by sole proprietors' reluctance to permit outsiders to participate in what is typically a family or personal business.

b. Lack of Technical Know-How: Another issue confronting Nigerian industries is the lack of managerial personnel and technological know-how. Babinton (2015) asserts that entrepreneurs rarely possess strong managerial and technical expertise. A large number of industrial entrepreneurs work in fields in which they lack significant technological expertise or experience. He added that because of the size of these industrial units, technical advice and advisory departments are typically nonexistent; as a result, there is a lack of technical advice on operational issues in the workshop, development work on issues related to the efficient use

of labor and equipment as well as the proper use of raw materials, improved product design, technical training for staff, and know-how to address issues of high production costs and poor quality.

c. Weak Raw Material Based: Nigerian industries also face this issue. Its agricultural sector is in poor condition, which has led to weaker raw material production and an over-reliance on the outside world for capital equipment and raw materials. In other words, Nigerian industries have relied on imported capital goods and raw materials. The majority of the beverage, cement, rubber, plastic, and some food industries rely on imported raw materials to produce their goods.

d. Inadequate Basic Infrastructural Facilities: Nigeria's industrial development was hindered by a lack of basic infrastructure, including a road network, railroads, river transportation, water facilities, and irrigation machinery and equipment. As a result, current industries have closed, and new ones are not emerging. Additionally, diesel engines were used to power their industries due to irregular or erratic power supplies, which raised production costs.

Government Incentives/Policy Measures to the Industrial Sectors Since gaining independence in 1968, the Nigerian government has worked consciously to lessen reliance on foreign manufacturers by implementing supportive programs that aim to make local manufacturers meet local demand along the line of import substitution. To guide the country's achievement of this goal, the government has drafted an industrial policy document, which the Bureau of Public Enterprise (2005) defines as a systematic government involvement through specifically designed policies in industrial affairs, arising from the adequacy of macroeconomic policies in regulating the growth of the industry.

Subsidies, tax incentives, export promotion, government procurement, and import restrictions are some of the instruments of industrial policy, it continued, adding that direct investment was the mainstay of industrial policy from the 1970s to the 1980s and that trade, monetary, and foreign exchange rate policies all influenced investment decisions.

Empirical Review

Singh and Kumar (2021) used a linear, log-linear, and non-linear regression model to measure the performance of the Indian industrial sector from 2003 to 2018. The results of the linear regression indicated that the gross value added of industries was positively and statistically significantly impacted by labour productivity, annual population growth, literacy rate, credit to industries by scheduled commercial banks, gross capital formation, gross value added with total persons engaged, gross capital formation, total inputs, labour productivity, per person emoluments, capital intensity, and credit to industry by scheduled commercial banks.

The nonlinear outcome demonstrated a linear relationship between the gross value added of industries and labor productivity, gross capital creation, total persons engaged, yearly

population increase, and loan to industries by scheduled commercial banks. In the meantime, India's industrial growth is correlated in a hill-shaped manner with the country's literacy rate, per capita income, capital intensity, and total inputs.

Using empirical research with annual data from 1990 to 2019, Aransiola et al. (2022) investigated a number of factors that may influence industrial development in Nigeria. They confirmed the contributions of market size, agricultural output, GDP growth rate, exchange rate, foreign direct investment inflows, and trade openness to industrial development. The Granger causality test and Fully Modified Ordinary Least Squares (FMOLS) were used in the study to analyze the data that was gathered. The following are significant findings from this study that should be reported: Trade openness, GDP growth rate, exchange rate, market size, and agricultural output are not powerful factors that can propel Nigeria's industrial development.

This suggests that Nigeria's industrial development is not influenced by these factors. FDI influx, however, is not a strong force behind Nigeria's economic development. According to the Granger causality results, which are shown on a different page, the availability of a large market is the single determinant associated with industrial development that is essential to the nation's industrial growth. Given the aforementioned, the study suggests to Nigerian policymakers that industrial development in Nigeria necessitates growing the country's market, producing enough value-added agricultural products, increasing GDP, managing the exchange rate, encouraging exports, and drawing in more foreign direct investment.

Therefore, Nigerian officials should establish policy measures to make it easier for the government to implement these recommendations. Using two-stage least squares to evaluate the data, Amoah and Jehu-Appiah (2022) investigated the factors influencing industrialization in Africa between 1990 and 2018. It was shown that industrialization was significantly positively impacted by financial development, total natural resources, and foreign direct investment. Additionally, industrialization was significantly harmed by trade openness, but inflation and human capital had little effects.

Using a dynamic panel model, Kothakapa et al. (2021) examined the relationship between industrialization and financial development in low- and middle-income countries between 1970 and 2014. The results indicate a nonlinear relationship between the two variables, specifically that industrialization is hampered by financial development until the effect reverses. Bokosi (2022) uses a variety of econometric techniques to examine the impact of industrialization on economic growth, including mean group, pooled mean group, dynamic fixed effects, and accounting for common correlated effects. Manufacturing value added is used as a proxy for industrialization.

According to empirical findings, economic growth is favorably correlated with industrialization in both the short and long term. This positive association is strengthened when cross-sectional dependence is addressed by using commonly correlated elements. According to the research's policy implications, industrialization is still a key instrument for

economic transformation in Southern Africa, and implementing industrialization strategies successfully in these nations is one of the obvious routes to economic growth.

Ogundipe (2022) examines how Nigeria's manufacturing sector affected the country's economic growth from 1981 to 2018. The study used the OLS regression methodology to investigate the relationship between the growth of the Nigerian economy and the designated explanatory factors. The results show that the output of the manufacturing sector positively and significantly correlates with the growth of the gross domestic product, suggesting that it has a favorable effect on that expansion. This variable's significance indicates that one of Nigeria's primary economic drivers at the moment is the manufacturing sector.

Furthermore, capital and GDP have a high and positive association, indicating that capital can contribute to GDP growth. Labor has a positive effect on GDP, as evidenced by the positive and strong relationship between labor and GDP growth. The gross domestic product and foreign direct investment have a robust and positive relationship, suggesting that FDI contributes positively to GDP growth. The exchange rate and GDP have a positive but negligible relationship, indicating poor exchange rate management in Nigeria. The significant and positive influence of manufacturing production on economic growth may be due to the fact that the Nigerian economy's manufacturing sector is currently one of its primary drivers.

3. Methodology

This study's main data collection method was secondary. A variety of sources, including books, unpublished essays, journals, government reports, magazines, and the interne. The study's data collection is made up of time series spanning from the years 1990–2021. Granger causality and Autoregressive Distributed Lag are the analytical techniques that were used to accomplish the research's objectives.

Model Specification

The functional relationship between the variables is presented thus:
GDP = F (IG, EXR, INR)
The functional relationship is translated into an econometric model for regression:
$RGDP = \beta o + \beta 1IO + \beta 2\ EXR + \beta 3\ INR + \mu$
Where:
GDP= Gross Domestic Product (proxy for Economic Development)
IO = Industrial Output
EXR= Exchange Rate
INFR = Inflation Rate
μ= Error term at time

4. Results and Discussion

Unit root test

Conventionally, the universal assumption in testing economic model is that the variables be stationary, but is not generally true. Therefore, before estimating the model of the research, we shall check for the time series properties of the data. The unit root was tested using Augmented Dickey-Fuller test at 5% level of significance. The choice of lag length was lag (4) which was used uniformly for all variables. The result is shown in the table below:

Table 1: Summary of the Augmented Dickey-Fuller Test

Variables	ADF Statistics	5% Critical value	Probability	Order of integration	Remark
EXCR	-3.679488	-2.963972	0.0098	1(1)	Stationary
LOGGDP	-4.605098	-2.960411	0.0009	1(0)	Stationary
INF	-6.125550	-2.981038	0.0000	1(1)	Stationary
LOGIO	-4.004280	-2.967767	0.0045	1(1)	Stationary

Sources: Authors computation using Eview 10

The table above shows the results of the unit root test. The decision rule state that if the Augmented Dickey Fuller statistics is > than the critical value at 5% then there is no unit root in the data, but its stationary. The result shows that Gross Domestic Product (LOGGDP) is stationary at level while INF, IO and EXCR were stationary at 1st difference, hence the data is stationary. However, ADF unit root test for this study confirmed that only one of the variables in the research model is stationary at 1(0) and the remaining three are stationary at first difference1(1). The result in table 1 above indicates that when the variables are tested at levels, only one variable is stationary, the rest are not stationary. Moving forward, differencing the respective variables and performing the unit root test on each of the resultant time series. The rationale behind this procedure is as Box and Jenkins (1976) have argued that differencing non-stationary time series will make it attain stationarity. The data of this nature warrant the use of Autoregressive Distributed Lag Model.

Granger causality test

Although regression analysis deals with the dependence of one variable on the other, it does not imply causation. In other words, the existence of a relationship between variables does not prove causality or the direction of influence (Gujarati, 2004). The essence of employing causality analysis, using the granger causality test in this research work is to actually ascertain whether a causal relationship exists between Inflation Rate (INF), Exchange Rate (EXCR), Industrial Output (IO) and Gross Domestic Product (GDP). The F- statistics is used to reject or accept the null hypothesis of no causation between the variables when F-statistics is greater than 2 and less than 2 respectively. Or the probability value, the null hypothesis is rejected if p- value is less than 5% level of significance. Consider the table below to check for

direction of influence between the variables in Nigeria for the period under study (i.e. from 1990 to 2021).

Pairwise Granger Causality Tests
Date: 06/04/25 Time: 11:42
Sample: 1990 2021
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
EXCR does not Granger Cause LOGGDP	30	1.57131	0.2276
LOGGDP does not Granger Cause EXCR		1.61183	0.2196
INF does not Granger Cause LOGGDP	30	4.08428	0.0292
LOGGDP does not Granger Cause INF		4.82287	0.0169
IO does not Granger Cause LOGGDP	30	0.07809	0.9251
LOGGDP does not Granger Cause IO		2.63447	0.0916
INF does not Granger Cause EXCR	30	0.65037	0.5305
EXCR does not Granger Cause INF		0.81965	0.4521
IO does not Granger Cause EXCR	30	5.01760	0.0147
EXCR does not Granger Cause IO		7.59326	0.0027
IO does not Granger Cause INF	30	0.47819	0.6255
INF does not Granger Cause IO		0.06742	0.9350

Source: Author's computation using Eview 10

The results alternated between no causality, and bi-directional depending on the lag length allowed, which are all tested on the same lag. The outcome is presented in Table 2 above. The results suggest that the direction of causality is from EXCR to GDP and from GDP to INF. It showed that an increase in Exchange Rate will not lead to an increase in Gross Domestic Product in Nigeria, and also, GDP does not Granger cause EXCR. That is, GDP has no relationship with Exchange Rate. So also, the is a bi-directional relationship between GDP and INF. They are both causing each other. An increased in INF will lead an increase in GDP, as well as, increase in GDP will lead to an increase in INF. On the other hand, IO and GDP does not granger cause each other. INF and EXCR is not granger causing each other in Nigeria. There is a bi-directional relationship between IO and EXCR. An increase in Industrial Output will lead to an increase in Exchange Rate, and also, increase in exchange rate will lead to an increase in industrial output. Lastly, IO and INF does not granger cause each other in Nigeria. Also, the result showed that the rest of the variables their probability is greater than 0.05 and that means they are not Granger causing each other. That is, no relationship exists between them.

Autoregressive Distributed Lag Model (ARDL) Result

The ARDL approach was adopted because its test statistics generally perform much better in small sample than the test statistics computed using the asymptotic formula that explicitly takes account of the fact that the regressors are 1(1). Its permits the combination of the

different order of integration (1(1)) and 1(0)) among the variables in the model. The result of the ARDL for the models is represented below:

TABLE 3: showing the ARDL result

Dependent Variable: LOGGDP
Method: ARDL
Date: 4/04/25 Time: 15:23
Sample (adjusted): 1994 2021
Included observations: 28 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): EXCR INF LOGIO
Fixed regressors: C
Number of models evalulated: 500
Selected Model: ARDL(3, 4, 1, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
EXCR	-0.000656	0.001015	-0.646440	0.5302
INF	0.006064	0.001532	3.958535	0.0019
LOGIO	-0.000859	0.003452	-0.248885	0.8077
C	-0.664406	0.464498	-1.430373	0.1781

R-squared	0.999379	Mean dependent var	10.22041
Adjusted R-squared	0.998604	S.D. dependent var	1.383320
S.E. of regression	0.051690	Akaike info criterion	-2.791542
Sum squared resid	0.032062	Schwarz criterion	-2.030282
Log likelihood	55.08159	Hannan-Quinn criter.	-2.558817
F-statistic	1288.349	Durbin-Watson stat	1.913178
Prob(F-statistic)	0.000000		

The coefficient of the constant intercept β_0 is -0.664406 which show that if all the explanatory variables were held constant, the GDP will be negatively affected as -664406, a decrease in economic growth in the economy. In relation to our apriori expectation, it is expected that there should be a direct positive relationship between Gross Domestic Product and the independent variables (IO, and INF) in Nigeria. The coefficient does not conform to the apriori expectation. However, the coefficient of Industrial Output as percentage of GDP does not conformed to the apriori expectation. The coefficient (β_1=-0.664406, P=0.8077) shows a negative and an insignificant relationship between IO and economic development in Nigeria. Its shows that a unit change in IO will lead to 66% decrease in economic development in Nigeria.

Consequently, the coefficient of Exchange Rate shows that it conformed to the apriori expectation of a negative relationship. This is proving by the coefficient of (β_2=-0.000656, P=0.5302). The result is negative and insignificant at 5%. This shows that a unit change in Exchange Rate will lead to a decrease in GDP by 656 units in the economy. There is a negative relationship between EXCR and economic development.

Lastly, the coefficient of Inflation rate also conformed to the apriori expectation of a positive relationship. This is shown by the coefficient (β_3=0.006064, P=0.0019) which indicates that a

unit increase in Inflation Rate will lead to a 6064 unit increase in economic development in Nigeria.

The coefficient of determination (R^2) showed the percentage of variations in the dependent variable that can be explained by the independent variables. The R^2 of 0.999379 or 99% showed that Economic development can be explained by changes in the explanatory variables as shown in the model and the remaining 1% is explained by the dummy variable. The F-statistic which measures the overall significance of the model indicated that it is significant at 5%. This is indicated by the F-statistics and its probability (1288.349 and 0.000000) respectively. We therefore conclude that there is a significant impact of industrialization on economic development in Nigeria. The Durbin Watson statistics is approximately 2 which show that there is no serial correlation. This means that the value of the random term in any particular period is uncorrelated with its preceding values which indicate the absence of autocorrelation.

Discussion of Findings

Nigeria is one of developing countries that are in the process of development. One of the strategies that can aid the development of a nation is through industrialization. Industrialization helps a country to balance its import and export goods. Industrialization provides a greater opportunity employment in small and large scale industries thereby increasing the income per head of individual in the economy and help to improve the living standard in the economy and also increase foreign exchange.

Based on this result, the regression shows that a negative and an insignificant relationship existed between IO and Economic Development in Nigeria. Its shows that a unit change in IO will lead to 0.09% decrease in economic development in Nigeria at 5%. This could be as a result of lower industrial input in the economy, the inputs of most industries are source from outside not within, this could lead to a negative relationship with economic development. This does not conform to Ogundipe (2022) who found out that manufacturing sector's output has a positive and significant link with the increase of the gross domestic product, indicating that it has a favorable impact on that growth. His finding also shows that the link between exchange rate and GDP is both positive and insignificant while our findings indicated a negative and insignificant relationship. Our studies found a positive and significant relationship between inflation and economic development, the result is consistent with Amoah and Jehu- Appiah (2022) who found positive and insignificant relationship between inflation economic growths in Nigeria. The result further shows that there exists a negative and insignificant relationship between Exchange Rate and economic development in Nigeria. That a unit increase in exchange rate will lead to a 0.07% unit decrease in economic development. This conforms to the apriori expectation.

The regression result shows that there exist a positive and a significant relationship between industrialization and economic development in Nigeria. This is indicated by the goodness of fit of 99% growth in GDP which is as a result of a change in the independent variables and 1% is by the dummy variables. The overall significance is measured by the value of the

probability F-statistic which is 0.000000 and is less than 0.05 significant levels. We, therefore, reject the null hypothesis and conclude that there is a significant impact of industrialization on economic development in Nigeria.

5. Conclusion and Recommendations

Conclusion

The unit root test tested showed that some of the variables are stationary at a level and some are stationary at first difference. The regression shows that a negative and an insignificant relationship existed between Industrial Output and Economic Development in Nigeria. The result further shows that there exists a positive and significant relationship between Inflation Rate and Economic Development in Nigeria. The JarqueBera test indicated that the data are normally distributed.

The role of industrialization in enhancing economic development in Nigeria has been discussed in this study. The study showed that industrialization is the engine room of development of any economy. Therefore, any nation that want to be develop must give priority to industrial development as this will lead to a reduction in poverty rate in the economy and also give room for employment generation thereby improving the income of individual as well as having an improved economic based.

Recommendations

Based on the result of this research study, the following recommendations were made:

That Government through her various agencies should formulate friendly industrial policy that will encourage investors in Nigeria, and by so doing, more industries will emerge and this will generate employment to citizens.

Agriculture should be improve for industries to source for raw material internally that will help to increase production as well

The government should subsidies industrial and farm inputs that will help producers to produce goods at affordable prices thereby reducing inflation in the economy.

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