

Analysis of Government Revenue on Industrial Output in Nigeria

¹Joshua-Gyang, Emily & ²Aigbedion, I. Marvelous

^{1&2}Department of Economics,
Bingham University Karu, Nasarawa State

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Abstract

Government revenue can be used to support small and medium-sized enterprises (SMEs) in the industrial sector by providing them with funding and resources to grow and expand industrial output in developing countries like Nigeria. The paper's objective is to analyze the relationship between government revenue indicators and industrial output in Nigeria using historical data. This is done through the use of a regression model, with data sourced from the Central Bank of Nigeria Statistical Bulletin spanning the years 1987-2021. While Autoregressive Distributed Lagged (ARDL) was used for the estimation. Thus, the ARDL results revealed that the government's non-oil revenue in Nigeria has a positive and significant impact on the industrial output in Nigeria at a 5 percent significant level. Similarly, the government oil revenue in Nigeria has a positive and significant impact on industrial output in Nigeria at a 5 percent significant level. Also, the speed of adjustment mechanism from the short run to the long run should there be any disequilibrium is 227% and this implies that it will take more than 24 months for any disequilibrium to be corrected in the model of government revenue and industrial output in Nigeria. The paper suggests that the Nigerian government should increase non-oil revenue through investment in the real sector and improving sector productivity, while also improving oil revenue through domestic production and distribution. Additionally, a long-term policy strategy is recommended to improve the impact of government revenue on industrial output in Nigeria.

Keywords: *Government Revenue, Industrial Output, Oil-Revenue, Non-oil Revenue*

Corresponding Author: Joshua-Gyang, Emily

Background to the Study

Fiscal policy should attempt to promote economic and social development by pursuing a policy stance that gives a sense of balance between spending, taxing, and borrowing that is consistent with long-term growth and development. As a result, development is seen to be synonymous with industrialization. Industrialization, according to Jaiswal (2014), is a crucial engine of growth and development in every economy. Thus, industrialization is the process of increasing a country's ability to manufacture a wide range of products by extracting raw materials and producing semi-finished and completed items (Ekpo, 2014). It is the process of increasing a country's ability to transform raw materials and other inputs into completed goods and to produce commodities for other products or end consumption.

Thus, many governments aim to boost their economies through industrialization by generating revenue and investing in various sectors, including the industrial sector. Researchers have studied the relationship between government revenue and industrial output to understand how government revenue affects industrial production and how it can be used to promote economic development. Industrial output is a crucial factor in economic growth as it reflects the production of goods and services in the manufacturing and industrial sectors. Governments generate revenue through various methods, such as taxes, fees, lottery, sale of government assets, borrowing, grants and aid and the way they use this revenue can have a significant impact on the industrial sector. For instance, investing in infrastructure like roads and bridges can improve transportation and increase industrial productivity.

Nigeria is one of the largest economies in Africa and has a relatively high level of industrial output compared to many other African countries. However, there is significant variation in the level of industrialization across the continent, with some countries having more advanced industrial sectors than others. According to data from the World Bank, in 2019 Nigeria's industrial sector contributed around 23% of the country's GDP, which is higher than the average for sub-Saharan Africa of around 17%. However, Nigeria's level of industrialization is still relatively low compared to some other African countries, such as South Africa, which has a more developed industrial sector and where industry contributes around 29% of GDP. Other African countries with relatively high levels of industrial output include Egypt, which has a diverse and developed industrial base, and Morocco, which has a growing manufacturing sector. However, many African countries continue to face challenges in developing their industrial sectors, including a lack of infrastructure, skilled labour, and access to finance.

Insufficient infrastructure, including power supply, transportation networks, and telecommunications, negatively impacts industrial output. The lack of reliable electricity supply raises production costs and hampers operational efficiency. Poor transportation infrastructure results in delays, increased logistics costs, and challenges in the movement of goods. These infrastructure deficits hinder industrial growth and limit the sector's contribution to government revenue. Industrial activities in Nigeria face high production

costs, primarily due to factors such as inadequate infrastructure, multiple taxes, and regulatory burdens. The high cost of doing business makes Nigerian industries less competitive both domestically and internationally, impacting their output and profitability. It also discourages investments in the sector.

Many industrial enterprises in Nigeria struggle to access affordable financing for expansion, modernization, and technological upgrades. Limited access to credit, high-interest rates, and complex loan procedures impedes industrial growth and hinder the sector's ability to contribute to government revenue. Security challenges, including insurgency, terrorism, and communal conflicts, pose significant obstacles to industrial output and revenue generation. Insecurity disrupts industrial activities, deters investments, and leads to the closure of industries in affected areas. This not only affects government revenue but also contributes to job losses and economic instability.

The Nigerian government has previously implemented policies to promote industrial output, which could provide insight into potential policies for the future. In 2020, the government launched the National Industrial Revolution Plan (NIRP) to support local content development, provide access to finance for SMEs, and develop industrial parks and special economic zones (Omankhanlen, Chimezie & Lawrence, 2021). Trade policies, such as import prohibition on certain goods and the African Continental Free Trade Area Agreement (AfCFTA), support domestic industries and promote trade with other African countries. Infrastructure development, including road construction, rail transportation, and power generation, enhances industrial productivity and encourages business investment (Nwaogwugwu, Ayodele & Ejumedia, 2016). Tax incentives to companies investing in certain sectors, such as agriculture and infrastructure, to stimulate investment in the industrial sector and policies supporting SMEs, such as access to funding and training programs. Despite all these policies and programs, the problems in this sector persist. It is possible that investing in infrastructure projects may require significant financial resources and long-term planning. Governments may need to secure funding through various sources, such as borrowing or international aid, which may come with conditions that limit their ability to implement policies that best support the industrial sector.

Additionally, providing tax incentives and funding to specific industries may lead to unintended consequences, such as crowding out other industries or creating a dependency on government support. These problems in industrial output if not attended to in good time potent a danger to the growth and development of the economy. Therefore, the main objective of this paper is to analyze the impact of government revenue on industrial output growth in Nigeria. While the specific objectives are to evaluate the impact of non-oil revenue on industrial output in Nigeria and to access the extent to which oil revenue has an impact on industrial output in Nigeria. The other sections of the paper are divided into three (3) main parts which are the materials and methods, presentation of data and discussion of results and conclusion and recommendations.

Materials and Methods

Conceptual Review

Public income is defined broadly and narrowly by Adegbite and Fasina (2019). In a broader sense, it encompasses all revenue and receipts received by the government at any one time. Public income/revenue comprises money from taxes, the prices of products and services provided by public businesses, revenue from administrative operations such as fees, penalties, and so on, as well as gifts and grants, while public receipts encompass all government earnings income comprises taxes revenues and also receipts that are not taxation proceeds but instead the realization from government assist sales, interest and returns from investment and loans, or profits from user charges, according to Okoroafor and Nwaeze (2013). This implies that revenue is the income of the government gotten through taxes, interest on its loans, investments as well as payments made for the use of its services.

Industrial output is the overall output of industrial enterprises and includes mining, manufacturing, gas, steam and electricity (Callistus & Pascal, 2020). The production capacity of the industrial sector is a significant contributor to economic growth, and thus, measuring industrial output is crucial to understanding an economy's performance (Jaiswal, 2014). The quantity and value of services and goods produced by the industrial sector, including consumer goods, intermediate goods, and capital goods, are typically used to measure industrial output. GDP is a widely used measure of industrial output, as it calculates the total value of services and goods produced in an economy, including those from the industrial sector (Muhamad & Henny, 2020). Therefore, industrial output is a crucial measure of an economy's performance, and it is influenced by various factors, including government policies, technology, labour productivity, and global economic conditions. Policymakers and business leaders closely monitor industrial output to identify trends, opportunities, and challenges for the industrial sector, and to formulate strategies to enhance industrial performance.

Empirical Review

Several empirical research has been conducted on the influence of government revenue, particularly the collection of tax, on the growth of the Nigerian economy and other countries. However, this study examined other related studies, such as the work of Akeem and Adejare (2015), who explored the impact of the petroleum profit tax (PPT) on the growth of the Nigerian economy. Multiple regressions were used to examine secondary data collected from the CBN. Thus, the findings suggest that a PPT has a significant beneficial impact on GDP in both the long and the short. Achor and Ekundayo (2016) did a similar tax revenue study, analyzing how indirect tax revenues impact Nigerian economic growth. The study scope covered from 1993 to 2013, and the research relied on secondary data which were obtained from the CBN bulletin. From the study findings, it was observed that VAT has a significant impact on the GDP of Nigeria within the study period. Another study conducted by Ogar and Oka (2016) revealed that there is a strong link between non-oil revenue and Nigerian economic development, but no significant relationship between Nigerian economic growth and corporate income tax.

In another study, Eze and Ogiji (2018), employed an error correction technique to estimate the impact of fiscal policies on Nigeria's manufacturing sector output. According to the statistics, there is a significant negative relationship between the revenue generated by the government through tax and the output of the manufacturing sector in Nigeria. Furthermore, the research found a significant positive relationship between government expenditure and industrial output in Nigeria. According to the statistics, there was also a level relationship between fiscal policies and industrial output. According to the paper, the government should adopt expansionary fiscal policies since they have the potential to increase Nigerian industrial production. Ogbole, Sonny, and Isaac (2018) used cointegration and error correction models to compare the impact of fiscal policy on industrial activity in Nigeria under regulation and deregulation. The results show a negative difference in fiscal policy effectiveness in supporting the industrial sector during and after a regulatory period. They advocate for refocusing and redirecting government fiscal policy toward the production of goods and services to support the industrial sector.

While Joseph and Omodero (2020), looked at the relationship between the revenue generated by the government and Nigerian economic growth. The study adopted ex-post facto and exploratory research approaches, as well as secondary data from the FIRS, the NBS, and the CBN bulletin from 1981 to 2018. To investigate the relationship, the OLS regression method is applied. The data suggest that federal revenue and VAT have a somewhat positive relationship with growth. According to the report, the government must design appropriate revenue methods that will enhance government income while also having a good influence on the economy. Adeusi, Uniamikogbo, Erah, and Aggreh (2020) employed OLS regression techniques to examine the data acquired to explore the influence of non-oil income on Nigerian economic growth. According to the findings of the research, indirect taxes are more advantageous to Nigerian economic growth than direct taxes. Moreover, direct taxes have a significant yet unfavourable influence on Nigerian economic growth, especially in the long run.

Awa and Ibeanu (2020), examined the tax revenue impact on economic development in Nigeria. The yearly time series information from FIRS and the CBN was used from 1997 to 2018. The inquiry made use of regression analysis. According to the data, PPT and CIT have a major influence on economic growth, while VAT has no significant effect on development. According to the research, the higher the level of economic growth, the bigger the amount of tax revenue generated. According to the study, indirect taxes have less effect on economic growth than direct taxes, and hence direct taxes have a stronger influence on the economic development in Nigeria. From 1981 to 2018, Callistus and Pascal (2020), investigated the influence of taxes on industrial performance in Nigeria. A single linear model was employed in the study, with industrial output as the dependent variable and CIT, PPT, excise duty and customs tax, and the independent variable was the manufacturing capacity utilization. The data, on the other hand, reveal that joint CIT, excise, and customs duty, PPT and the capacity utilization of the manufacturing sector all have a substantial association with industrial production. When analyzed separately,

however, it is shown that CT and PPT have a positive but no significant link with industrial production. The effectiveness of fiscal policy in stimulating the industrial sector was found to be reliant on the quantity of available public money, the direction of public expenditure, and its implementation.

Obiano (2022) investigated the impact of fiscal policy on industrial capacity utilization in Nigeria. The study covered from 1981 to 2019 using time series data which were collected from CBN Bulletin. Government capital investment, local debt, and foreign debt all have a significant negative influence on industrial capacity utilization in Nigeria, according to the ECM results. Government recurrent spending, non-oil income, and the budget deficit were shown to have a considerable beneficial influence on Nigerian industrial capacity utilization. Oil income and Allocative efficiency had a negative and negligible influence on manufacturing capacity utilization in Nigeria, but debt sustainability had a positive but small effect. The research indicated that fiscal policy has a substantial influence on industrial capacity utilization in Nigeria based on statistically significant f-statistics values.

Theoretical Framework

The neoclassical theory, developed by Robert Solow and Trevor Swan in 1956, holds that a functional market economy is essential for economic growth and development and that government revenue can be used to create a conducive business environment that encourages investment and innovation in the industrial sector. This can be achieved through policies that eliminate barriers to entry, promote competition, and provide incentives for companies to invest in research and development. For instance, tax incentives can be provided to firms that invest in new technology, which can spur innovation and productivity. Trade barriers such as quotas and tariffs can be reduced to increase competition and lower consumer prices. Additionally, property rights can be strengthened through policies that safeguard intellectual property and enforceable contracts, which can boost investor confidence and encourage long-term investments.

Overall, neoclassical theory suggests that government revenue can be utilized to promote investment and innovation, leading to increased productivity, competitiveness, and economic growth, which benefits both companies and consumers. The neoclassical theory suggests that government revenue (GR) can positively impact industrial output (IO) through various channels, such as investment and innovation. Mathematically, this can be represented by the following regression model:

$$IO = \beta_0 + \beta_1 GR + \varepsilon$$

Where: IO represents industrial output, GR represents government revenue, β_0 represents the intercept, β_1 represents the coefficient of government revenue and ε represents the error term. The coefficient β_1 is expected to be positive, indicating that as government revenue increases, industrial output also increases, holding other factors constant. The intercept term β_0 represents the expected level of industrial output when

government revenue is zero, and the error term ε captures the variation in industrial output that cannot be explained by government revenue.

Methodology

This study used an ex post facto research design. When research attempts to examine the cause-effect connection between the independent and dependent variables to establish a causal link between them, the design is utilized. The study analyses government revenue indicators on industrial output in Nigeria using historical data to predict the projected relationship through an established regression model. Time Series Annual data of industrial sector output and the indicators of government revenue were extracted from the CBN Bulletin for the period, 1987-2021. This implies that a secondary source of data was used in the study. The study's dependent variable is industrial production growth in Nigeria, which was proxied by the industrial sector's contribution to Nigeria's GDP. The proxies for measuring the independent variable, government revenue are government non-oil revenue in Nigeria and government oil revenue in Nigeria.

Model Specification

The first model was based on the work of Joseph and Omodero (2020), who investigated the link between government income and Nigerian economic development. The model was broadly summarized as follows:

$$y_t = \alpha + \beta_t X_t + \mu_t \quad (1)$$

Where: y_t is the dependent variable representing industrial output growth in Nigeria, as proxied by the contribution of the industrial sector to Nigeria's GDP, and X_t is the independent variable(s) representing non-oil revenue in Nigeria and oil revenue in Nigeria. However, the research has the implied purpose described as follows to establish the link between government income and industrial production in Nigeria:

$$ind = f(gnorv, gorv) \quad (2)$$

The explicit function is captured as:

$$indu_t = \alpha_0 + \alpha_1 gnorv_t + \alpha_2 gorv_t + \mu_t \quad (3)$$

Where: $indu_t$ is the industrial output in Nigeria at time t , $gnorv_t$ is the government non-oil revenue in Nigeria at time t , $gorv_t$ is the government oil revenue in Nigeria at time t , and μ_t = Residual (Stochastic error often called impulses). Therefore, the specified ARDL of the paper is as follows:

$$\Delta indu_t = \alpha_0 + \sum_{i=1}^n \beta_1 \Delta indu_{t-i} + \sum_{i=1}^n \beta_2 \Delta gnorv_{t-i} + \sum_{i=1}^n \beta_3 \Delta gorv_{t-i} + \beta_4 \Delta indu_{t-1} + \beta_5 \Delta gnorv_{t-1} + \beta_6 \Delta gorv_{t-1} + \mu_t \quad (4)$$

Therefore, equation (4) was used to estimate and analyse the impact of government revenue indicators on industrial output growth in Nigeria.

Method of Data Analysis

The ARDL procedure was used for the estimation of government revenue on industrial output in Nigeria. In addition, if there is any disequilibrium in the model, the error correction model (ECM) is used to determine the pace of adjustment between government revenue indicators and industrial production in Nigeria.

Presentation and Discussion of Results

Descriptive Statistics

Table 1: Descriptive Summary

	INDU	GNORV	GORV
Skewness	1.487379	1.133441	4.414493
Kurtosis	4.564040	3.409906	24.06859
Jarque-Bera	16.47247	7.739053	761.0118
Probability	0.000265	0.020868	0.000000
Sum	396705.0	51086.90	140810.8
Sum Sq. Dev.	6.700000	98053752	1.660000
Observations	35	35	35

Source: Author's Computation, 2023

Table 1 revealed that all the variables used have positive skewness and also the Table revealed that the industrial output in Nigeria (INDU), government non-oil revenue in Nigeria (GNORV) and government oil revenue in Nigeria (GORV) are mesokurtic as their kurtosis values are greater than three (3). Similarly, the probability of the Jarque-Bera shows that it was only the government non-oil revenue in Nigeria (GNORV) was normally distributed at the 5% normality test.

Trend and Graphical Analysis

The charts associated with industrial output in Nigeria (INDU), government non-oil revenue in Nigeria (GNORV) and government oil revenue in Nigeria (GORV) as economic variables used in this paper and from the trend results in government oil revenue in Nigeria (GORV) exhibited significant fluctuations between 1987 and 2022. The implication of this is that it will affect the policy implementation for government oil revenue in Nigeria and also that oil revenue is not the reach of control by internal market factors, but they mainly controlled by external market factors. While industrial output in Nigeria (INDU) and government non-oil revenue in Nigeria (GNORV) have a progressing trend between 1987 and 2022 and this implies that both variables can be controlled for policy implementation.

Stationary Tests (Unit Root Tests)

Table 2: Unit Root Test Result

Variables	ADF Statistics	Critical Value	Stationary Status
INDU	-4.843389	-3.557759	I (1)
GNORV	-4.087768	-2.963972	I (0)
GORV	-8.251221	-2.954021	I (1)

Source: Output from E-views 12.0 (2023)

Table 2 shows the stationary test of the variables used in this paper which are industrial output in Nigeria (INDU), government non-oil revenue in Nigeria (GNORV) and government oil revenue in Nigeria (GORV). The ADF test results revealed that industrial output in Nigeria (INDU) and government oil revenue in Nigeria (GORV) were stationary at first difference which means that they are integrated of order one 1(1) at a 5% level of significance. On the other hand, the government non-oil revenue in Nigeria (GNORV) was stationary at the level and it was said to be integrated of order zero 1(0). Given the mix result, as shown by ADF tests as well as the order of integration of the variables, the long-run relationship among the variables will be tested using the ARDL model which can capture the characteristics of a mixture of 1(0) and 1(1) of the variables as postulated by Pesaran, et al. (2001).

Co-integration of ARDL-Bounds Test

Table 3: ARDL-Bound Testing

Null Hypothesis: No long-run relationships exist				
Test Statistic	Value	K		
F-statistic	5.121939	3		
Critical Value Bounds				
Significance	I0 Bound	I1 Bound		
10%		2.63		3.35
5%		3.1		3.87
2.5%		3.55		4.38
1%		4.13		5

Source: Output from E-views 12.0 (2023)

Table 3 depicts the ARDL bounds test for co-integration that was performed in accordance with the study goals. The F-statistic returned by the ARDL limits test is 5.12, and when compared to the critical values obtained from the Pesaran Table at a 5% level of significance, it surpassed both 3.1 and 3.87 for 1(0) and 1(1), respectively. This means that the dependent variable, industrial production in Nigeria, and the independent variables, government non-oil income in Nigeria and government oil revenue in Nigeria, are co-integrated at a 5% level of significance.

Presentation and Interpretation of Results

Table 4: ARDL Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Dependent variable: $INDU_t$				
Long Run				
GNORV	6.046801	0.485266	12.46079	0.0000
GORV	0.562839	0.190609	2.952852	0.0094
C	128.3004	140.5693	0.912720	0.3749
Short Run				
D(INDU(-1))	1.725220	0.313580	5.501699	0.0000
D(GNORV)	6.897051	1.411572	4.886079	0.0002
D(GORV)	-0.036179	0.043921	-0.823719	0.4222
D(GORV(-1))	-1.325961	0.266277	-4.979635	0.0001
ECM(-1)*	-2.274656	0.461160	-4.932465	0.0002

Source: Output from E-views 9.0 (2023)

The ARDL long-term coefficient and probability values for each variable indicated that government non-oil income in Nigeria had a positive and substantial influence on industrial production growth in Nigeria at a 5% level. Similarly, the government's oil income in Nigeria has a beneficial and considerable influence on the Nigerian industrial sector at a 5% significant level. Furthermore, the short-run result and the ECT display the Error Correction Term with a 1-period lag. Its -2.27 value shows that it is negative and statistically significant, with a probability value of 0.00 at a 5% significance level. This suggests that if there is any disequilibrium, the average pace of adjustment from the short run to the long run is 227%. This indicates that any imbalance in Nigeria's industrial production model would take more than 24 months to fix.

Hypotheses Testing

Table 5: Hypotheses Testing of ARDL Results

Hypotheses	Tc	Tt	Decision Rule	Remark
H ₀ : =	12.46	1.69	> Tt Reject H ₀	Rejected
H ₁ : >			< Tt Accept H ₀	
H ₀ : =	2.953	1.69	> Tt Reject H ₀	Rejected
H ₁ : >			< Tt Accept H ₀	

Tc is the calculated T-Statistics, Tt is the table T -Statistics (Theoretical T-Statistics) and the decision rule is based on 5% level significance. While the Degree of Freedom is set as (N - K) = 30 (Gujarati & Sangeetha, 2007).

Source: Author's Compilation, (2023)

Table 5 depicts the assumptions about the influence of government revenue indicators on Nigerian industrial production growth. Thus, H01: government non-oil revenue has no significant impact on Nigerian industrial output growth is rejected at a 5% level of significance because the calculated T-Statistics (Tc) of 12.46 is greater than the table T-Statistics (Tt) of 1.69, implying that government non-oil revenue has a significant impact on Nigerian industrial output growth. While H02: government oil revenue in Nigeria has no significant impact on industrial output growth in Nigeria is rejected at a 5% level of significance, this implies that government oil revenue in Nigeria has a significant impact on industrial output in Nigeria because the value of the calculated T-Statistics (Tc) of 2.95 is greater than the value of the table T-Statistics (Tt) of 1.69.

Table 6: Heteroscedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.467339	Prob. F(14,16)	0.9201
Obs*R-squared	8.997351	Prob. Chi-Square(14)	0.8312
Scaled explained SS	3.115978	Prob. Chi-Square(14)	0.9989

Source: Author's Computation, 2023

Table 6 shows that the variables are not affected by heteroscedasticity since the p-values of F-stat. and Obs*R-squared are larger than the 5% significance threshold. The p-value of 1.000 for the Scaled explained SS suggests the absence of heteroscedasticity in the model

of the impact of government revenue indicators on industrial output in Nigeria, and this implies the absence of heteroscedasticity among the variables, which are government non-oil revenue, government oil revenue, and industrial output in Nigeria.

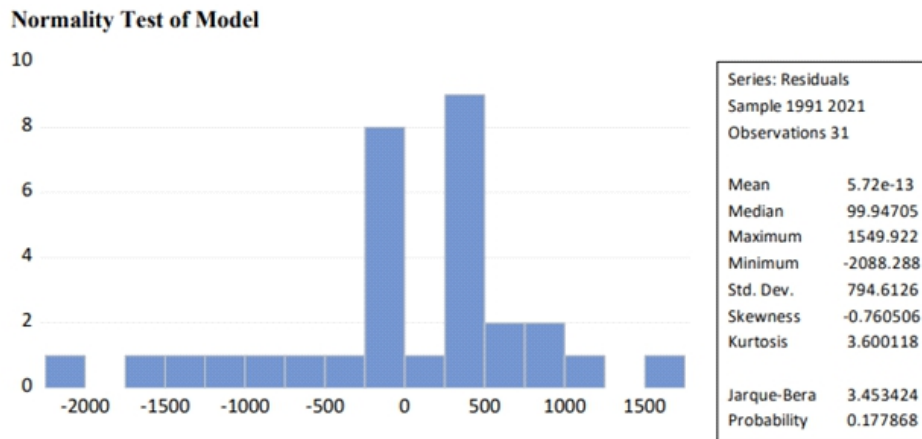


Figure 1: Normality Test of Model

Figure 1 depicts the post-normality test of the model of the influence of government revenue indicators such as non-oil income, oil revenue, and industrial production growth in Nigeria. The model and variables are normally distributed, as shown in the figure. Furthermore, the Jarque-Bera normality test demonstrates that the error component in our given equation is normally distributed. The corresponding negligible Jarque-Bera statistics of the pertinent variables utilized in the research demonstrate this.

Discussion and Implication of Findings

The ARDL result revealed that government non-oil revenue has a significant and positive effect on industrial output growth at a 5 percent significant level and this implies that a unit increase in government non-oil revenue will cause a 6.04-unit increase in the industrial output growth in Nigeria. Similarly, government oil revenue has a significant and positive effect on industrial output in Nigeria at a 5 percent significant level and this implies that a unit increase in the government oil revenue will lead to a 0.56-unit increase in industrial output in Nigeria. Also, this implies that government non-oil revenue and government oil revenue are both key indicators of government revenue for improving the industrial output in Nigeria if the policies are effectively implemented. The findings of this paper agreed with the work of Joseph and Omodero (2020) who in their study examined the impact of government revenues on economic growth in Nigeria. The study concluded that government revenues have a significant impact on industrial output in Nigeria.

Conclusion and Recommendations

In conclusion, based on the paper's specific objectives of evaluating the impact of non-oil revenue on industrial output in Nigeria, as well as determining the extent to which oil revenue has an impact on industrial output in Nigeria, the results revealed that

government non-oil revenue has a positive and significant impact on industrial output in Nigeria. Similarly, government oil income has a favourable and large impact on Nigerian industrial production. If there is any disequilibrium, the speed of adjustment mechanism from the short run to the long run is 227%, implying that any disequilibrium would take more than 24 months to be addressed in the model of government revenue and industrial production growth in Nigeria. As a result, the report suggested the following:

- i. Private investment in infrastructure development is crucial in Nigeria as it can bring about various benefits such as improving transportation networks, increasing industrial productivity and promoting industrial output growth. Overreliance on the government for infrastructure development may not be sufficient, hence the need to involve private individuals in the process. Private investment can bring innovation, cost savings, job creation and diversification of funding sources. It can also complement the efforts of the government in achieving its goals.
- ii. Similarly, the government should provide a mechanism to improve the government oil revenue through the domestic production and distribution of oil products and bye products and also enforce transparency and accountability in extractive industries in Nigeria.
- iii. The short-run revealed that it will require more than 24 months to correct any disequilibrium in the model of the analysis of government revenue on industrial output in Nigeria. Therefore, the recommended long-run policy strategy for improving the impact of government revenue on industrial output growth in Nigeria should focus on diversifying the economy, investing in infrastructure, promoting industrial development, improving the business environment, and effective revenue management.

References

- Achor, S. O. & Ekundayo, O. U. (2016). The impact of indirect revenue on economic growth: The Nigerian experience, *Igbinedion University Journal of Accounting*, 2(6).
- Adegbite, T. A., & Fasina, H. T. (2019). Taxation and revenue generation in Nigeria, *Accounting and Taxation Review*, UNIBEN, 3(1), 82-92.
- Adeusi, A. S., Uniamikogbo, E., Erah, O. D., & Aggreh, M. (2020). Non-oil revenue and economic growth in Nigeria, *Research Journal of Finance and Accounting*, 11(8), 95-106.
- Akeem, U. O. & Adejare, A. T. (2013). The impact of petroleum profit tax on economic growth in Nigeria; The co-integration analysis, proceedings of international academic conferences, *International Institute of Social and Economic Sciences*. 3 (4), 14-20.
- Awa, F. N., & Ibeanu, R. I. (2020). Impact of tax revenue on economic development in Nigeria (1997- 2018), *European Journal of Accounting, Auditing and Finance Research*, 8(7), 18-32.

- Callistus, O., & Pascal, O. K., (2020). Impact of taxation on industrial performance in Nigeria, *Global Journal of Applied, Management and Social Sciences (GOJAMSS)*, 18(1), 173 -185
- Cornelius, M. O., Ogar, A. I. & Oka, F. A. (2016). The impact of tax revenue on economic growth: Evidence from Nigeria, *Journal of Economics and Finance*, 7(1), 32-38.
- Ekpo, U. N. (2014). Nigeria industrial policies and industrial sector performance: Analytical exploration, *IOSR Journal of Economics and Finance*, 3(4), 1-11.
- Evans, O., & Uduakobong, D. (2018). Government revenue and industrial growth: Empirical evidence from Nigeria, *The Journal of Developing Areas*, 52(1), 1-11.
- Eze, O. R. & Ogiji, F. O. (2018). Impact of fiscal policy on the manufacturing sector output in Nigeria: An error correction analysis, *International Journal of Business and Management Review*. 1(3), 35-55.
- Jaiswal, J. (2014). The role of monetary and fiscal policy in industrial development: The industrial revolution in developing countries, *Scholarly Research Journal for Interdisciplinary Studies*, 2(9), 1252 – 1263.
- Kelboro, G. & Kiros, G. (2017). Government Revenue and economic growth in Ethiopia: An ARDL approach, *Journal of Economic Structures*, 6(1), 1-16.
- Muhamad, Y. & Henny, M. (2020). The contribution of fiscal policies to the industry sector, *Global Journal of Social Sciences Studies*, 6(2), 115-127.
- Nwaogwugwu, I., Ayodele, S., & Ejumedia, P. (2016). *Nigeria's industrial development: Corporate governance, and public policy*, University of Lagos Press and Bookshop Ltd
- Obiano, B. I. (2022). Effect of fiscal policy on manufacturing capacity utilization in Nigeria, *International Journal of Innovative Development and Policy Studies*, 10(4), 10-22.
- Ogbole, F. O., Sonny, N. A. & Isaac, D. E. (2018). Fiscal policy: Its impact on economic growth in Nigeria 1970-2006, *Journal of Economics and International Finance*, 3(6), 407-417.
- Okoroafor, M. O. & Nwaeze, C. (2013). Poverty and economic growth in Nigeria (1990-2011), *Academic Journal of Interdisciplinary Studies*. 4 (3) 485-491.
- Omankhanlen, A. E., Chimezie, P. O., & Lawrence, O. U. (2021). Impact of government expenditure on sustainable industrial development in Nigeria, *WSEAS Transactions on Business and Economics*. 8(4), 31-41.

- Osei-Akoto, F., Quartey, A., & Adu, J. (2016). The effect of government revenue on manufacturing sector growth in Ghana, *Journal of African Business*, 17(1), 91-109.
- Pesaran, H. M. Y. Shin, R. & Smith, J. (2001). Bounds testing approaches to the analysis of long-run relationships, *Journal of Applied Economics*, 16, 289-326.
- Uffie, E. J. & Aghanenu, A. S. (2019). Fiscal policy and manufacturing sector output: The Nigerian evidence, *International Journal of Research in Social Sciences*, 9(7), 13 – 25.
- World Bank. (2021). *Nigeria*, Retrieved from; <https://data.worldbank.org/country/nigeria>