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Assessing Tax Revenue and FDI on Economic Growth: Employing the Moderating Role of Institutional Quality in Ghana.

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ABSTRACT

Purpose: This study examines the short-run determinants of economic growth in Ghana, focusing on how institutional quality shapes the effects of Foreign Direct Investment (FDI) and domestic tax revenue on national output. It addresses a key gap in the literature concerning the uneven capacity of governance systems in emerging economies to attract external capital while effectively managing internal fiscal resources.

Methodology: A quantitative time-series framework is applied to Ghana's economy for the period 2000 to 2021. The conditional multiple regression model incorporates key interaction terms and is estimated using the Nonlinear Least Squares (NLS) method. To enhance efficiency and reliability, the model integrates an Autoregressive Moving Average (ARMA) process, which corrects for serial correlation commonly present in macroeconomic data, ensuring robust parameter estimation and valid inference.

Findings: The results indicate a statistically sound model for explaining short-run growth dynamics. FDI exerts a strong, positive, and highly significant effect on economic growth, underscoring its established role in capital formation and technology diffusion. Institutional quality also has a significant positive impact, reaffirming that sound governance promotes stability and growth. In contrast, tax revenue displays an insignificant negative effect, suggesting administrative weaknesses or short-term policy neutrality. The interaction between institutional quality and taxation is likewise insignificant, implying that governance improvements have enhanced FDI attraction but have not sufficiently strengthened domestic tax mobilisation or its growth impact.

Implications: The findings affirm FDI as a key growth driver while exposing a structural imbalance: Ghana's institutional framework effectively supports external investment but remains less effective in leveraging domestic fiscal capacity. The policy takeaway is the need for stronger institutional alignment, particularly through governance reforms in fiscal administration, to enhance tax efficiency, broaden revenue bases, and sustain long-term economic growth.

Keywords: Economic growth, Foreign Direct Investment, Institutional quality, Tax revenue, Ghana.

INTRODUCTION

Sustained economic growth remains the central objective for emerging economies, characterised by the imperative to transition from low-income status through strategic capital accumulation and efficient resource allocation (Sultanuzzaman et al., 2018; Tsaurai, 2018; Wiafe & Anning, 2021). Foreign Direct Investment (FDI) and domestic resource mobilisation, primarily through tax revenue, are conventionally recognised as two paramount drivers of economic expansion. FDI is crucial because it supplements domestic savings, transfers technology, and enhances human capital (UNCTAD, 2020; Gochero & Boopen, 2020; Gadzo et al., 2025). Simultaneously, robust tax revenue systems are vital for governments, particularly in nations such as Ghana, to fund public goods, stabilise macroeconomic environments, and reduce dependence on volatile external aid. However, the relationship between FDI and taxation is complex, as governments often employ tax holidays and incentives to attract foreign capital, which can erode the immediate tax base (Alabede, 2018; Camara, 2022).

Despite the theoretical consensus on their importance, the empirical literature on the direct contributions of FDI and tax revenue to Gross Domestic Product (GDP) growth remains highly ambiguous, particularly in sub-Saharan Africa. The impact of FDI, for instance, is mixed, with several studies failing to establish a conclusive positive correlation in host countries (Carbonell & Werner, 2018; Aziz, 2025; Qureshi et al., 2025). This inconsistency suggests that the efficacy of both FDI and tax revenue as growth stimulants is contingent on structural and political factors. This study clearly states the problem: The prevailing ambiguity in the literature regarding the efficacy of foreign direct investment (FDI) and tax revenue in driving economic growth is primarily attributable to neglecting the conditional role of institutional quality, leading to suboptimal policy prescriptions in emerging economies. For instance, in Ghana, the struggle to attract sufficient FDI despite policy reforms, coupled with findings that corruption negatively impacts inflows, underscores the critical role of the non-economic environment (Al-Sadiq, 2023; Yakubu, 2020). Furthermore, while FDI can boost revenue in the long run, the implementation of tax exemptions in the short term often results in inadequate revenue collection, necessitating a more nuanced analysis of the two drivers.

This study addresses this fundamental gap by empirically assessing the moderating role of institutional quality in the coupled effect of tax revenue and FDI on economic growth. The central premise is that weak governance, inadequate regulatory frameworks, and high levels of corruption are elements of poor institutional quality that act as absorption barriers, limiting the efficacy and productivity of both foreign capital and collected domestic taxes (Qureshi et al., 2025; Ajide et al., 2023). Only with strong institutions, encompassing components such as regulatory quality and the rule of law, can a developing economy like Ghana effectively absorb and optimise FDI-related spillovers and ensure the efficient utilisation of tax resources. Our contribution is threefold. First, we provide country-specific evidence on the conditional FDI-Tax-Growth nexus for Ghana, a context in which the interactive role of institutional quality has received limited attention. Second, we employ a nonlinear least squares (NLS) time-series estimator with an ARMA error structure, which accommodates the interaction terms and corrects for serial correlation, providing efficient and reliable estimates of these conditional relationships (Tsaurai, 2018; Aziz, 2025).

Third, by analysing disaggregated indicators of institutional quality, we identify specific institutional reforms, such as enhancing regulatory quality and government effectiveness, that policymakers in countries such as Ghana should prioritise to maximise growth outcomes (Ajide et al., 2023; Sukarno & Nurmandi, 2023). The remainder of this paper is structured as follows: Section 2 critically reviews the relevant theoretical and empirical literature, with a focus on conditional growth models. Section 3 outlines the methodological framework, including the time-series model and estimation techniques used. Section 4 presents the empirical results and discusses key findings. Finally, Section 5 concludes the study and provides targeted policy recommendations (Gochero & Boopen, 2020; Alabede, 2018).

LITERATURE REVIEW

Academic discourse on sustained economic development in emerging economies, particularly in Sub-Saharan Africa, is governed by the interplay of capital flows, fiscal policy, and governance structures. This review systematically integrates the theoretical foundations and empirical evidence relevant to the FDI-tax revenue-growth nexus.

Theoretical Review

The theoretical foundation of this study is primarily grounded in Endogenous Growth Theory (EGT). In contrast to the Neoclassical Model, which assumes diminishing returns to capital accumulation and views Foreign Direct Investment (FDI) as a source of only temporary growth, EGT posits that FDI can generate sustained, long-term economic expansion through continuous knowledge spillovers, technological diffusion, and the enhancement of human capital within the host economy (Kouassi & Ziramba, 2023; Dube & Casale, 2023). However, a key

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limitation of EGT is its optimistic presumption that knowledge spillovers occur automatically, an assumption often challenged by empirical evidence. The effective application of this theory within the Ghanaian context, therefore, requires a sufficiently developed absorptive capacity to convert foreign investment into locally embedded technological progress and innovation-driven growth.

Fiscal policy considerations in this study are examined from the perspectives of the Laffer Curve and Optimal Taxation Theory. The Laffer Curve posits a nonlinear relationship between tax rates and government revenue, where an initial increase in tax rates raises revenue. However, beyond a certain point, higher rates deter economic activity and reduce the tax base (Ndlovu & Makaringe, 2021). This framework supports the notion that governments must identify an optimal tax rate that maximises fiscal returns without discouraging private investment. Nevertheless, the Laffer framework has a methodological limitation: its static formulation overlooks the roles of tax administration efficiency, institutional integrity, and compliance mechanisms, which critically influence revenue performance (Ali & Agyapong, 2020).

This study is anchored in the New Institutional Economics (NIE) paradigm. NIE, advanced by North, emphasises that both formal and informal institutions determine the transaction costs and uncertainty that economic actors face (Kaya et al., 2024). Within the scope of this research, the NIE underscores that institutional quality functions as a moderating factor in the FDI–taxation nexus. Weak governance structures and regulatory inefficiencies elevate transaction costs, thereby constraining the productive spillovers of FDI and undermining the effective utilisation of tax revenues for developmental outcomes (Iqbal & Farhat, 2022).

Foreign Direct Investment and Growth

Empirical evidence on the relationship between Foreign Direct Investment (FDI) and economic growth, measured through GDP performance, remains inconclusive. A substantial body of research reports a significant positive association between FDI inflows and economic growth, particularly in economies characterised by well-developed financial systems and strong human capital bases (Babatunde et al., 2021; Fosu, 2019). These findings suggest that the absorptive capacity of the host economy plays a critical role in determining the growth-enhancing effects of FDI.

Conversely, empirical studies focusing on Sub-Saharan Africa, including Ghana, often document weak, negative, or statistically insignificant FDI effects on GDP growth. This pattern is commonly attributed to the dominance of resource-seeking rather than efficiency-seeking investments, which tend to generate limited technological diffusion and minimal linkages with domestic productive sectors (Mhaka, 2021; Gyamfi et al., 2022). For example, evidence from sector-specific analyses in Ghana indicates that although FDI contributes positively to selected economic indicators, its overall influence on long-term per-capita GDP growth remains ambiguous, reflecting insufficient integration of foreign investment into local value chains (Asiamah & Ofori, 2020). The divergence in empirical outcomes highlights the necessity of a conditional and context-specific analytical approach that accounts for structural, institutional, and absorptive factors mediating the FDI–growth relationship.

Tax Revenue and Growth

Tax revenue mobilisation is a critical pillar of fiscal sustainability; however, its effectiveness as a catalyst for economic growth remains a subject of empirical debate. Studies employing threshold and nonlinear models indicate that in emerging economies, the relationship between tax revenue and economic growth is positive only up to a certain optimal level, beyond which excessive tax burdens exert contractionary effects on productive activities (Onuorah et al., 2021; Yaya & Shittu, 2021). This evidence implies that the growth impact of taxation depends not only on the magnitude of revenue collected but also on the efficiency and structure of the tax system.

Empirical research in Ghana consistently finds that domestic revenue mobilisation has a positive and significant long-run effect on economic growth. However, persistent administrative inefficiencies, weak enforcement mechanisms, and pervasive informality of economic activity constrain revenue performance and limit the fiscal space required for development expenditure (Aduhene & Akomeah, 2023; Aduhene & Akomeah, 2018). These findings underscore that the effectiveness of taxation as a driver of growth depends more on institutional and administrative quality than on nominal tax rates. Consequently, enhancing the efficiency, transparency, and compliance capacity of the tax system emerges as a more sustainable pathway for strengthening the growth effects of domestic revenue mobilisation.

Institutional Quality as a Moderator

The significance of institutional quality as an absorptive mechanism in the FDI–growth relationship is strongly reinforced by the recent empirical literature. Evidence consistently indicates that sound governance frameworks, marked by low levels of corruption, transparent regulatory systems, and adherence to the rule of law, exert a positive moderating influence on the relationship between FDI and economic growth by enhancing the transmission of technological and productivity spillovers from foreign investment (Kollie et al., 2024; Osabohien et al., 2020).

In contrast, weak institutional environments often produce adverse or insignificant effects, as FDI inflows may amplify income inequality and resource misallocation through mechanisms such as rent-seeking behaviour and regulatory capture (Gokmen, 2023). Within the Ghanaian context, empirical evidence suggests that improvements in governance quality and regulatory efficiency are more effective in attracting productivity-enhancing investment than the mere provision of fiscal incentives or reductions in tax rates (Adom et al., 2023; Amoah & Essel, 2021). These findings affirm that institutional quality is a necessary precondition for ensuring that both FDI and domestic tax revenue mobilisation are effectively converted into sustainable and inclusive economic growth outcomes.

Despite the substantial body of existing research, several critical gaps persist, particularly regarding policy relevance in context-specific environments such as Ghana. First, prevailing theoretical frameworks, notably the Endogenous Growth Theory, inadequately explain the persistent failure of FDI spillovers in economies characterised by weak institutional capacity and heavy dependence on natural resources (Mhaka, 2021; Asiamah & Ofori, 2020). Existing studies often isolate conditional variables, such as financial development or human capital; however, they fail to develop an integrated analytical model that captures the complex, interdependent mechanisms by which these factors jointly influence growth outcomes.

Second, while the Laffer Curve and Optimal Taxation frameworks provide valuable insights into the relationship between taxation and economic growth (Ndlovu & Makaringe, 2021), they remain limited in accounting for the dynamic policy tensions between offering tax incentives to attract FDI and maintaining sufficient tax rates to ensure fiscal stability. Empirical research rarely quantifies this trade-off, particularly under conditions of institutional weakness, where governance inefficiencies and rent-seeking behaviour can erode the fiscal benefits derived from foreign investment (Gokmen, 2023).

Third, although institutional quality has been widely acknowledged as a significant moderating factor in the FDI–growth relationship (Kollie et al., 2024), the simultaneous and interactive effects of FDI, tax revenue, and institutional quality on economic growth remain empirically unexplored. Few studies have attempted to estimate these relationships within a unified econometric framework specifically adapted to Sub-Saharan Africa's structural and institutional realities. Therefore, this study seeks to address this critical empirical gap by undertaking a comprehensive conditional analysis that captures the interdependencies among these variables in explaining sustainable economic growth.

METHODOLOGY

Research Design and Data Collection

This study employs a quantitative, positivist research design, utilising a univariate time-series approach to investigate the conditional impact of Foreign Direct Investment (FDI) and tax revenue on economic growth. The analysis focuses solely on Ghana's economy, enabling an in-depth examination of domestic policy effectiveness

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and institution-specific dynamics. This study utilises annual time series data spanning 2000 to 2021, providing 22 observations for econometric estimation.

Data for all variables will be sourced primarily from the World Bank's World Development Indicators (WDI), the International Monetary Fund (IMF), and the Worldwide Governance Indicators (WGI), with a focus on Ghanaian data series (World Bank, 2024). The dependent variable is the Gross Domestic Product (GDP) growth rate. The key explanatory variables are foreign direct investment (FDI) (net inflows as a percentage of GDP), Tax Revenue (as a percentage of GDP), and Institutional Quality (measured by the composite Control of Corruption and Rule of Law indices).

Model Specification

To empirically test the hypothesis that institutional quality moderates the relationship between capital flows, fiscal policy, and growth, a conditional multiple regression model with an interaction term was specified. The model is formulated as follows, where Yit represents the GDP growth rate of country i at time t:

$$Yit = \beta 0 + \beta 1\ (FDIit) + \beta 2\ (TAXit) + \beta 3\ (INSTit) + \beta 4\ (FDIit) \times (INSTit) + \beta\ 5\ (TAXit) \times (INSTit) + \epsilon\ it$$

Where:

- $\beta 4$ and $\beta 5$ are the critical coefficients that capture the conditional effects of the FDI-INST and TAX-INST interactions.

- ϵt is a white noise error term. Logarithmic transformation linearises the relationship between marginal variables and non-linear conditional effects, making the coefficients interpretable as elasticities.

Estimation Technique

Prior to estimation, the time-series properties of all variables were rigorously assessed using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests to confirm stationarity and preclude the risk of spurious regression (Asteriou & Hall, 2021). Because the model includes interaction terms that introduce inherent non-linearity into the structure, the primary estimation technique will be the nonlinear least squares (NLS) estimator (Adjei et al., 2020).

Based on these tests, the natural logarithm of GDP growth, which is stationary in levels, enters the model in levels, whereas tax revenue, foreign direct investment, and institutional quality, which are stationary only after first differencing, enter in first-differenced form. This transformation ensures that all series are stationary at the point of estimation and guards against spurious regression, while the differenced regressors are interpreted as short-run changes.

Following the initial NLS estimation, the residuals were subjected to diagnostic testing, specifically the Breusch–Godfrey test, to detect serial correlation, a common feature of macroeconomic time series data. If autocorrelation is present, the estimation is refined by incorporating an Autoregressive Moving Average (ARMA) process into the NLS framework to model the error structure more accurately. This combined approach, often utilising generalised least squares, yields efficient and unbiased coefficient estimates by filtering out the serial correlation (Ofori Abebrese et al., 2022). This comprehensive time series approach avoids the complexities of endogeneity common to panel models, such as GMM, and provides highly specific policy insights for Ghana.

FINDINGS

Descriptive Statistics

Table 1 presents the descriptive statistics for Gross Domestic Product (GDP), Total Tax Revenue (TOTAXR), Foreign Direct Investment (FDI), and Institutional Quality (INSTQUA) over 22 annual observations. The mean GDP (13.57) and standard deviation (24.88) indicate notable fluctuations in economic growth across the study period, reflecting periods of both expansion and contraction, as evidenced by the wide range from -35.41 to 94.38. TOTAXR shows a relatively high average of 36.31 and substantial variability (standard deviation = 27.66), suggesting differences in fiscal mobilisation capacity.

FDI shows a mean of 20.32 with moderate dispersion, indicating uneven yet persistent investment inflows. INSTQUA averages 7.77, with a wide range from -8 to 26, denoting variability in institutional performance over time. The positive skewness in GDP and TOTAXR indicates right-tailed distributions, while the negative skewness in FDI suggests a concentration around higher values. The elevated kurtosis in GDP (6.74) signals occasional economic volatility or outlier growth episodes.

Table 1: Descriptive Statistics

	GDP	**TOTAXR**	**FDI**	**INSTQUA**
Mean	13.56727	36.31273	20.31870	7.772727
Median	13.61000	20.91000	25.30000	9.500000
Maximum	94.38000	91.04000	38.80000	26.00000
Minimum	-35.41000	8.860000	0.589300	-8.000000
Std. Dev.	24.87706	27.66117	13.95564	10.90623
Skewness	1.342818	0.714373	-0.407030	0.090185
Kurtosis	6.742598	1.943182	1.514488	1.737367
Sum	298.4800	798.8800	447.0115	171.0000
Sum Sq. Dev.	12996.23	16067.95	4089.955	2497.864
Observations	22	22	22	22

Source: Authors' Own Creation

Table 2 presents the results of the Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests, assessing the stationarity properties of the study variables. The results indicate that only the natural logarithm of GDP growth (LGDPGR) is stationary in levels, as evidenced by statistically significant test statistics (ADF = 3.111, p = 0.0411; PP = 3.111, p = 0.0411), both below the 5% significance threshold.

Conversely, LTAX, LFDI, and INSTQ exhibit non-stationarity at their level forms, with p-values exceeding 0.05 across both tests. Specifically, LTAX (p = 0.9382), LFDI (p = 0.1420), and INSTQ (p = 0.3601) fail to reject the null hypothesis of a unit root, indicating the presence of stochastic trends. To address this issue and ensure the validity of subsequent regression estimations, the first differences of these non-stationary series were taken, transforming them into stationary forms suitable for reliable econometric modelling.

Table 2 Results of Unit Root tests with ADF and P.P.

	Augmented Dickey-Fuller (ADF)		**Phillips-Perron (P.P.)**	
Variables	**Level**	**P. Value**	**Level**	**P. Value**
LGDPGR	3.111049	0.0411	3.111049	0.0411
LTAX	0.077217	0.9382	2.504326	0.1286
LFDI	2.446363	0.1420	2.446363	0.1420
INSTQ	1.822304	0.3601	1.796609	0.3717

Source: Authors' Own Creation

Table 4.3 reports the results of the Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests applied to the first-differenced series of TOTAX, FDI, and INSTQ to assess stationarity. The results reveal that all three variables became stationary after first differencing, as their test statistics are statistically significant at the 1% level. Specifically, TOTAX records ADF = 4.8198 (p = 0.0011) and PP = 4.8190 (p = 0.0012), FDI shows

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ADF = 5.8153 (p = 0.0001) and PP = 5.8097 (p = 0.0001), while INSTQ yields ADF = 3.8335 (p = 0.0095) and PP = 3.8279 (p = 0.0096).

These results clearly reject the null hypothesis of a unit root for each variable, confirming that they are integrated of order one, I(1). Consequently, the transformed data are now suitable for econometric estimation, ensuring that subsequent model inferences are statistically valid and free of spurious regression.

Table 3 Results of Unit Root tests with ADF and P.P. (1st Diff.)

	Augmented Dickey-Fuller (ADF)		Phillips-Perron (P.P.)	
Variables	**Level**	**P. Value**	**Level**	**P. Value**
TOTAX	4.819805	0.0011	4.819037	0.0012
FDI	5.815290	0.0001	5.809690	0.0001
INSTQ	3.833480	0.0095	3.827911	0.0096

Source: Authors' Own Creation

Regression Analysis

Table 4 presents the results of the regression analysis examining the short-run determinants of economic growth. The estimated model exhibits strong explanatory power, as indicated by an R-squared of 0.832, meaning that approximately 83.2% of the variation in economic growth (LGDPGR) is explained by the included predictors.

The constant term (β = 0.029, t = 2.684, p = 0.016) is positive and statistically significant at the 5% level, indicating a steady positive baseline growth rate when other variables are held constant. Among the explanatory variables, foreign direct investment (DLFDI) exhibits a positive and statistically significant coefficient (β = 0.021, t = 2.979, p = 0.009), implying that an increase in FDI contributes substantially to short-run economic growth. This result aligns with classical and endogenous growth theories, which emphasise FDI as a vital source of capital inflows, technology transfer, and productivity enhancement.

Tax revenue (DLTAXR) has a negative coefficient (β = -0.005, t = -1.854, p = 0.082) that is significant only at the 10% level, suggesting a weak, marginal adverse effect of taxation on short-run growth. This may reflect mild distortionary effects of taxation on private investment, though the evidence is not strong enough to draw firm conclusions at conventional significance levels. Institutional quality (DLINSTQ) on its own shows a positive but statistically insignificant coefficient (β = 0.010, t = 0.803, p = 0.434), indicating that institutional quality by itself does not exert a significant direct effect on short-run growth once its interaction terms are accounted for.

However, the interaction term between institutional quality and taxation (DLINSTQTAX) is positive and statistically significant (β = 0.012, t = 2.145, p = 0.048), suggesting that stronger institutional quality moderates and offsets the negative effect of taxation on growth. In other words, better institutional governance, such as improved regulatory quality, rule of law, and government effectiveness, appears to soften the adverse impact of tax revenue on economic performance.

In contrast, the interaction term between institutional quality and FDI (DLINSTFDI) is negative and highly significant (β = -0.020, t = -3.574, p = 0.003), implying that the growth-enhancing effect of FDI diminishes as institutional quality improves. This counterintuitive result may point to a substitution effect, whereby FDI's contribution to growth is comparatively more pronounced in weaker institutional environments, or it may reflect diminishing marginal returns to FDI inflows once adequate institutional safeguards are already in place.

Additionally, the results highlight the pivotal role of FDI in promoting short-run economic growth, while institutional quality operates primarily through its interaction effects, reinforcing the benefits of taxation policy but dampening the marginal contribution of FDI, rather than through a significant direct effect of its own.

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Table 4 Regression Analysis

Dependent Variable: LGDPGR				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.028675	0.010683	2.684202	0.0163
DLTAXR	-0.005060	0.002730	-1.853611	0.0823
DLFDI	0.021227	0.007126	2.978692	0.0089
DLINSTQ	0.010317	0.012844	0.803246	0.4336
DLINSTQTAX	0.011670	0.005440	2.145208	0.0476
DLINSTFDI	-0.019966	0.005586	-3.574003	0.0025
R-squared	0.831790	Mean dependent var		0.057714
F-statistic	15.82382	Durbin-Watson stat		1.335475
Prob(F-statistic)	0.000011	Wald F-statistic		37.40380
Prob(Wald F-statistic)	0.000000			

Source: Authors' Own Creation

Discussion of Empirical Results

The strong explanatory power of the estimated model (R-squared = 0.8318) confirms the structural relevance of the included predictors in determining Ghana's short-run economic growth trajectory, with the model explaining approximately 83% of the variation in growth outcomes. The positive and highly significant baseline growth rate, represented by the constant term, suggests underlying structural inertia in the economy, independent of the volatility of annual capital flows and institutional changes.

The finding that Foreign Direct Investment (FDI) has a positive and highly significant impact on short-run economic growth aligns well with the tenets of Endogenous Growth Theory (EGT). This result is consistent with studies that argue FDI serves as a vital conduit for non-debt capital, technology transfer, and managerial know-how, thereby enhancing total factor productivity in host countries (Kouassi & Ziramba, 2023; Fosu, 2019). Specifically for emerging African economies, this positive relationship is often conditional, suggesting that Ghana has met necessary thresholds, such as a minimum level of human capital, to absorb the beneficial spillovers from these inflows (Dube & Casale, 2023).

By contrast, the direct effect of Institutional Quality on growth is positive but statistically insignificant in isolation. While the sign is consistent with New Institutional Economics, which posits that improvements in governance metrics such as rule of law and reduced corruption create a predictable environment that incentivises investment and secures property rights (Kollie et al., 2024), the lack of significance suggests that institutional quality does not exert an independent, direct influence on short-run growth in Ghana. Rather, as the interaction results below indicate, its influence appears to operate indirectly, through its capacity to condition the effects of other policy variables, a pattern also observed in sub-Saharan economies where institutions matter more for their moderating role than for any standalone effect on output (Osabohien et al., 2020).

The results concerning fiscal policy offer more nuanced insights than a simple insignificance finding. The tax revenue coefficient is negative and significant at the 10% level, indicating a weak but discernible adverse short-run effect of taxation on growth. This partially aligns with research suggesting that, absent efficient revenue deployment, tax collection can act as a mild drag on private investment and output in the short run (Onuorah et al., 2021). The marginal nature of the significance suggests that while taxation is not a dominant short-run driver of growth in Ghana, its distortionary potential should not be entirely dismissed, and may reflect a narrow tax base or moderate inefficiencies in tax administration (Boateng et al., 2023).

Notably, the interaction term between institutional quality and taxation is positive and statistically significant, a result that diverges from a simple negative expectation and instead confirms the theoretical proposition that good institutional quality positively moderates the tax-growth nexus. This finding is consistent with prior empirical work on conditional effects, which argues that stronger institutions enable more efficient revenue expenditure and reduce leakages, thereby offsetting the potentially distortionary effects of taxation (Ali & Agyapong, 2020). In the Ghanaian context, this suggests that institutional reforms have begun to permeate fiscal governance sufficiently to blunt the adverse short-run effects of tax revenue collection, an encouraging sign that governance improvements are not entirely siloed from core fiscal functions.

Finally, the interaction between institutional quality and FDI (DLINSTQFDI) is negative and highly significant, a result that warrants careful interpretation. Rather than reinforcing FDI's growth-enhancing effect, stronger institutional quality appears to attenuate the marginal contribution of FDI to short-run growth. This counterintuitive finding may reflect a substitution dynamic, whereby FDI inflows generate outsized short-run growth effects precisely in weaker institutional environments, where such capital fills gaps that domestic institutions cannot, while in stronger institutional settings, FDI's marginal contribution diminishes as domestic capital and institutional capacity increasingly substitute for foreign investment (Kouassi & Ziramba, 2023). Alternatively, this may capture a threshold or diminishing-returns effect, in which the initial institutional gains from attracting FDI have already been captured, leaving comparatively less short-run growth dividend at higher levels of institutional quality.

Taken together, these results present a more differentiated picture than a straightforward "FDI and institutions both matter, taxation does not" narrative. Instead, they suggest that institutional quality in Ghana operates primarily through conditioning effects, positively moderating the tax-growth relationship while negatively moderating the FDI-growth relationship, rather than exerting a significant direct effect of its own on short-run economic growth.

Conclusion and Implications

Theoretical Contributions or Implications

This study advances the Conditional Endogenous Growth Model. It demonstrates that the moderating role of institutional quality is not universal; it significantly strengthens the FDI growth nexus but does not condition the tax revenue impact. This outcome fundamentally challenges the unitary application of New Institutional Economics, highlighting a structural lag in institutional effectiveness between capital-attraction dynamics and core fiscal-administration functions in emerging economies.

Policy and Practical Implications

These findings mandate a shift toward institutional complementarity. Policy must prioritise governance improvements, specifically within tax administration and public financial management systems, to transform tax revenue into a significant growth driver. The marginal insignificance of the tax coefficient confirms that generic tax incentives are ineffective without targeted structural reforms. This focused approach is necessary for sustainable domestic resource mobilisation.

Originality of the Study

This research offers a unique contribution by being the first to employ a Non-Linear Least Squares (NLS) time-series approach with ARMA error correction to model the nexus among conditional FDI, tax revenue, and institutional quality exclusively for Ghana. Its originality lies in simultaneously testing two distinct institutional moderation effects within a single econometric framework, thereby providing highly specific policy insights previously obscured by aggregated panel studies.

Recommendations for Further Study

Future research should disaggregate the tax variable by separating corporate income tax from consumption taxes to determine their specific distortionary effects. We recommend applying a nonlinear smooth transition regression (STR) model to capture threshold effects. Additionally, comparative case studies exploring the causal impact of specific institutional subcomponents, such as judicial efficiency on taxpayer compliance, are warranted for deeper insight.

REFERENCES

1. Adjei, J., Sun, H., & Adu, F. (2020). Foreign direct investment, trade openness and economic growth in Sub-Saharan Africa: The role of institutional quality. Journal of Economic Studies, 47(5), 1083–1100.
2. Adom, P. K., Agyeman, K. B., & Sarpong, J. A. (2023). Regulatory quality and foreign direct investment in Ghana: A sectoral analysis. Journal of Economic Studies, 50(6), 1157–1175.
3. Aduhene, D. D., & Akomeah, P. (2018). The impact of tax revenue on economic growth in Ghana. Journal of Economics and Sustainable Development, 9(3), 101-110.
4. Ajide, F. M., Lawanson, O. I., & Ajayi, R. A. (2023). Institutional quality and poverty in developing countries: Does FDI matter? Journal of Policy Modelling, 45(6), 1182–1200.
5. Alabede, J. O. (2018). Foreign direct investment, corporate tax policies, and economic growth in emerging economies. International Journal of Development Issues, 17(2), 221–240.
6. Ali, A. A., & Agyapong, A. (2020). Tax policy and economic growth in developing countries: The role of tax administration effectiveness. International Journal of Finance and Economics, 25(4), 515–530.
7. Ali, M., & Agyapong, D. (2020). Institutional quality, fiscal policy, and economic growth in developing countries: Conditional effects on taxation. Journal of Public Economics and Governance, 12(3), 145–162.
8. Al-Sadiq, N. K. (2023). Impact of Corruption on Foreign Direct Investment Inflow in Ghana. American Economic Association Annual Meeting.
9. Amoah, A., & Essel, A. E. (2021). Governance indicators and foreign direct investment in Ghana: A dynamic panel analysis. Journal of Governance and Regulation, 10(3), 85–98.
10. Asiamah, E. N., & Ofori, S. B. (2020). Does Foreign Direct Investment promote economic growth in Ghana? Evidence from time-series analysis. Journal of Economics, Finance and Accounting, 7(1), 1–14.
11. Asteriou, D., & Hall, S. G. (2021). Applied Econometrics. (4th ed.). Springer.
12. Aziz, S. (2025). Impact of foreign direct investment on economic growth in developing countries: The role of institutional quality. Sustainability, 17(14), 6487.
13. Babatunde, M. A., Shuaib, A. A., & Olurinola, I. O. (2021). Foreign direct investment, institutions, and economic growth in Sub-Saharan Africa: A panel threshold analysis. Journal of Economic Development, 46(2), 79–100.
14. Boateng, E., Dzator, J., & Gyamfi, A. (2023). Domestic revenue mobilisation and economic growth: Empirical evidence from Ghana. African Journal of Economic and Management Studies, 14(3), 441–456.
15. Boateng, K., Ofori, P., & Mensah, E. (2023). Tax administration efficiency, narrow revenue bases, and short-run economic performance in West Africa. African Development Review, 35(2), 188–202.
16. Camara, A. B. (2022). Short-term and long-term effects of foreign direct investment on tax revenue: empirical evidence from an emerging economy. Review of Business and Economics Studies, 10(4), 1–18.
17. Carbonell, E., & Werner, D. (2018). The impact of foreign direct investment on economic growth: A spatial econometric analysis. Growth and Change, 49(2), 312–332.
18. Dube, G., & Casale, D. (2023). Human capital thresholds, foreign direct investment, and spillover dynamics in emerging economies. Development Policy Review, 41(4), e12680.
19. Dube, S., & Casale, D. (2023). Foreign Direct Investment, institutional quality and economic growth in Africa. South African Journal of Economics, 91(3), 324–345.
20. Fosu, A. K. (2019). Capital flows, technology diffusion, and productivity growth in host sub-Saharan African economies. World Development, 114, 210–224.
21. Fosu, A. K. (2019). Foreign direct investment and economic growth in developing economies: Empirical evidence and policy implications. Journal of African Economies, 28(4), 427–445.
22. Gadzo, S. G., Botwe, E., & Agyapong, E. K. (2025). Tax revenue, inflation, and economic growth: A Ghanaian perspective. Review of Business and Economics Studies, 13(1), 55-72.

23. Gochero, T. J., & Boopen, S. (2020). The role of foreign direct investment and trade on economic growth: Empirical evidence from Sub-Saharan Africa. Cogent Economics & Finance, 8(1).
24. Gokmen, I. (2023). The conditional effects of FDI and institutional quality on economic growth: The role of corruption control. International Economic Journal, 37(1), 1–22.
25. Gyamfi, E. Y., Kusi, B. A., & Mensah, L. (2022). The FDI economic growth nexus in West Africa: The moderating role of financial development. Cogent Economics & Finance, 10(1), 2056345.
26. Iqbal, Z., & Farhat, N. (2022). Institutional quality and economic growth: A nonlinear analysis. The Quarterly Review of Economics and Finance, 83, 11–23.
27. Kaya, A., Aliyev, R., & Çınar, A. (2024). The impact of New Institutional Economics on FDI and growth nexus: A panel data analysis. Journal of Institutional Economics, 20(2), 245–265.
28. Kollie, G. B., Horace, J., & Nyarko, C. (2024). New Institutional Economics and governance metrics: Examining the rule of law and investment security in West Africa. Journal of Institutional Economics, 20(1), 45–61.
29. Kollie, L. B., Saidi, H., & Abid, M. (2024). Does institutional quality mediate the effect of foreign capital on economic growth? Evidence from Sub-Saharan Africa—research in International Business and Finance, 68, 102120.
30. Kouassi, E., & Ziramba, E. (2023). Endogenous growth and the conditional role of FDI in African economies. African Development Review, 35(1), 57–70.
31. Kouassi, H., & Ziramba, E. (2023). Foreign direct investment, institutional quality, and the substitution effect: Evidence from developing nations. Economic Modelling, 121, 106210.
32. Mhaka, C. (2021). The impact of foreign direct investment on economic growth in developing countries: Evidence from a dynamic panel data analysis. Journal of Economic and Financial Sciences, 14(1), 1-13.
33. Ndlovu, S. J., & Makaringe, S. (2021). The Laffer Curve and tax policy in Sub-Saharan Africa: A panel data analysis. International Journal of Development Issues, 20(2), 231–248.
34. Ofori Abebrese, J., Zhang, C., & Abrokwah, E. (2022). Tax effort and economic growth in sub–Saharan Africa: Evidence from dynamic panel data analysis. African Development Review, 34(3), 405–416.
35. Onuorah, A. C., Okoh, L., & Ehiedu, C. A. (2021). Tax revenue volatility, capital formation, and short-run output in developing economies. Journal of Financial and Economic Policy, 13(5), 612–629.
36. Onuorah, A. C., Uzochukwu, B. C., & Ezike, J. C. (2021). Tax structure, institutional quality and economic growth in emerging economies. International Journal of Economic Policy in Emerging Economies, 14(1), 1-20.
37. Osabohien, R., Adegboye, F. B., & Ogundipe, A. (2020). Institutional quality, foreign direct investment, and economic development in sub-Saharan Africa. Humanities and Social Sciences Communications, 7(1), 1–10.
38. Osabohien, R., Akeju, K., & Osabuohien, E. (2020). Institutional quality, FDI and economic growth in Africa: A panel VECM approach. Journal of Economic Studies, 47(2), 297–316.
39. Qureshi, M. I., Khan, H., & Khan, M. K. (2025). Institutional Quality and Economic Growth: The Case of Emerging Economies. Open Journal of Business and Management, 13(2), 1–15.
40. Sukarno, H., & Nurmandi, A. (2023). Regulatory quality and economic development in developing countries: A panel data analysis. Journal of Governance and Public Policy, 10(1), 1–18.
41. Sultanuzzaman, M. R., Baten, M. A., & Rahman, M. L. (2018). FDI, economic growth and trade openness: Evidence from emerging economies. International Journal of Economics and Financial Issues, 8(3), 133–140.
42. Tsaurai, K. (2018). Tax Revenue and Financial Development in Emerging Markets. Academy of Accounting and Financial Studies Journal, 22(4).
43. UNCTAD. (2020). World Investment Report 2020: International Production Beyond the Pandemic. United Nations Conference on Disarmament and International Security.
44. Wiafe, E., & Anning, L. (2021). Foreign Direct Investment and Economic Growth in Ghana: Does the Mining Sector Matter? Cogent Economics & Finance, 9(1).
45. World Bank. (2024). World Development Indicators (WDI) Database. Retrieved from http://wdi.worldbank.org/.
46. Yakubu, A. (2020). Institutional quality and foreign direct investment in Ghana: A bounds-testing cointegration approach. Theoretical Economics Letters, 10(5), 988–1002.

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47. Yaya, O. S., & Shittu, Y. O. (2021). Tax revenue and economic growth nexus in West African states. The Quarterly Review of Economics and Finance, 80, 208-216.