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Natural Resources and Natural Gas Rent on Economic performance in Nigeria.

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Abstract
The study aims to investigate the effect of natural resources and natural gas rent on economic performance in Nigeria.Data from 2000 to 2024 was used in the study. The results of Model estimation, which examines the short-run dynamics of natural resource rents on economic performance in Nigeria using the Error Correction Model (ECM), reveal an important interaction between resource endowments and growth outcomes that encapsulates the paradox of resource-driven development. The natural resource rent exhibits a positive and statistically significant effect, the mineral resource rent is positive and significant, oil resource rent has a negative and statistically significant effect, natural gas rent is positive and significant. The error correction term (ECM) bears the expected negative and significant confirming the presence of a valid long-run equilibrium relationship among the variables. Essentially, these results convey that while aggregate natural resource exploitation contributes positively to short-term growth, the specific role of oil remains detrimental, reinforcing the paradox that Nigeria's principal source of revenue simultaneously undermines sustainable development. Based on these findings the study recommended that; government strengthen the transparency framework governing extractive industries through full public disclosure of all payments, receipts, and contracts across all tiers of government, the National Assembly should enact a fiscal rule mandating that a fixed proportion of oil and gas revenues be automatically invested in a sovereign wealth or future generations fund. Such a fund should be ring-fenced for financing long-term developmental assets, particularly in infrastructure, education, and healthcare, thereby converting non-renewable resource income into reproducible capital that supports intergenerational equity and macroeconomic stability.

Keywords: *Natural Resources, Natural Gas Rent, Economic Performance, ECM*

I. Introduction

The relationship between natural resource abundance and economic performance has been a subject of extensive academic and policy debate, particularly in resource-rich developing countries like Nigeria. The "natural resource curse" paradox, which suggests that countries with abundant natural resources often experience slower economic growth, weaker institutions, and higher levels of poverty compared to their resource-scarce counterparts, has been widely documented (Sachs & Warner, 1995; Auty, 1993). Nigeria, Africa's largest oil producer, exemplifies this paradox, as its heavy reliance on oil and gas revenues has not translated into sustained economic development or improved living standards for its population (Chenge & Salifu, 2020). Instead, the country has grappled with systemic challenges such as corruption, institutional weakness, and economic volatility, which have undermined the potential benefits of its resource wealth (Banjo et al., 2024).

Natural resources have long been hailed as potential engines for economic growth and development. Countries rich in resources, particularly fossil fuels, often possess the ability to leverage these assets for substantial national prosperity. However, the phenomenon known as the "Natural Resource Curse" challenges this expectation, suggesting that resource-rich nations frequently experience lower economic growth, increased corruption, and heightened political

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instability compared to those with fewer resources (Sachs & Warner, 2001). This paradox is particularly relevant in the context of Nigeria, which is endowed with vast oil reserves and ranks as one of the largest oil producers in Africa. Despite generating significant revenues from oil exports, Nigeria continues to grapple with pervasive poverty, high unemployment rates, and deteriorating infrastructure (Ajakaiye & Fakiyesi, 2019).

The term "paradox of plenty" aptly describes the situation in Nigeria, where the wealth generated from oil has not translated into broad-based economic development. Stijns (2005) argues that the curse manifests through various channels, including Dutch Disease, where resource booms lead to an appreciation of the national currency, making other sectors less competitive. This has been evident in Nigeria, where the agricultural and manufacturing sectors have seen declines due to the focus on oil production, hindering economic diversification and job creation. The neglect of these sectors has also contributed to food insecurity and reliance on imports, further exacerbating economic vulnerability.

Nigeria's journey into oil wealth began in the 1950s, with commercial production starting in 1958. The oil boom of the 1970s transformed Nigeria's economic landscape, resulting in an influx of foreign investment and a dramatic increase in government revenue (Obi, 2016). However, this sudden wealth laid the groundwork for systemic corruption and poor governance. Subsequent military regimes prioritized short-term gains over sustainable development, leading to the neglect of critical sectors such as education and healthcare (Ibeanu, 2019). The establishment of the Nigerian Extractive Industries Transparency Initiative (NEITI) in 2004 aimed to promote accountability in resource management, but the effectiveness of such reforms has been undermined by entrenched corruption and weak institutional frameworks (Ogunleye et al., 2020).

Statement of the Problem

Despite Nigeria's vast natural resource endowments, particularly in oil and gas, the country continues to grapple with a paradoxical reality: resource abundance coexists with chronic underdevelopment, institutional decay, and pervasive poverty. Over five decades of oil dependency have failed to translate into sustainable economic growth or improved welfare for the majority of Nigerians. While oil rents contributed 12.01% to GDP on average between 1984 and 2022, poverty rates surged from 36% in 1970 to 63% in 2022, accompanied by widening income inequality and recurrent macroeconomic instability (Banjo et al., 2024; Chenge & Salifu, 2020). This contradiction underscores the persistence of the "resource curse" hypothesis, which posits that natural resource wealth, instead of catalyzing development, often exacerbates governance failures, economic volatility, and social inequities (Sachs & Warner, 1995; Auty, 1993).

From the perspective of some scholars, resource curse is not inevitable, but conditional, depending largely on the strength and quality of domestic institutions (Adu & Denkyirah, 2023; Epo & Nochi, 2023). In contexts where rule of law, transparency, regulatory quality, and anti-corruption frameworks are weak, resource revenues tend to fuel rent-seeking behavior, elite capture, and cyclical misallocation of public expenditure (Effiom, Ndem, & Eyo, 2024). Nigeria exemplifies this trajectory. Despite multiple reform efforts, the institutional environment remains plagued by inconsistent fiscal policies, lack of accountability, poor regulatory enforcement, and corruption, all of which continue to undermine the country's capacity to leverage its natural wealth for meaningful economic growth (Asongu & Odhiambo, 2020).

The rest of the study is structured as follow; the second section, focuses on the literature review and methodology is in the third section. The fourth section, contains the results and discussion, providing a detailed analysis of the model's findings and the final section presents the conclusion and recommendations.

Objectives of the Study

The study aims to investigate the effect of natural resources and natural gas rent on economic performance in Nigeria. Specifically, the study will;

i. Examine the effect of natural resources rent on economic performance in Nigeria.
ii. Evaluate the effect of mineral resources rent on economic performance in Nigeria.
iii. Investigate the impact of natural gas rent on economic performance in Nigeria.

The rest of the study is structured as follow; the second section, focuses on the literature review and methodology is in the third section. The fourth section, contains the results and discussion, providing a detailed analysis of the model's findings and the final section presents the conclusion and recommendations.

II. Literature Review

Banjo et al. (2024), who found that oil rents boosted short-term GDP growth but had no

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significant long-term impact, while natural gas rents exhibited more sustainable growth linkages. Disaggregated analyses differentiate between oil, gas, and mineral rents to capture resource-specific dynamics, as exemplified by Epo and Faha (2019), who employed both resource rent and export composition metrics to assess growth impacts across 44 African countries. Panel threshold models, as used by Abdulahi, Shu, and Khan (2019), identify critical institutional quality thresholds below which resource abundance becomes detrimental, and above which it may be neutral or beneficial. These approaches underscore the non-linear and context-dependent character of the resource-growth relationship. Emerging research highlights complementary factors that can ameliorate the resource curse. Financial inclusion, through expanded access to credit and savings, can diversify economic participation and reduce reliance on resource sectors (Adams, Ullah, Akhtar, Adams, & Saidi, 2019). Transparency initiatives, such as the Extractive Industries Transparency Initiative (EITI), aim to strengthen public oversight and accountability, though their effectiveness depends on active civic engagement and legal enforcement mechanisms (Corrigan, 2014). Human capital development, technological innovation, and robust environmental governance further contribute to creating a more resilient and diversified economic base that can leverage resource wealth sustainably (Sun & Wang, 2021; Zalle, 2019). Destek et al. (2023) investigate the institutional prerequisites for overcoming the resource curse in 16 MENA countries (1990-2020), employing Pooled Mean Group (PMG) and ARDL estimators to account for heterogeneous short-run effects and long-run equilibria. The results revealed a sharp divergence between reformist (UAE, Qatar) and non-reformist (Iraq, Libya) MENA economies: Successful cases leveraged resource wealth to build sovereign wealth funds (UAEs Mubadala), invest in economic complexity (Qatar's knowledge-based industries), and depoliticize resource governance (Dubai's independent regulators).

Studies such as Ejedegba (2025) and Fagbemi & Adeoye (2020) employ advanced econometric techniques (ARDL, GMM) to demonstrate that while natural resource rents can contribute to short-term growth, their long-term benefits are contingent on strong institutions. These studies highlight Nigeria's struggles with corruption, fiscal mismanagement, and Dutch disease, emphasizing the need for institutional reforms to mitigate the curse. Bamoy & Fouopi Djiogap (2024) extend this analysis across Africa, finding that trade openness, human capital, and governance quality mediate the resource-growth relationship, reinforcing the conditional nature of the curse. Comparative case studies, such as Sarmidi et al. (2019) and Alemazung (2015), contrast successful resource managers like Norway and Botswana with underperformers like Nigeria and Angola, identifying political stability, bureaucratic efficiency, and anti-corruption measures as key differentiators. These works underscore that institutional capacity rather than resource abundance determines economic outcomes. Meanwhile, Sibanda et al. (2023) and Chenge & Salifu (2020) expand the discourse to environmental and social dimensions, showing that weak institutions exacerbate ecological degradation and inequality in resource-rich regions. Subnational and qualitative analyses, including Pelzman et al. (2018) on Kazakhstan and Obi (2016) on Nigeria's Niger Delta, revealed intra-country disparities in resource governance, emphasizing the role of local elites, fiscal decentralization, and community engagement.

III. Methodology

This study will utilize an ex post facto design. This design was selected due to the nature of the study's variables, which involve examining events or influences that have already occurred and their impact on a particular phenomenon. This study relied exclusively on secondary time series data covering the period 2000 to 2024, drawn from credible national and international databases. The data were collected from the World Development Indicators (WDI, 2024) of the World Bank, the Central Bank of Nigeria (CBN) Statistical Bulletin (2024 edition).

The data set comprised variables representing natural resource rents, oil rents, mineral rents, natural gas rent, and economic performance proxies. Specifically, economic performance was measured using Gross Domestic Product (GDP) growth rate, while natural resource rents were disaggregated into total natural resource rent (% of GDP), oil rent (% of GDP), and mineral rent (% of GDP). Natural gas rent was measured as natural gas rent (% of Gross National Income, GNI), consistent with the World Bank methodology.The choice of secondary data was informed by the historical nature of the study, which required long-term macroeconomic indicators to assess the relationships among natural resource dependence, institutional quality, and economic performance in Nigeria. All data were cleaned, organized, and transformed

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www.ijhssm.org

where necessary to ensure stationarity and comparability before empirical analysis.

The model for this study would first be stated in their functional forms. We consider economic performance as a function of natural gas rent and natural resource rent variables disaggregated thus:

$$GDP = f(NRR, MRR, ORR, NGR) \quad - - - - - - (3.1)$$

Where; GDP is Gross Domestic Product, NRR is Natural Resource Rents, MRR is Mineral Resource Rents, ORR is Oil Resource Rents

Next, we transform the functional form models into econometric models as follows;

From equation (3.1), we would be testing the effects of natural resources and natural gas rent on economic performance.

$$GDP_t = \alpha_1 + \beta_1 NRR_t + \beta_2 MRR_t + \beta_3 ORR_t + \beta_4 NGR_t + u_{1t}$$

Let $ECT_{t-1}^{(j)} = \hat{u}_{jt-1}$be the lagged residual from the estimated long-run equation j. The ECM models for are specified as follows:

$$\Delta GDP_t = \phi_0 + \sum_{i=1}^{p} \alpha_{1i}\Delta GDP_{t-i} + \sum_{k=0}^{q_1} \beta_{1k}\Delta NRR_{t-k} + \sum_{k=0}^{q_2} \beta_{2k}\Delta MRR_{t-k} + \sum_{k=0}^{q_3} \beta_{3k}\Delta ORR_{t-k} + \sum_{k=0}^{q_4} \beta_{4k}\Delta NGR_{t-k} + \lambda_1 ECT_{t-1}^{(1)} + \varepsilon_{1t}$$

Where:

- Δdenotes first difference (short-run changes).
- The $\beta_{\cdot k}, \gamma_{\cdot k}, \delta_{\cdot k}$are short-run (dynamic) coefficients on differenced regressors.
- $\lambda_j$is the speed-of-adjustment coefficient for model j. We expect $\lambda_j < 0$and $| \lambda_j | \leq 1$. A negative and significant $\lambda_j$indicates that deviations from long-run equilibrium are corrected over time; its magnitude gives the speed of adjustment.

IV. Results and Discussion of Findings

Table 4.1: Descriptive Statistics

	GDP	NRR	MRR	ORR	NGR
Mean	3.29E+11	4.23E+10	34617888	3.44E+10	3.43E+09
Median	3.67E+11	4.29E+10	24523622	3.36E+10	2.90E+09
Maximum	5.74E+11	7.13E+10	98266852	6.30E+10	7.84E+09
Minimum	6.92E+10	2.25E+10	71742.27	1.30E+10	2.84E+08
Std. Dev.	1.53E+11	1.31E+10	33628669	1.37E+10	2.42E+09
Skewness	-0.385691	0.214171	0.543259	0.111645	0.440831
Kurtosis	1.885313	2.478748	1.749384	2.289995	2.008715
Jarque-Bera	1.914121	0.455180	2.744561	0.553965	1.833307
Probability	0.384020	0.796451	0.253528	0.758068	0.399855
Sum	8.22E+12	1.01E+12	8.31E+08	8.26E+11	8.57E+10
Sum Sq. Dev.	5.65E+23	3.97E+21	2.60E+16	4.30E+21	1.41E+20
Observations	25	25	25	25	25

Source: Author computation (2026)

The descriptive statistics reveal a Nigerian economy with substantial yet volatile resource wealth, juxtaposed with persistently weak institutional quality, a combination highly relevant to the resource curse paradox.

Beginning with economic performance, the mean GDP of approximately ₦329 billion (converted from USD) indicates a significant economic size, though the substantial standard deviation of ₦153 billion and a minimum value as low as ₦69.2 billion highlight considerable

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www.ijhssm.org

economic volatility over the observed 25-year period; this implies Nigeria's economic output has been subject to pronounced fluctuations, likely tied to external shocks. The analysis of resource rents shows that oil resources rent (ORR) has the highest mean value of ₦34.4 billion, which is notably larger than the mineral resources rent (MRR) of ₦34.6 million, a finding that implies the Nigerian economy is overwhelmingly dependent on oil revenues rather than on a diversified mineral base, creating a high exposure to global oil price swings.

Furthermore, the positive skewness for all rent variables suggests that periods of extremely high resource revenue occur more frequently than periods of extreme low revenue, though the Jarque-Bera probabilities indicate these variables are still normally distributed. Importantly, the mean natural gas rent (NGR) of ₦34 billion is a critical metric, implying that a significant portion of the resource wealth being generated, over half when compared to the mean NRR of ₦42.3 billion is effectively a loss of natural capital, raising serious concerns about the sustainability of this growth model and whether it represents genuine income or merely asset depreciation.

4.1.2 Unit Root Test

Unit root tests are crucial in this study to assess the stationarity of the time series data, as non-stationary variables can lead to spurious results. By examining the presence of unit roots, the study ensures that the variables such as GDP, resource rents, and institutional indices are appropriately transformed, if necessary, to avoid misleading conclusions about long-term relationships. The result is presented in Table 4.2.

Table 4.2: Results of the Augmented Dickey-Fuller Unit Root Test

Unit Root Test at Level				
Variable	**ADF Test Statistic**	**ADF Critical Value**	**P-Value**	**Remark**
GDP	-1.919785	-2.991878	0.3181	Not Stationary
NRR	-2.219454	-2.998064	0.2051	Not Stationary
MRR	-2.633035	-3.004861	0.1017	Not Stationary
ORR	-1.974744	-2.998064	0.2950	Not Stationary
NGR	-2.030592	-2.991878	0.2727	Not Stationary
Unit Root Test at 1st Difference				
Variable	**ADF Test Statistic**	**ADF Critical Value**	**P-Value**	**Remark**
GDP	-3.094566	-2.998064	0.0411	Stationary At I(1)
NRR	-4.885217	-3.004861	0.0008	Stationary At I(1)
MRR	-4.555550	-3.012363	0.0019	Stationary At I(1)
ORR	-4.713793	-3.004861	0.0012	Stationary At I(1)
NGR	-4.826848	-3.040861	0.0009	Stationary At I(1)

Source: Author's Computation (2026)

The results of the Augmented Dickey-Fuller (ADF) unit root test, as presented in Table 4.2, provide important information into the time series properties of the data, which fundamentally shape the subsequent econometric approach for analyzing the resource curse paradox in Nigeria.

At their levels, the test reveals that the null hypothesis of a unit root cannot be rejected for any of the variables under study, as evidenced by their ADF test statistics being less negative than the 5% critical values and their associated p-values all exceeding the 0.05 significance threshold; this implies that the stochastic processes governing Nigeria's GDP, the various resource rents (NRR, MRR, ORR, NGR). However, upon applying the test to the first differences of these variables, the null hypothesis of a unit root is soundly rejected for every series, as each ADF test statistic now significantly exceeds the 5% critical value in absolute terms with p-values well below 0.05; this key finding implies that while the variables are non-stationary in their level form, they all become stationary after first differencing, confirming that each series is integrated of order one, or I(1).

The primary implication of this result is that it establishes a firm empirical foundation for employing cointegration techniques, such as the Johansen or Engle-Granger methodology, to investigate whether stable long-run equilibrium relationships exist among these variables, as the

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Volume 6, Issue 5, Sep. – Oct., 2026, pp: 410-419 ISSN: 3048-6874
www.ijhssm.org

presence of a common stochastic trend among I(1) variables would mean that despite their individual non-stationarity, their linear combination is stationary and thus reflects a genuine economic linkage rather than a statistical artifact.

Table 4.3: Johansen Co-integration

No. of co-integrating equation	**Trace Statistic**		**Maximum Eigen Value**	
	Trace Statistic	P-Value**	Max-EigenStatistic	P-Value**
None*	**230.3395**	**0.0000**	**76.32938**	**0.0000**
At most 1*	**154.0101**	**0.0003**	**49.51570**	**0.0215**
At most 2*	**104.4944**	**0.0109**	38.66430	0.0715
At most 3	65.83008	0.0998	28.28460	0.2007
At most 4	37.54548	0.3222	15.98273	0.6673
At most 5	21.56276	0.3235	9.559911	0.7849
At most 6	12.00285	0.1568	7.274319	0.4572
At most 7	4.728527	0.0297	4.728527	0.0297

** denotes rejection of the hypothesis at the 0.05 level*
***MacKinnon-Haug-Michelis (1999) p-values*
Source: Author's Computation

The Johansen cointegration test results provide strong evidence of a stable, long-run equilibrium relationship among the variables, which is a pivotal finding for your research on the resource curse paradox in Nigeria. Both the Trace test and the Maximum Eigenvalue test reject the null hypothesis of no cointegration (None*) at the 1% significance level, as their statistics (230.34 and 76.33) far exceed the critical values and their associated p-values are 0.0000; this implies that despite the individual variables being non-stationary, they share a common stochastic trend and move together in the long run, confirming that the modelled relationship between economic performance, resource rents, and institutional quality is not spurious but represents a genuine long-run equilibrium.

Furthermore, the tests sequentially reject the hypotheses of "at most 1" and "at most 2" cointegrating equations at the 5% significance level, which implies there is not merely one but multiple, specifically up to three, distinct long-run relationships binding these variables together; this suggests a more complex and multi-faceted equilibrium system is at work, where variables like oil rents, institutional quality, and GDP may adjust in different ways to restore long-run balance after an economic shock. The failure to reject the null hypothesis beyond "at most 3" cointegrating vectors implies that the system is driven by three common trends, a finding which significantly directs the subsequent econometric strategy; it necessitates the use of a Vector Error Correction Model (VECM) to not only model the long-run equilibria but also to analyze the short-run dynamics and the speed of adjustment through which variables like GDP and institutional quality converge back to their long-run path following a deviation.

The result of the first model estimation which seeks to determine the effect of natural resources rent on economic performance is presented in Table 4.5. The natural log of the variables were taken before estimation.

Table 4.4: ECM Model

Dependent Variable: ΔLNRGDP
Sample (adjusted): 2000 2023
Included observations: 24 after adjustments
Method: Error Correction Model

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.***
C	0.040960	0.008205	4.992113	0.0001
ΔLNNRR	0.088464	0.038070	2.323719	0.0151
ΔLNMRR	0.050701	0.039014	1.299559	0.0967
ΔLNORR	-0.026712	0.009713	-2.750129	0.0182

International Journal of Humanities Social Science and Management (IJHSSM)
Volume 6, Issue 5, Sep. – Oct., 2026, pp: 410-419 ISSN: 3048-6874
www.ijhssm.org

ΔLNNGR	0.042419	0.020422	2.077123	0.0457
ECM_1	-0.442013	0.174013	-2.540115	0.0213
R-squared	0.757872	Mean dependent var		0.048693
Adjusted R-squared	0.569011	S.D. dependent var		0.035148
S.E. of regression	0.032040	Akaike info criterion		-3.824198
Sum squared resid	0.017452	Schwarz criterion		-3.527982
Log likelihood	49.97828	Hannan-Quinn criter.		-3.749701
F-statistic	8.894898	Durbin-Watson stat		1.375483
Prob(F-statistic)	0.000187			

Source: Author's computation (2026)

The results of Model estimation, which examines the short-run dynamics of natural resource rents on economic performance in Nigeria using the Error Correction Model (ECM), reveal an important interaction between resource endowments and growth outcomes that encapsulates the paradox of resource-driven development. The model exhibits strong explanatory power with an R-squared value of 0.758, indicating that approximately 75.8% of the short-run variations in real GDP growth are explained by changes in the included natural resource variables. This high degree of fit underscores the dominant role of resource rents in shaping macroeconomic fluctuations within Nigeria's economy. The F-statistic (8.8949, $p < 0.01$) confirms the joint statistical significance of the model, implying that the collective influence of natural resource rents on short-term economic performance is both robust and non-spurious.

Examining the coefficients individually, the natural resource rent (ΔLNNRR) variable exhibits a positive and statistically significant coefficient (0.088464, $p = 0.0151$). This finding suggests that a 1% increase in overall natural resource rents leads to approximately a 0.088% rise in real GDP growth in the short run. The positive effect reflects the short-term stimulus that resource exploitation provides through increased export revenues and fiscal inflows, consistent with the traditional growth-enhancing hypothesis of resource endowment. However, this relationship may primarily reflect the immediate financial benefits of extraction rather than sustainable productivity improvements.

The mineral resource rent (ΔLNMRR) coefficient (0.050701) is positive but only weakly significant at the 10% level ($p = 0.0967$). This indicates a modest but potentially important contribution of non-oil minerals to short-run economic growth. The result implies that mineral resources, when effectively managed, may have less distortionary effects on macroeconomic stability compared to oil, suggesting a possible diversification avenue away from petroleum dependence. This aligns with the argument that solid minerals often carry lower volatility and fewer governance pathologies than hydrocarbons.

In contrast, the oil resource rent (ΔLNORR) variable records a negative and statistically significant coefficient (–0.026712, $p = 0.0182$), revealing that increases in oil rents, when controlling for other resources, are associated with short-run declines in GDP. This finding epitomizes the resource curse phenomenon in the Nigerian context, where oil dependence tends to crowd out productive sectors such as agriculture and manufacturing, foster macroeconomic instability, and encourage rent-seeking behavior. The result suggests that even in the short run, oil booms may exert contractionary effects by amplifying structural distortions and fiscal mismanagement.

Interestingly, the natural gas rent (ΔLNNGR) coefficient (0.042419, $p = 0.0457$) is positive and significant, implying that gas exploitation contributes positively to short-run economic growth. This may reflect Nigeria's increasing gas commercialization and export diversification efforts, especially through LNG projects, which have recently become more efficient and less volatile relative to oil revenues. Nonetheless, the relatively small magnitude of the coefficient underscores that the contribution of gas remains limited compared to the broader economy, warranting policy interventions to expand gas value chains domestically.

The error correction term (ECM_1) bears the expected negative and significant coefficient (–0.442013, $p = 0.0213$), confirming the presence of a valid long-run equilibrium relationship among the variables. The coefficient indicates that approximately 44.2% of the disequilibrium in GDP from the previous year is corrected within the current period, suggesting a moderate speed of adjustment toward long-run equilibrium. This

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www.ijhssm.org

validates the ECM specification and implies that short-run deviations caused by shocks to resource rents are gradually self-correcting as the economy reverts toward its long-term growth path.

Essentially, these results convey that while aggregate natural resource exploitation contributes positively to short-term growth, the specific role of oil remains detrimental, reinforcing the paradox that Nigeria's principal source of revenue simultaneously undermines sustainable development. The positive but weaker effects of mineral and gas rents highlight potential diversification channels, yet the persistence of oil-driven volatility suggests that without strong institutional reforms and effective resource management, Nigeria's growth will remain fragile and prone to cyclical instability.

V. Conclusion

This study has clearly demonstrated that the natural resources curse is not a mere theoretical abstraction but a persistent and defining reality of the Nigerian economy. The empirical analysis confirms the central paradox: the nation's immense resource wealth, particularly from oil, has functioned as a double-edged sword, driving short-term fluctuations in GDP while simultaneously undermining the foundations for sustainable and diversified growth. The findings reveal an economy heavily dependent on a sector whose revenues are volatile and whose specific influence is detrimental, creating a growth model that is not only inefficient but fundamentally unsustainable, as evidenced by the significant economic cost of natural gas rent. This validates the concerns raised by early theorists of the curse, and firmly situates Nigeria's experience within the global narrative of resource-rich yet underperforming nations.

Looking ahead, the implications of this study point towards an urgent need for a fundamental reorientation of policy. The path forward for Nigeria cannot be business as usual; it demands a deliberate and strategic dismantling of the structures that perpetuate the curse. Policy must move beyond simplistic revenue allocation to focus on deep institutional surgery, prioritizing the strengthening of the rule of law, contract enforcement and property rights above all else. Furthermore, a conscious strategy of economic diversification is imperative to reduce the overwhelming dominance of oil, with the potential of the non-oil mineral sector offering a glimmer of hope. Critically, mechanisms for transparent and accountable resource revenue management, as championed by initiatives like the NEITI, must be strengthened to ensure that future earnings are invested in human capital, infrastructure and a resilient non-resource sector, thereby aligning with the sustainable development principles.

Ultimately, this research contributes to the enduring discourse on the resource curse by providing robust, country-specific evidence that the curse is not an inevitable destiny but a consequence of poor institutional choices. The Nigerian case serves as a stark reminder that resources themselves are neutral; it is the quality of a nation's institutions that determines whether they become a blessing or a curse. The future of Nigeria's economic prosperity, therefore, hinges less on the fluctuations of global oil markets and more on its collective will to undertake the profound institutional reforms necessary to break the curse and finally harness its natural endowment for the benefit of all its citizens.

Based on the findings of this study, the following practical and realistic policy recommendations are proposed:

i. **Institutionalize Transparency and Accountability in the Resource Sector**

Given that oil rents continue to exert a negative influence on growth while overall resource rents remain positive, the persistence of opacity and rent-seeking in the petroleum sector undermines its developmental potential. It is therefore critical to strengthen the transparency framework governing extractive industries through full public disclosure of all payments, receipts, and contracts across all tiers of government. This can be operationalized by deepening compliance with the Extractive Industries Transparency Initiative (EITI) standards and empowering independent oversight bodies to monitor and audit resource flows. Institutional transparency will reduce corruption, discourage fiscal leakages, and build citizen trust in public resource management.

ii. **Legislate a Structural Link Between Resource Revenues and Long-Term Investment**

The evidence that Nigeria's growth remains tied to the depletion of natural capital underscores the unsustainability of its current fiscal model. To mitigate this, the National Assembly should enact a fiscal rule mandating that a fixed proportion of oil and gas revenues be automatically invested in a sovereign wealth or future generations fund. Such a fund should be ring-fenced for financing long-term developmental assets, particularly in infrastructure, education, and healthcare, thereby converting non-renewable resource income into reproducible capital that supports intergenerational equity and macroeconomic stability.

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iii. **Promote Diversification Through Targeted Non-Oil Sector Incentives**

The positive and significant coefficients for mineral and natural gas rents highlight the potential of non-oil resources to drive sustainable growth. Accordingly, the Federal Government, through the Ministry of Industry, Trade and Investment and in partnership with subnational governments, should introduce targeted incentives for investment in solid minerals, agriculture, and light manufacturing. This includes tax holidays, export incentives, and infrastructure upgrades in resource-producing regions. Encouraging backward linkages and local value addition will reduce vulnerability to oil price shocks and broaden the productive base of the economy.

iv. **Invest Strategically in Human Capital for Post-Oil Competitiveness**

Ultimately, the pathway to escaping the resource trap lies in developing a highly skilled and adaptive workforce. The government should prioritize large-scale investment in education, technical and vocational training, and digital literacy programs aligned with the demands of an innovation-driven economy. Such investments, if coordinated through a reformed educational framework and supported by private sector partnerships, will position Nigeria for a post-oil transition where human capital, not natural resources becomes the foundation of sustainable economic prosperity.

v. **Recalibrate the Role of Government Effectiveness Toward Productive Facilitation**

The negative association between government effectiveness and economic growth indicates that administrative capacity, as currently deployed, may be overly focused on regulatory control rather than economic facilitation. To address this, public sector efficiency should be redirected toward creating a business-enabling environment. This requires the civil service and regulatory agencies under the coordination of the Presidency to simplify business registration, rationalize overlapping regulations, improve digital service delivery, and enhance bureaucratic transparency. By focusing on facilitation rather than control, government effectiveness can shift from a source of economic friction to a driver of productivity and competitiveness

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