FOREIGN DIRECT INVESTMENT AND THE NATURAL RESOURCE CURSE IN SUB-SAHARAN AFRICA: PATHWAYS TO SUSTAINABLE DEVELOPMENT

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ABSTRACT

This study examines the relationship between foreign direct investment (FDI) and the natural resource curse in Sub-Saharan Africa (SSA) from 2011 to 2020, framed within Sustainable Development Goal (SDG) 8 on Decent Work and Economic Growth. Despite abundant natural resources, many SSA countries face the paradox of resource wealth impeding long-term development under weak institutional and structural conditions. Using panel data from 46 SSA countries, fixed and random effects models assess the impact of FDI inflows and natural resource rents on GDP across Eastern, Central, Western, and Southern Africa. The results show a negative and significant relationship between resource rents and GDP for the aggregated SSA sample, consistent with the resource curse hypothesis. However, subregional analysis reveals variation, with Southern Africa and other selected subregions showing positive and significant effects. FDI demonstrates a growth-enhancing role, particularly in regions where governance and policy frameworks are more conducive to investment benefits. These findings underscore the importance of context-specific policies that strengthen resource governance, promote economic diversification, and invest in human capital. Enhancing FDI-led sectors and fostering inclusive employment are essential for advancing SDG 8, unlocking SSA's economic potential, and improving livelihoods across the continent.

Keywords: Foreign direct investment, natural resources curse, Sub-saharan Africa, economic growth

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1. INTRODUCTION

Sub-Saharan Africa is home to some of the world's most abundant natural resources, including vast reserves of minerals, fossil fuels, and agricultural commodities. The region contains around 30% of the world's mineral reserves, approximately 12% of proven global oil reserves, and about 8% of natural gas reserves (UNEP, 2023; Mo Ibrahim Foundation, 2022). For example, the Katanga region of the Democratic Republic of the Congo (DRC) supplies over 70% of global cobalt output (Gulley, 2022), while countries across Central and Southern Africa are rich in gold, diamonds, and other precious minerals (Matsa et al., 2024). The region's oil and uranium deposits are also significant, and its agricultural sectors, producing commodities such as coffee, cocoa, cotton, and tea, further highlight its wealth.

Given these resources, Sub-Saharan Africa might be expected to experience robust economic growth, as resource wealth should naturally drive prosperity. However, the reality is often different. Resource rents, which refer to income derived from oil, gas, minerals, and other extractives, averaged 10.03% of GDP in Sub-Saharan Africa between 1990 and 2020, compared to a global average of just 1.5% (Nwani, 2023). In some of the most resource-dependent economies, such as Angola, Botswana, and the Republic of Congo, extractive industries contribute between 40% and over 60% of GDP and account for up to 75% of government revenue (Brookings, 2022; World Bank, 2023a). This heavy reliance on the primary sector reflects a structural dependence on commodity exports for fiscal income and foreign exchange earnings.

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Despite this wealth, economic progress has been uneven. The average GDP growth rate for the region slowed from 5.2% in 2001–2010 to just 3.2% between 2011 and 2020 (World Bank, 2023a). Extreme poverty remains widespread, with the poverty headcount ratio at the international poverty line of USD 2.15 per day standing at 35.2% in 2019, equivalent to over 400 million people (World Bank, 2023b). In some countries, such as Nigeria, Madagascar, and the Democratic Republic of Congo, the absolute number of people living in extreme poverty has increased despite periods of commodity booms.

This dependency leaves the region highly vulnerable to fluctuations in global commodity prices. For instance, the collapse of oil prices in 2014 and 2015, and again in 2020 during the COVID-19 pandemic, triggered fiscal crises and GDP contractions exceeding 3% in major oil-exporting countries such as Nigeria, Angola, and Equatorial Guinea (IMF, 2021). These shocks have hindered consistent economic growth and slowed poverty reduction, as the gain from commodity booms often fail to translate into sustainable improvements in living standards.

This paradox is commonly referred to as the "natural resource curse," which asserts that an abundance of resources can, under certain conditions, hinder long-term economic development (Tabash et al., 2022; Nurmakhanova et al., 2023; Boafo et al., 2024). According to Hayat and Tahir (2021), the resource-rich nations in the region often struggle with political instability, conflict, authoritarian governance, and weak institutions, which impede their ability to translate resource wealth into sustainable development.

This issue is particularly relevant in the context of SDG 8: Decent Work and Economic Growth, which aims to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all (Roša et al., 2025). For Sub-Saharan Africa, achieving SDG 8 is a complex challenge. The over-dependence on extractive industries has left many economies vulnerable to external shocks, and this vulnerability has stunted long-term, inclusive economic growth. Rather than fostering the creation of decent jobs and improving living standards, resource wealth in many African nations has instead perpetuated cycles of poverty and inequality.

Foreign Direct Investment (FDI) is often considered a potential catalyst for driving economic growth and creating jobs in Sub-Saharan Africa. By providing essential capital, technology, and expertise, FDI can help diversify economies, reduce reliance on extractive industries, and promote growth in sectors such as manufacturing, renewable energy, and services. However, despite these potential benefits, Sub-Saharan Africa continues to attract a disproportionately small share of global FDI, accounting for only 2.46% in 2018 (World bank, 2021). Historically, FDI inflows have been dominated by the extractive industries, but recent trends show increasing interest in sectors such as logistics, information technology, and renewable energy. Yet, empirical studies reveal that in oil-exporting states such as Nigeria, Chad, and Angola, the wealth derived from natural resources can discourage non-resource FDI inflows due to political instability, poor governance, and corruption (Poelhekke and van der Ploeg, 2013; Hayat and Tahir (2021).

While previous research has examined the natural resource curse and its governance dimensions in Africa (Nurmakhanova et al., 2023; Acheampong et al., 2023), few studies have explicitly investigated the role of FDI in mitigating or exacerbating this phenomenon within the framework of SDG 8. Moreover, there is limited empirical work that compares the effects of natural resource rents and FDI across different sub-regions of Sub-Saharan Africa, as well as between least developed and developing countries.

This study addresses this gap by examining the interplay between FDI, natural resource rents, and economic growth across 46 Sub-Saharan African countries from 2011 to 2020. By integrating both regional and development-level analyses, it aims to identify pathways for transforming natural resource wealth into diversified, inclusive growth. In doing so, the study contributes to the literature by linking the resource curse debate with FDI dynamics and SDG 8 objectives, offering policy-relevant insights for overcoming structural dependency on extractive industries.

2. LITERATURE REVIEW

The "resource curse" hypothesis asserts that countries endowed with abundant natural resources often underperform economically compared to resource-scarce nations, primarily due to governance failures, rent-seeking behaviour, and macroeconomic volatility (Sachs & Warner, 2001; Tabash et al., 2022). This paradox is often explained through mechanisms such as Dutch disease, institutional erosion, and macroeconomic instability. In the context of Sub-Saharan Africa (SSA), this phenomenon manifests in slow economic growth, persistent poverty, and underdeveloped manufacturing and service sectors despite vast reserves of minerals, oil, and gas (Hayat & Tahir, 2021; Acheampong et al., 2023). Recent extensions of the theory emphasise the role of foreign

direct investment (FDI) as both a potential driver of diversification and a channel through which resource dependence may be reinforced (Poelhekke & van der Ploeg, 2013; Tsauri, 2018).

Empirical research has examined the relationship between natural resource rents, FDI, and broader development outcomes using a variety of independent and dependent variables. For instance, Yadav et al. (2024) analyse the BRICS economies using sustainable economic growth as the dependent variable, with natural resource rents, green finance, fintech adoption, and green innovation as independent variables. Their findings show that poorly managed resource rents appreciate the real exchange rate and erode manufacturing competitiveness via Dutch disease effects, while green finance and fintech adoption mitigate these impacts, functioning as moderating mechanisms that can transform a resource curse into a resource blessing. Similarly, Duan et al. (2023) test the financial resource curse hypothesis in the MENA region by modelling financial development as the dependent variable, with natural resource rents, public debt, and institutional quality as independent variables, alongside an interaction term between resource rents and debt. Their results reveal that resource rents and debt both reduce financial development, while strong institutions partially offset these effects.

The social dimension of the resource curse is highlighted by Tadadjeu et al. (2023), who examine under-five mortality as the dependent variable in 50 African countries, with total and disaggregated resource rents as independent variables, and governance quality as a moderator. The study finds that point resources such as oil, gas, and minerals increase child mortality, while diffuse resources such as forest rents do not, with governance thresholds at which the negative effect disappears. Institutional mediation is further explored by Destek et al. (2023), who model real GDP per capita as the dependent variable and incorporate natural resource rents, human capital, financial development, and six subdimensions of institutional quality as independent variables. They show that control of corruption and rule of law transform the effect of resource rents from negative to positive, whereas regulatory quality has no significant effect.

Evidence from SSA offers additional insights. Asiamah et al. (2022a) assess institutional quality as the dependent variable, with natural resource dependence, employment, education, FDI, and other macroeconomic controls as independent variables. They conclude that resource dependence erodes institutional quality, consistent with rent-seeking theory, while employment, education, and FDI enhance it. In a related study, Asiamah et al. (2022b) use sectoral growth in manufacturing, agriculture, and services, as well as aggregate GDP growth, as dependent variables, with natural resource rents as the key explanatory variable. Their results confirm Dutch disease effects, with institutional quality and FDI moderating the negative impact.

At the corporate level, Adams et al. (2022) investigate corporate financial performance (CFP) of multinational corporations in oil-rich African countries, with CSR commitment, institutional quality, and profit maximisation motives as independent variables. They find that weak institutions allow profit motives to undermine CSR, limiting socio-economic benefits despite CSR's positive association with CFP. Country-specific evidence is provided by Barczikay et al. (2020), who study Botswana using bilateral real exchange rates as the dependent variable and the diamond price index as the independent variable. Their nonlinear ARDL results indicate that diamond price shocks appreciate the pula, undermining manufacturing competitiveness despite macroeconomic stability.

Beyond these newer contributions, earlier empirical works provide foundational understanding of the FDI–resource nexus. Poelhekke and van der Ploeg (2013) show that natural resource abundance often diverts FDI away from non-extractive sectors, limiting diversification. Ayompe et al. (2021) reveal that foreign investment in palm oil in SSA provided minimal poverty alleviation without local value-added processing. Study by Alemu (2025) found that strong institutional quality enables resource rents to attract sustainable FDI, which can finance infrastructure and human capital. Gyamfi et al. (2022) link resource dependence to institutional quality, financial development, constraining inclusive growth, while Yu (2023) shows that resource rents have nonlinear effects on growth, worsening when governance is weak. Mlambo (2022) finds political instability mediates the negative growth impact of resource wealth in Africa.

The governance dimension remains critical. Acheampong et al. (2023) link resource rents to rising inequality, even in democracies. Gregory and Sovacool (2019) note that electricity infrastructure investment outcomes depend on governance, while study by Olaniyi and Odhiambo (2025) show that resource dependence hampers renewable energy transitions. In recent years, global energy markets have been strongly encouraged to accelerate the transition toward renewable energy as part of broader strategies to mitigate climate change and ensure sustainable development (Mohamad & Ab-Rahim, 2025). The results align with broader global evidence that emphasizes the necessity of transitioning away from fossil fuels and enhancing renewable energy adoption

(Mohamad et al., 2023; Mohamad & Ab-Rahim, 2024). Boafo et al. (2024) caution that demand for critical minerals risks repeating fossil-fuel-style extractive dependency without regulation.

Despite the breadth of this literature, there remain notable gaps. Few studies jointly examine the effects of natural resource rents and FDI on economic growth within the framework of Sustainable Development Goal (SDG) 8 in SSA. Furthermore, much prior research treats SSA as homogenous, overlooking subregional differences and disparities between least developed and developing economies. This study addresses these gaps by analysing the interplay between FDI, resource rents, and economic growth in 46 SSA countries from 2011 to 2020, offering both regional and development-level perspectives. In doing so, it contributes to the resource curse debate by integrating investment dynamics with sustainable development objectives, yielding policy-relevant insights for overcoming structural dependency on extractive industries.

3. METHODOLOGY

This study investigates the relationship between natural resource rents, foreign direct investment (FDI), and economic growth in forty-six Sub-Saharan African (SSA) countries over the period 2011 to 2020. The empirical strategy employs both static and dynamic panel data approaches. Static models are applied to subregional and development-level groupings to capture cross-sectional heterogeneity, while dynamic models are implemented for the full SSA sample to account for the persistence of economic growth and potential endogeneity. The baseline static panel model is specified as:

$$GDP_{it} = \alpha + \lambda_1 + \beta_1 FDI_{it} + \beta_2 NRR_{it} + \beta_3 HC_{it} + \beta_4 PS_{it} + \beta_5 UNEMP_{it} + \beta_6 CCO_{it} + \varepsilon_{it} \quad (1)$$

Table 1: Variable Definitions and Data Sources

Variable	Definition	Unit / Scale	Source
GDP	Economic growth rate	% Annual growth	World Bank
FDI	Net foreign direct investment inflows	% of GDP	World Bank
NRR	Total natural resource rents (oil, gas, coal, minerals, forests, etc)	% of GDP	World Bank
HC	Human Capital Index	Scale (1 to 5)	UNDP
PS	Political Stability and Absence of Violence/Terrorism	Index (−2.5 to 2.5)	World Bank
UNEMP	Unemployment rate, total	% of total labour force	OECD
CCO	Control of Corruption	Index (−2.5 to 2.5)	World Bank

Table 1 presents a comprehensive summary of the variables employed in the empirical analysis. The dependent variable, GDP, is measured as the annual economic growth rate in percentage terms and obtained from the World Bank. This widely used macroeconomic indicator allows for meaningful cross-country and temporal comparisons (Feenstra et al., 2015). Foreign Direct Investment (FDI), expressed as a percentage of GDP and sourced from the World Bank, captures the inflow of foreign capital, a factor often linked to growth dynamics, especially in resource-based economies. Natural Resource Rents (NRR) represent the total rents derived from oil, gas, coal, minerals, forests, and other resources, measured as a percentage of GDP. This measure is key for examining the resource curse hypothesis and is sourced from the World Bank. Human Capital (HC) is measured through the Human Capital Index from the UNDP, scaled from 1 to 5, providing a robust proxy for the role of education, health, and skills in economic performance.

Political Stability (PS) and Control of Corruption (CCO) are institutional quality indicators from the World Bank's Worldwide Governance Indicators. Both are measured on a scale ranging from -2.5 to 2.5, with higher values indicating better governance. These measures are important for analysing whether institutional quality moderates the relationship between resource dependence and growth. Unemployment (UNEMP) is recorded as the percentage of the total labour force without work, based on data from the OECD. This serves as a measure of labour market performance and its possible interaction with growth and natural resource dependence. These governance and institutional quality variables (PS and CCO), along with the HC. All other variables are transformed into natural logarithms to reduce heteroscedasticity and stabilise variance. The hypotheses of the Hausman Specification test are as follows:

H_0: Cov (λ_i, β_{it}) =0 (no correlation between λ_i and X_{it} →Random Effect Model)
H_a: Cov (λ_i, β_{it}) ≠ 0 (correlation between λ_i and X_{it} →Fixed Effect Model)

The selection between fixed effects (FE) and random effects (RE) estimators is guided by the Hausman specification test (Hausman, 1978). If the null hypothesis of regressor-effect independence says that the Hausman

statistics have an asymptotic chi-squared distribution with k degrees of freedom, then it is better to use a random effect model. But if the p-value is less than 0.05, then this study uses the fixed effect estimate (Ab-Rahim et al., 2025; Borenstein et al., 2010). The FE model is specified as:

$$LGDP_{it} = (\alpha + \lambda_i) + \beta_1 LFDI_{it} + \beta_2 LNRR_{it} + \beta_3 LHC_{it} + \beta_4 LPS_{it} + \beta_5 LUNEMP_{it} + \beta_6 LCCO_{it} + \varepsilon_{it} \quad (2)$$

The RE model takes the form:

$$LGDP_{it} = \alpha + \beta_1 LFDI_{it} + \beta_2 LNRR_{it} + \beta_3 LHC_{it} + \beta_4 LPS_{it} + \beta_5 LUNEMP_{it} + \beta_6 LCCO_{it} + \lambda_i + \varepsilon_{it} \quad (3)$$

The fixed effects (FE) model controls for unobserved time-invariant heterogeneity across countries, while the random effects (RE) model assumes that individual country effects are uncorrelated with the explanatory variables. This study conducts both FE and RE analysis, and robust standard errors clustered at the country level are employed to address potential heteroscedasticity and autocorrelation. By providing precise operational definitions, specifying measurement units, and ensuring consistent terminology in both model specification and interpretation, the methodology aligns with best practices for applied panel econometrics (Baltagi, 2021; Wooldridge, 2010).

4. RESULTS AND DISCUSSION

Table 2 summarises the main characteristics of the variables used in this study for 46 Sub-Saharan African countries between 2011 and 2020.

Table 2: Descriptive Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
Gross Domestic Product	37.328	5.799	0.2	55
Foreign Direct Investment	23.354	8.943	0.1	106
Natural Resource Rents	11.234	8.595	1	52.8
Political Stability	3.421	0.971	1	5
Human Capital	1.431	0.18	1	1.82
Unemployment	8.44	6.975	0.32	26.061
Control of Corruption	1.333	0.674	0.215	3.389

Gross Domestic Product (GDP), measured as the annual growth rate, has an average of 37.328 with a standard deviation of 5.799. The minimum value of 0.2 and the maximum value of 55 indicate wide disparities in economic performance. Some economies recorded almost stagnant growth while others achieved exceptional expansion. Foreign Direct Investment (FDI), expressed as a percentage of GDP, records a mean value of 23.354 with a relatively high dispersion of 8.943. The values range from 0.1 to 106, indicating that some countries attracted negligible inflows while others experienced extremely large FDI relative to their economic size. This variation may reflect differences in investment climate, natural resource endowments and political conditions.

Natural Resource Rents (NRR), representing the share of GDP derived from oil, gas, coal, minerals and forests, have a mean of 11.234 and a standard deviation of 8.595. The values range from 1 to 52.8, suggesting that while some economies are marginally dependent on natural resources, others derive more than half of their GDP from them. This variation is a critical factor in the analysis of the natural resource curse in the region. Political Stability (PS), measured on a scale from 1 to 5, has an average value of 3.421 with a standard deviation of 0.971. The minimum of 1 and the maximum of 5 indicate that some states enjoy high stability while others face persistent political risks. Human Capital (HC), measured by the Human Capital Index, ranges from 1 to 1.82 with an average of 1.431 and a relatively small dispersion of 0.18. This shows modest differences across countries but also reflects generally low human capital levels that may constrain long-term productivity.

The unemployment rate (UNEMP) has an average value of 8.44 percent of the labour force, but the large standard deviation of 6.975 and the range from 0.32 to 26.061 reveal significant disparities in labour market conditions. Some countries maintain very low unemployment rates while others face severe joblessness, which can have economic and social consequences. Control of Corruption (CCO), measured on a scale from 0.215 to 3.389, records an average of 1.333 with a standard deviation of 0.674. This variation highlights differing governance

capacities in the region, where some countries demonstrate relatively effective anti-corruption mechanisms while others struggle with systemic governance challenges.

Table 3: Estimation Results in Sub-Saharan African Regions

Variable	West	Central	South	East
LGDP	3.338*** (0.000)	3.646*** (0.000)	2.069***(0.000)	2.076***(0.001)
LFDI	0.056 (0.295)	0.018(0.871)	0.269***(0.004)	0.083*(0.07)
LNRR	-0.012 (0.738)	0.001(0.992)	0.137*(0.063)	0.086**(0.048)
LPS	-0.134*** (0.004)	0.095 (0.712)	0.174 (0.288)	0.004 (0.976)
LHC	0.023 (0.513)	0.139 (0.518)	0.537**(0.036)	-0.193 (0.752)
LCCO	0.055* (0.09)	-0.093 (0.392)	-0.115 (0.475)	0.063 (0.478)
LUNEMP	-0.115*** (0.001)	0.025 (0.914)	-0.051 (0.207)	0.139 (0.476)

Note: Asterisks ***, **, and * means significant at 1%, 5% and 10% respectively

The regional analysis in Table 3 examines the heterogeneous impact of foreign direct investment (FDI), natural resource rents (LNRR), and other macroeconomic variables on GDP across the four subregions of Sub-Saharan Africa. This breakdown follows the United Nations geographical classification, which divides the region into Western Africa (16 countries), Eastern Africa (17 countries), Central Africa (9 countries), and Southern Africa (4 countries). By adopting a region-specific perspective, the analysis captures how geographic, institutional, and economic structures influence the transmission of investment, resource exploitation, governance quality, and labour market dynamics into measurable growth outcomes. This approach also allows for the identification of regionally distinct pathways towards achieving Sustainable Development Goal 8 (SDG 8) on "Decent Work and Economic Growth," acknowledging that structural strengths and vulnerabilities vary widely across the continent.

The results from Table 3 show a varied impact of LNRR, FDI, and other macroeconomic variables across the four subregions. In Western Africa, LNRR displays a negative but statistically insignificant coefficient, suggesting that the natural resource curse is not a dominant driver of growth in this region. While GDP (LGDP) demonstrates strong significance at the 1% level, FDI is also insignificant, indicating that resource-led development and external capital inflows have yet to be fully harnessed for sustained growth (Zehri et al., 2024). Political stability (LPS) is significantly negative, which may reflect the destabilising effects of governance challenges, conflict, and institutional weaknesses, thereby undermining SDG 8 objectives.

In Central Africa, the negligible and statistically insignificant effect of LNRR reinforces the resource curse hypothesis, whereby resource abundance has not translated into meaningful growth due to governance deficits, rent-seeking behaviours, and weak institutional capacity. FDI, LHC, and LCCO are all insignificant, highlighting persistent structural bottlenecks in attracting investment and leveraging human capital for development. This underlines the importance of institutional reforms to enhance economic diversification, job creation, and political stability, in line with SDG 8 priorities (Zehri et al., 2024). Compare to Southern Africa presents a different scenario. Here, FDI (0.269***) and LNRR (0.137*) are positive and significant, alongside LHC (0.537**), suggesting that this subregion has been more successful in translating resource wealth and human capital into economic gains.

The strong positive relationship between FDI and GDP supports the SDG 8 vision that strategic investment can foster sustainable development. However, the negative but insignificant unemployment coefficient suggests that growth has not yet been fully inclusive, pointing to the need for labour market reforms (Cao, 2023; Chigbu and Nekhweyha, 2023). Eastern Africa's results reveal a positive and significant relationship between LNRR (0.086**) and GDP, challenging the traditional natural resource curse hypothesis. This outcome indicates that effective resource management, possibly supported by sector-specific reforms and infrastructure investment, can contribute to growth. However, the insignificance of LHC, LPS, and LCCO suggests that structural reforms in governance, human capital investment, and corruption control are needed to ensure resource-led growth is sustainable and inclusive.

Therefore, the results indicated that Sub-Saharan Africa cannot be treated as a homogeneous economic bloc when formulating policy interventions. While some regions require institutional reforms to overcome the natural resource curse, others need strategies that convert resource-driven growth into employment and social inclusion. These findings reinforce the importance of region-specific policy frameworks that align with SDG 8 and account for local governance capacity, resource management practices, and structural economic characteristics.

Table 4: Estimation Results in Least Developed and Developing Countries

Variables	Least Developed	Developing
LGDP	3.035*** (0.000)	3.169*** (0.000)
LFDI	0.075 (0.261)	0.111** (0.025)
LNRR	-0.014 (0.693)	0.078*** (0.0002)
LPS	0.39*** (0.004)	0.024 (0.665)
LHC	0.082 (0.741)	-0.045 (0.758)
LUNEMP	-0.12*** (0.006)	-0.039* (0.097)
LCCO	0.068 (0.325)	0.132** (0.0101)

Note: Asterisks ***, **, and * means significant at 1%, 5% and 10% respectively

Table 4 extends the analysis by grouping the sample into two developmental categories based on the United Nations Economic and Social Council (UN ECOSOC) list: Least Developed Countries (LDCs) and Developing Countries. The LDC category is defined by low per capita income, low human asset indices, and high economic vulnerability, while developing countries in this context are those that do not meet the LDC criteria but remain classified by the UN as developing. This classification enables a direct comparison of how structural development levels influence the capacity to harness natural resources, attract and utilise FDI, and benefit from governance-related factors such as political stability (LPS) and control of corruption (LCCO). Such a perspective is essential for tailoring growth strategies that align with SDG 8, as policy priorities and institutional capabilities differ substantially between LDCs and more advanced developing economies.

The results in Table 4 show that LNRR has an insignificant negative effect on GDP in LDCs (-0.014), consistent with the natural resource curse theory. This outcome suggests that despite resource availability, LDCs face challenges such as political instability, limited institutional capacity, and poor governance, which hinder the translation of natural wealth into sustained growth (Sharma and Mishra, 2022). Conversely, in developing countries, LNRR is positive and highly significant (0.078***), indicating that better institutional frameworks and governance mechanisms enable resource rents to serve as an engine for economic development. This divergence underscores that the impact of resources is conditional on institutional quality and economic structure (Awoa et al., 2024).

FDI is insignificant in LDCs (0.075) but positive and significant in developing countries (0.111**), showing that more developed economies in the region are better positioned to attract and effectively utilise foreign investment for growth. This aligns with empirical evidence that FDI contributes to capital accumulation, productivity gains, and job creation, which are core components of SDG 8 (Awoa et al., 2024; Adabor et al., 2022). Political stability has a strong and significant positive effect in LDCs (0.39***), reaffirming that governance reforms are critical to unlocking growth potential in vulnerable economies (Kreinin and Aigner, 2022; Cao, 2023).

Unemployment has a significant negative relationship with GDP in both groups, but its effect is stronger in LDCs (-0.12***) than in developing countries (-0.039*), suggesting that employment generation policies may yield higher marginal returns in less developed contexts. The insignificance of LHC and LCCO in LDCs indicates persistent challenges in building human capital and curbing corruption, while in developing countries, LCCO (0.132**) is significant, reflecting the role of governance in sustaining growth. These results imply that while resource management and investment attraction are essential for both groups, governance quality and labour market reforms play a more decisive role in shaping long-term economic outcomes (Yu, 2023) These findings reveal that in LDCs, growth is most constrained by governance and employment challenges, whereas in developing countries, growth is driven by the strategic utilisation of resources and investment flows. This suggests that while broad SDG 8 targets apply to all, the specific policy levers for achieving them differ substantially by developmental status.

5. CONCLUSION

The findings from this study reveal a more nuanced picture of the natural resource and economic growth relationship in Sub-Saharan Africa than the simple presence or absence of a resource curse. While the aggregate results in Table 2 indicate a negative and significant relationship between natural resource rents (NRR) and GDP for the full sample, suggesting a potential resource curse at the macro level, the disaggregated regressions in Tables 3 and 4 tell a different structure of analysis. In three out of four Sub-Saharan African subregions (South, East, and Central), and in developing countries as classified by the United Nations Economic and Social Council, the relationship between NRR and GDP is positive, with statistical significance in several cases. These results

imply that in many parts of Sub-Saharan Africa, resource wealth can act as a driver of growth when combined with enabling governance conditions and supportive macroeconomic policies.

The contrast between the negative aggregate effect and the predominantly positive subregional and development-status effects suggests that the relationship is highly context dependent. Aggregation may mask underlying heterogeneity, as structural differences between least developed countries (LDCs) and more advanced developing economies influence how natural resources contribute to growth. In LDCs, weak institutional capacity, governance challenges, and economic vulnerability limit the potential of resource rents to generate broad-based development, consistent with the resource curse hypothesis. Conversely, in developing countries and better-performing subregions, stronger governance structures, diversified economies, and targeted investment strategies appear to mitigate the adverse effects often associated with resource dependence.

The Foreign direct investment (FDI) emerges as another key factor in driving economic performance, with a significant positive effect in developing countries and in certain regions, particularly Southern Africa. This finding underscores the importance of capital inflows in supporting SDG 8 objectives of productive employment and sustainable economic growth. At the same time, the consistent negative relationship between unemployment and GDP across multiple specifications reinforces the centrality of labour market policies in ensuring that growth translates into meaningful job creation.

Taken together, the results indicate that the natural resource curse is not a uniform phenomenon in Sub-Saharan Africa. Instead, its presence or absence depends on a combination of institutional quality, political stability, human capital development, and the ability to attract and manage investment. Policymakers should therefore adopt differentiated strategies. For LDCs, the priority is to strengthen governance, improve transparency in resource management, and channel resource rents into productive investments that diversify the economy. For developing countries, the challenge lies in sustaining and enhancing the positive contributions of resource wealth and FDI while ensuring that the benefits are widely shared through inclusive employment generation and skills development. By tailoring policies to these structural realities, Sub-Saharan African nations can more effectively harness their natural wealth to advance the goals of SDG 8 and foster resilient, inclusive growth.

The Limitations of this study include the restricted time frame, which may not fully capture the long-term cyclical effects of resource dependence and structural reforms, as well as the reliance on aggregated macroeconomic indicators, which may obscure intra-country disparities. Although the panel estimation techniques applied reduce the risk of omitted variable bias, endogeneity issues cannot be entirely ruled out. Data limitations in measuring governance quality, political stability, and human capital may also affect the precision of estimates.

As for the recommendations for future research include extending the time series to capture long-run dynamics, employing disaggregated sectoral data to understand how resource rents affect specific industries, and incorporating qualitative governance assessments to complement quantitative indicators. Policymakers should consider adopting region-specific development plans, focusing on diversification, value addition in resource sectors, and institutional reforms that improve the efficiency of public investment. Finally, given the consistent significance of unemployment in constraining growth, employment generation, particularly for youth and women, should be embedded as a core objective in all natural resource management strategies to ensure that growth is both sustainable and inclusive.

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