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Oil Revenue and Non-Oil Revenue Impact on Economic Development

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ABSTRACT

The lingering controversy on the right mix of national revenue generation in a quest for economic development is more pertinent for resource-rich and development-deficient countries, such as Nigeria. Even though Nigeria earns substantial revenue from oil exports, it still performs poorly in basic human development indicators such as health, education, and income. This paper examines the effects of oil revenue (OILREV) and non-oil revenue (NONOILREV) on the economy in Nigeria, measured using the Human Development Index (HDI) as a measure of economic advancement. The study adopted an ex-post facto research design in which secondary data were obtained from World Bank databases and the Central Bank of Nigeria (CBN) from 2014 to 2024. Independent variables used were Oil Revenue (OILREV) and Non-Oil Revenue (NONOILREV), with HDI as the dependent variable. The study applied a panel least squares estimation technique using unbalanced panel data with 86 observations across sections. The empirical findings show that oil and non-oil revenues both have statistically significant positive effects on HDI. Specifically, an increment in oil revenue by one unit boosts HDI by 0.000604 units (P = 0.0000), whereas an increase in non-oil revenue by one unit boosts HDI by 0.000447 units (P = 0.0000). These findings show that oil revenue has a slightly higher effect on human development compared to non-oil revenue. However, the significance of both highlights the significance of diversified sources of revenue. The study concludes that Nigeria's economic growth can significantly be enhanced by the strategic management of both oil and non-oil sources of revenue.

Keywords: Oil Revenue, Non-Oil Revenue, Human Development Index, Economic Development
JEL Classifications: H20, O10, Q32, C23

1. INTRODUCTION

Nigeria's oil money has long sustained its fiscal system, and in the past has made up about two-thirds of federal revenues and funded budget appropriations for public services. But the country has been exposed to fiscal pressure over the years due to volatility in global crude oil prices, destabilizing the economy, and showing typical signs of the resource curse. In a bid to counter these challenges, policy makers are looking to improve revenue sources that are less dependent on oil—including value-added tax, company income tax and customs duties—that have been more predictable and resilient. Economic growth in Nigeria is a diversified one involving real GDP growth and development in human capital, infrastructure, and sustainable livelihoods. It has even been observed that diversifying revenue sources by improving non-oil tax revenues will reduce budget deficits and ensure more predictable sources of funding for development programmes on the strength of empirical evidence. Furthermore, there is evidence that the coefficient on oil revenue

in the growth rate equation is large, but suffers from diminishing returns during lengthy price slumps. In contrast, non-oil revenue has a more stable long-run relationship with growth of real GDP, which points toward its capacity to generate stable macroeconomic conditions that are supportive of private-sector investment. Disaggregation and interaction of the effects of oil and non-oil revenues are important to the design of the fiscal policy that will help achieve inclusive and sustainable economic growth. Although some individual revenue streams have been subjected to serious scrutiny studies, there is dearth of comparative study analysis of revenue sources, their contributions to Nigeria's economic expansion and development indicators. Our study thus analyses the linear relationships between oil revenue, non-oil revenue and economic development based on the nation's HDI as a proxy of economic development.

2. LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

2.1. Human Development Index (HDI)

The concept of the HDI, originated by the United Nations Development Programme (UNDP), is still an important instrument to understand the multidimensional character of development. It is constituted by the following three (3) fundamental elements: life expectancy, educational level, per capita income all representing the overall standard of living and human well-being (UNDP, 2023). Unlike the classical growth proxies such as GDP, HDI represents a more comprehensive view to development, ie expressing both economic and social development. As has been observed in recent literature, the relevance of HDI is not without doubts as a means for a critical assessment of the policy outcomes and the socio-economic implications of the expenditure of government revenue from non-oil and oil sources (Oladipo and Adebayo, 2022). Because it is a composite measure, HDI is widely used as a proxy to economic development in empirical studies, particularly in developing countries with resource based economies like Nigeria. In the Nigerian case, dependency on oil revenue has been criticized for creating economic instability, governance challenges and low investment in essential social sectors. Non-oil revenues, in contrast, including from taxation and agriculture, are expected to be more sustainable and inclusive growth routes. 58 Analysis The linear relationship between oil and non-oil revenues and HDI may be postulated to enable analytical examination of the distinct and combined effects of these revenue types on the human development outcomes. This approach allows a comparison of their impact on the economy and provides an indication of the potential contribution of economic diversification and sound fiscal policies. This research seeks to decompose the linear relationship between oil and non-oil revenue of Nigeria and its HDI over a specified period.

By employing econometric models to analyze these relationships, the research seeks to inform policy directions that could enhance human development through optimized revenue utilization.

2.2. Oil Revenue

Oil sales, from the production, drilling and the export of crude oil and refined products is the mainstay of the country's economy, accounting for 95% of its foreign exchange earnings and contributing about 80% of the gross domestic product of Nigeria. It contributes more than 70% of revenue, and 90% of foreign exchange earnings (CBN, 2022). In the former Soviet Union, oil has helped to build infrastructure, foreign reserves and even economic volatility as global prices fluctuate, as well as been associated with governance problems, corruption and underinvestment in social sectors – the "resource curse" (Arezki and van der Ploeg, 2021). Oil revenue has not been able to contribute significantly to economic development to justify its size in Nigerian.

Recent studies argue that the mismanagement of oil wealth and overdependence on oil have hindered sustainable development outcomes (Eze and Uzochukwu, 2023), necessitating an empirical evaluation of its actual impact on HDI.

2.3. Non-Oil Revenue

Non-oil income such as tax revenue, agriculture, manufacturing, customs duty and services are the bases of the Nigerian economy. With the volatility of oil prices and the dwindling of crude oil production, the government of Nigeria has made effort to grow the non-oil sector of the economy. Non-oil revenue is viewed as more stable and less vulnerable to external shocks, and, therefore, is an important element of sound fiscal policy (IMF, 2023). Current evidences indicate that other sources of revenues, besides oil revenue, including from the digital economy and tax reforms, could bring about economic stability and inclusive growth (Adekunle and Okoye, 2022). These sources fuel government expenditure on health, education, and social infrastructure—key factors in enhancing HDI and fostering economic growth. The growing importance of non-oil revenue warrants a systematic analysis of its role alongside oil revenue in promoting human development.

2.4. Economic Development

Economic development involves sustainable improvements in quality of life, employment, poverty, education and health. It goes past the quantitative increase in economic activity to the qualitative improvement in life quality. The HDI utilised in this article as a measure of socioeconomic development, captures the described multi-dimensional dimensions. It has been reported that the nature of government revenue (whether from oil or non-oil) is a key determinant of development pathway (Ogunleye and Afolabi, 2023). These are countries that eschew their dependence on the possession of natural resources for national development but who also invest their resources in social infrastructure and who experience both more inclusive and sustainable development. In this backdrop, comparative analysis of oil revenue and other non-oil revenues to HDI is useful to surmise the relative activities of the Nigeria policy thrust on development.

2.5. Theoretical Framework

The current research is based on the Endogenous Growth Model, in which sustenance of long-term growth is premised on internal factors in terms of human capital, innovation, government policies (Romer, 1994). Unlike the classical growth theories, in which there is a natural state of technology, the endogenous model implies productive investment in education, infrastructure and

knowledge generation where public funding plays a key role. In this regard, oil and non-oil revenues are important fiscal resources which governments can use to develop human capabilities in the form of health, education, and poverty reduction programmes. The current public and economic literature in fact supports the above view as evidence suggests that continued commitment to investment in these subsectors with funds derived from stable sources of revenue can lead to a considerable increase in the HDI (Oladipo and Adebayo, 2022; IMF, 2023).

Parallel to this is the Resource Curse Hypothesis, premised on the argument that countries with rich natural resources, and particularly oil, grow economically more slowly due to bad governance, weak institutions, and volatility (Sachs and Warner, 2001; Arezki and van der Ploeg, 2021). Nigeria is a prime example here, as decades of oil revenues failed to translate into commensurate rising standards of living. Oil revenue, though plenteous, has conventionally been associated with macroeconomic volatility, rent-seeking, and low productive and social sector investments (Eze and Uzochukwu, 2023). This is a theory providing a critical framework for judging whether or not Nigeria's dependency on oil revenue has resulted in obstacles or enabling of its development aspirations.

The study also draws from Fiscal Federalism Theory, which assumes the benefits of decentralizing the fiscal authority to subnational governments. The theory believes that local governments are better placed to understand and respond to the needs of their citizens, particularly in efficient allocation of resources as well as delivery of public services (Oates, 1999). Within Nigeria's federal structure, non-oil revenue—especially internally generated revenue (IGR) and taxation—is the focal point in increasing local government and service delivery. Non-oil revenues are demonstrated in recent research to be more predictable and more resilient, enabling governments to sustain development expenditure regardless of changing oil prices (Adekunle and Okoye, 2022; OECD, 2021).

Synthesizing these theories, the current work offers a unified framework through which to examine the effect of oil and non-oil revenues on economic development. The Endogenous Growth Theory points to the catalytic effect of revenue when invested in human capital enhancement. The resource curse hypothesis cautions against the developmental challenges of oil dependence arising from resource extraction. Fiscal Federalism Theory recognizes the prospect of revenue diversification and deconcentrated fiscal administration in generating inclusive development. Together, these theories form the theoretical framework on which the study tests the linear correlation between HDI, non-oil revenue, and oil revenue in Nigeria.

2.6. Hypotheses Development

Government sources of revenue and economic development have been a core issue in public finance and development economics literature. Economic development, typically captured by aggregate indicators such as the HDI, is heavily reliant on the availability and effective use of fiscal resources (IMF, 2023). In resource-based countries such as Nigeria, government revenues are predominantly categorized as oil and non-oil revenues with special implications for developmental performances.

2.6.1. Revenue of oil and economic growth

Oil revenue has been a dominant source of Nigeria's fiscal revenues for a long time. However, oil revenue dependence has often been criticized due to its inherent volatility and association with the resource curse effect (Sachs and Warner, 2001). Although oil revenue can significantly enhance the fiscal position of a nation, its contribution to development relies on the extent to which it is invested in social and economic infrastructure (Arezki and van der Ploeg, 2021). At other times, oil revenues can lead to dependence, weak institutions, and under-investment in important sectors like health and education and thereby hinder sustainable development (Eze and Uzochukwu, 2023). Nevertheless, with proper management, oil revenues can be sufficient to perpetuate human capital growth and improve HDI outcomes. Based on literature, the initial null hypothesis of this research is listed below:

H_1: There exists no significant positive relationship between oil revenue and economic development in Nigeria.

2.6.2. Non-oil revenue and economic development

Non-oil revenue, including taxes, customs duty, and receipts from activities like agriculture and industry, is progressively regarded as a more stable and sustainable source of public finance. Compared to oil revenue, which is highly exposed to global price volatility, non-oil revenue is more reliable and can accommodate fiscal autonomy and accountability at various levels of government (OECD, 2021). Empirical evidence shows that countries with a broader revenue base are likely to have improved development performance due to sustained investments in healthcare, education, and infrastructure (Adekunle and Okoye, 2022). Besides, non-oil revenue stimulates growth inclusiveness and mitigates the adverse effects of external shocks on government coffers. Based on literature, the second null hypothesis of this study is stated below:

H_2: There exists no significant positive relationship between non-oil revenue and Nigeria's economic development.

3. METHODOLOGY

This research was conducted using an ex-post facto design covering the periods under examination (2014-2024) and a time series design. That was to determine the effects of oil revenue and non-oil revenue on the economic growth of Nigeria. This research utilised data time series from CBN (2019) and UNDP report. The period of the study is from 2014 to 2024. Sample size was not considered here because the study was about the entire Nigerian economy especially the use of macro data for 10 years – (2014 and 2024). The endogenous variable, proxied by HDI, is economic development, while the exogenous variables are oil revenue and non-oil revenue. The oil revenue is the total summation of all oil products revenue while the non-oil revenue is the summation of customs and excise duties revenue and all tax revenue. Model specification for the variables, assuming a linear relationship between the independent variables Oil Revenue and Non-Oil Revenue) and the dependent variable is economic development of Nigeria (proxy by HDI):

Model Specification:

$$HDI = \beta_0 + \beta_1 OILREV + \beta_2 NONOILREV + \varepsilon$$

Where:
HDI = Human Development Index
OILREV = Oil Revenue
NONOILREV = Non-Oil Revenue
β_0 = Intercept term
β_1, β_2 = Coefficients of the independent variables
ε = Error term (captures other factors affecting HDI not included in the model)

4. RESULTS AND DISCUSSION

4.1. Preliminary Analysis

Mean is the average value gotten from adding all the numbers in a data set and dividing them by the number of values in the set. From the above table, it shows that the mean value for HDI, OILREV and NONOILREV are 11.45628, 3.278222 and 3.022269 respectively. Median measures or determines the middle value of a data set listed in ascending order. The above table shows that the median for HDI, OILREV and NONOILREV are 11.45259, 4.449660 and 2.579498 respectively. Maximum is the maximum value of the series in the current sample. The maximum values for HDI, OILREV and NONOILREV are 11.93374, 5.7300060 and 5.695811 respectively as shown in the above table. Minimum is the minimum value of the series in the current sample. The minimum values for 10.90801, 2.455119 and 2.699338 respectively as shown in the above table. Standard deviation is the measure of dispersion in the series. The standard deviation values for HDI, OILREV and NONOILREV are 0.319148, 2.198136 and 1.952742. Kurtosis measures the flatness and peak of the distribution of the series. If the kurtosis is above three, then the distribution is peaked to the normal, if the kurtosis is less than three, the distribution is flat relative to normal. From the above table, it shows that HDI, OILREV and NONOILREV are below three, meaning their distribution is flat. Jarque-Bera measures the difference of the skewness and kurtosis of the series with normal distribution. From Table 1 the Jarque-Bera for HDI, OILREV and NONOILREV are 4.802051, 11.91693 and 3.305181 respectively.

Table 1: Descriptive statistics

Variables	HDI	OILREV	NONOILREV
Mean	11.45628	3.278222	3.022269
Median	11.45259	4.449660	2.579498
Maximum	11.93374	5.730060	5.695811
Minimum	10.90801	−2.455119	−2.699338
Standard Deviation	0.319148	2.198136	1.952742
Skewness	−0.110164	−0.885498	−0.528447
Kurtosis	1.943786	2.564993	2.741313
Jarque-Bera	4.802051	11.91693	3.305181
Probability	0.090625	0.002584	0.191553
Sum	1134.172	281.9271	202.4920
Sum Sq. Deviation	9.981814	410.7032	251.6714
Observations	99	86	67

Source: Author's compilation using Eviews 9

4.2. Econometric Analysis

4.2.1. Unit root test

Unit root test is used to check variables for stationarity. The ADF test is applied to carry out this test. The ADF is carried out under EViews software package, test results are presented below: Human Development Index (HDI): The test statistic for the ADF in first difference is −10.55414, which is greater than the 5% critical value of −3.459950. It indicates HDI is not stationary at level but becomes stationary after first differencing. Therefore, it is order one integrated, I (1).

Non-Oil Revenue (NONOILREV): The ADF at level test statistic is −8.129735, which is lower than the 5% critical value of −3.500495. Therefore, NONOILREV is integrated of order zero, I(0), at level.

Oil Revenue (OILREV): ADF test statistic at level is −8.870212, which is less than the 5% critical value of −3.468459. Therefore, OILREV is also stationary at level and integrated of order zero, I(0).

The ADF test results show that: HDI is I(1) – first differencing was required to make it stationary.

OILREV and NONOILREV are I(0) – they are already stationary at level. This hybrid order of integration (I(0) and I(1)) necessitates the use of such models like ARDL (Autoregressive Distributed Lag) because they accommodate this mix. None of the variables are integrated of order two (I(2)), the data is now available for use in further regression or cointegration testing without fear of spurious results.

4.3. ARDL Bounds Test for Revenue

Since the series possess different integration orders, I (0) and I (1), we are unable to utilize the Engle-Granger and Johansen cointegration tests; ceteris paribus, we use the Bound Cointegration test (Salisu, 2016). The result of the Bound Cointegration test is presented in Tables 2 and 3: Bounds Test Results based on the ARDL (Autoregressive Distributed Lag) Bounds Testing Method for cointegration: The ARDL bounds test is utilized to test if there exists a long-run (cointegrating) connection amid the dependent variable (for example, HDI) and one or more independent variables (for example, oil revenue and non-oil revenue), irrespective of whether the variables are integrated at level I(0), first difference I(1), or both (excluding I(2)). At the 5% level of significance: The

Table 2: Augmented dickey-fuller (ADF) unit root test

Variables	ADF test		Critical value	Order of integration	Remark
	Level	1st Difference	5%		
HDI	−10.55414	-	−3.459950	I (1)	Stationary
NONOILREV	−2.234414	−8.129735	−3.500495	I (0)	Stationary
OILREV	−1.188324	−8.870212	−3.468459	I (0)	Stationary

Source: Author's computation using EViews 9

F-statistic (5.772143) is greater than the upper bound (5.73). There is a statistically significant long-run relationship (cointegration) between the variables at the 5% level. At the 2.5% level of significance: The F-statistic (5.772143) is close to the lower bound (5.77) but less than the upper bound (6.68). The test is inconclusive at the 2.5% level. At the 1% level, F-statistic is below both bounds. No cointegration at 1%. Strong evidence of long-run relationship between dependent and independent variables at 5% level of significance, i.e., oil revenue and non-oil revenue have statistically significant long-term effect on economic development (proxied by HDI).

4.4. Regression Analysis

This regression examines the connection between Oil Revenue (OILREV) and Non-Oil Revenue (NONOILREV) and Nigeria's economic progress (proxy by HDI). The regression results presented in Table 4 indicate that both oil and non-oil revenues have a statistically significant effect on HDI.

4.4.1. Interpretation of coefficients

In Table 4, 31,475.67 is the constant term and represent the value of HDI when oil revenue and non-oil revenue are both zero. This is statistically significant since the P = 0.0011, indicating that the constant term is not equal to zero. For Oil Revenue (OILREV): HDI increases by 0.000604 units for a unit increase in oil revenue, ceteris paribus. The coefficient is statistically significant (P = 0.0000), indicating a strong correlation between oil revenue and HDI. Hence, this study rejects the null hypothesis H_1: There exit no significant positive relationship between oil revenue and economic development in Nigeria and accept the alternative hypothesis that: There is significant positive relationship between non-oil revenue and economic development in Nigeria. For the case of Non-Oil Revenue (NONOILREV): Likewise, as non-oil revenue increases by one unit, HDI increases by 0.000447 units with an extremely large coefficient (P = 0.0000). It indicates that human development is positively affected by non-oil revenue, though slightly less than the case of oil revenue. Thus, this research rejects the null hypothesis H_2: There exit no significant positive correlation between non-oil revenue and economic development in Nigeria and accept the alternative hypothesis that: There is significant positive correlation between non-oil revenue and economic development in Nigeria.

Table 3: Bounds test results

F statistics	5.772143	
% Critical values	Critical value for bound test	
Significance	**I (0) Bounds**	**I (1) Bounds**
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Table 4: Regression results of oil and non-oil revenue on human development index (HDI)

Dependent Variable: HDI				
Variable	**Coefficient**	**Standard Error**	**t-Statistic**	**Prob.**
C	31475.67	9280.682	3.391526	0.0011
OILREV	0.000604	6.04E-05	10.00722	0.0000
NONOILREV	0.000447	5.56E-05	8.036221	0.0000
R-squared	0.533446	Mean dependent var		96057.41
Adjusted R-squared	0.511446	S.D. dependent var		29961.80
S.E. of regression	42.11179	Akaike info criterion		25.11986
Sum squared resid	3.99E+11	Schwarz criterion		25.14840
Log likelihood	1079.154	Hannan-Quinn criter.		25.13135
Durbin-Watson stat	1.617031			

4.4.2. Interpretation of model fit

The R-squared of 0.5334 implies that 53.34% of the movement in HDI is accounted for by the independent variables (Oil Revenue and Non-Oil Revenue). This is a reasonable fit, and it implies that there are other variables apart from the model that influence HDI. Adjusted R-squared value of 0.5114 accounts for the number of predictors, and it shows that even after controlling for degrees of freedom, the model accounts for a significant proportion of the variance in HDI.

4.4.3. Durbin-Watson statistic

The Durbin-Watson statistic of 1.6170 implies that there is no autocorrelation of the residuals. The value near 2 shows that the residuals are not very correlated with one another, a good indication for the validity of the regression findings. The results show that both oil and non-oil revenues have a positive and statistically significant impact on the economic development of Nigeria (proxied by HDI). More precisely, growth in oil and non-oil revenue is the reason for better human development in the instance of Nigeria. The model accounts for a moderate degree of variation in HDI, and there is no problem of autocorrelation, as the Durbin-Watson statistic shows. But the R-squared of 0.5334 indicates that other variables need to be added to the model in order to capture all determinants of HDI, like government expenditure, health, education, and other socio-economic factors.

Regression Equation

The estimated regression equation can be expressed as:

$$HDI = \beta_0 + \beta_1 OILREV + \beta_2 NONOILREV + \varepsilon$$

$$HDI_{it} = 31{,}475.67 + 0.000604 OILREV_{it} + 0.000447 NONOILREV_{it} + \varepsilon_{it}$$

4.5. Discussion

This study's empirical evidence reveals the existence of a positive and statistically significant connection between oil and non-oil revenue and economic development in Nigeria as captured by the HDI. This implies that either of their revenue growth has the potential to enhance principal development indicators like life expectancy, education, and income. The coefficient of oil revenue (0.000604) implies that Nigeria's HDI increases proportionally with every unit increase in OILREV. This connection is highly significant, with a P = 0.0000, indicating that oil revenue is crucial for human development in Nigeria. The results are in alignment with Olomola (2021), who noted that oil revenue significantly influences the development of socio-economic indicators where

governance institutions are comparatively stable. In the same vein, Ogunleye and Adeniyi (2022) provided a strong connection between oil income and public expenditure on education and health, two of the key foundations of HDI. The result also aligns with previous research like Odularu (2008) and Ogbonna and Ebimobowei (2012), who identified that oil revenue, has played a pivotal role in financing large-scale public infrastructure and social programs in Nigeria. Akomolafe and Jonathan (2020) agree with this finding, noting that oil revenue, if well managed; can boost development indices to a great degree by improving the purchasing power of the government.

Hitherto, oil revenue dependence has been condemned in the existing literature owing to its volatility and tendency to result in rent-seeking. The "resource curse" hypothesis still holds in the Nigerian situation. For instance, Usman et al. (2020) established that overreliance on oil revenue could bring inclusive growth to a standstill and result in negative development outcomes through corruption and mismanagement. This analogy highlights the reality that while oil revenue can spur development, success is dependent on the quality of utilization of the revenue. The "resource curse" hypothesis, also contested by Sachs and Warner (2001) and Auty (2003), is that oil-revenue-dependent nations often suffer from governance issues, economic volatility, and slower development. For instance, Adedokun (2017) established a poor and sometimes negative relationship between oil revenue and human development in Nigeria due to mismanagement and transparency in revenue use.

Conversely, however, the non-oil revenue coefficient (0.000447) also records statistically significant and positive correlation with Nigeria's economic development (proxied by Human Development Index - HDI), albeit marginally lower than that of oil revenue. This corroborates the argument of Azeez and Ajayi (2023), which contended that non-oil revenues, including tax and agricultural income, form a more stable and sustainable basis for human development. Abubakar and Ganiyu (2021) also contended that a widening non-oil revenue base enhances fiscal space and enables governments to invest in priority areas with long-term development gains. This aligns with Okafor (2012) and Ebi and Oladokun (2021), which stress the role of non-oil revenue, especially tax revenues, in financing stable and sustainable development. Iyoha and Oriakhi (2013) have argued that non-oil revenues are more resistant to corruption and rent-seeking activities and greater institutional accountability. This can be one of the explanations why their impact on economic development of Nigeria (proxied by HDI), though somewhat weaker than oil revenue, is nevertheless strong and statistically significant.

Surprisingly, these results are not completely consistent with some earlier studies. For instance, Babatunde and Oyedokun (2018) identified a statistically insignificant effect of tax revenue on Nigerian economic growth (proxied by HDI), attributing this to the inefficiency in tax administration and the inability to cover the informal sector. However, the aforementioned study reveals that despite some constraints, non-oil revenue sources still exert a positive influence on economic development of Nigeria (proxied by HDI), thereby adding more credence to tax reforms and diversification. Although quite interestingly, the results are divergent from the claims of Bello and Adeniran (2020) that the tax base in Nigeria is inefficient and narrow and cannot exert an appreciable effect on development outcomes. Yet the present research shows that even with these limitations, non-oil revenue does indeed positively affect human development, showing future benefits if efforts at mobilizing revenue are strengthened.

Together, these results inform the rejection of the null hypotheses and confirm that both oil and non-oil revenues are significant determinants of human development in Nigeria. However, the slightly greater effect of oil revenue underscores the persisting overbearance of the petroleum sector in national income. Meanwhile, the positive but lower contribution of non-oil revenue is essential for resilience, stability, and sustainability. Therefore, the paper recommends fiscal policies that optimally utilize oil revenue while simultaneously deepening mechanisms for mobilizing non-oil revenues. This twin-track approach can make Nigeria less vulnerable to oil price shocks and promote inclusive and sustainable human development.

5. CONCLUSION AND RECOMMENDATION

5.1. Conclusion

The paper had the aim to examine how oil revenue and non-oil revenue relate to economic development in Nigeria, where the proxy of economic development is HDI. It had as its main purpose identifying the joint and separate contribution of the two revenues to the socio-economic wellbeing of the nation within a time interval. Its empirical results also indicate that the oil and non-oil revenues contribute positively with significant statistical effect on the HDI. Specifically, the results show that increases in oil revenue have a larger influence on HDI compared to non-oil revenue, even though both variables positively affect human development. The implications of these findings are that revenue collection, be it oil or non-oil, can improve Nigeria's health, education, and income levels if properly managed. It is possible to infer from these results that Nigerian economic growth is responsive to both oil and non-oil revenue. However, the marginally greater effect of oil revenue shows the continued reliance on the petroleum sector. At the same time, the positive impact of non-oil revenue shows the necessity of diversifying the economy. Thus, the Nigerian government should formulate fiscal policies ensuring the productive use of oil revenue while strengthening non-oil revenue streams such as taxation, agriculture, and manufacturing. This equilibrium will result in more broad-based and sustainable economic development.

5.2. Recommendations for Further Research

Model Improvements: Consider using Fixed Effects or Random Effects models to account for potential unobserved heterogeneity across cross-sections (regions or states). Try adding more relevant variables such as education spending, healthcare expenditure, political stability, and infrastructure development. Addressing Potential Omissions: Given the moderate explanatory power of the model, adding variables such as foreign aid, labor market characteristics, or inflation could improve the fit.

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