MODERATING EFFECT OF INSTITUTIONAL QUALITY ON THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT, TRADE OPENNESS, ECONOMIC GROWTH AND DEVELOPMENT IN WEST AFRICA

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Abstract

This study examined the moderating effect of institutional quality in the relationship among FDI, trade openness, economic growth, and economic development in West Africa. Using an ex post facto research design, the study employed a convenience sampling technique to select 14 out of 15 countries in the region, based on data availability. The study was theoretically anchored on the endogenous growth theory, as well as the FDI-led and trade-led growth hypotheses, which guided both variable selection and model specification. Data were sourced from the World Bank's World Development Indicators (WDI), the Central Bank of Nigeria (CBN) and the United Nations Conference on Trade and Development (UNCTAD) databases. For model estimation, the study utilized the panel Feasible Generalized Least Squares (FGLS) technique, which is robust to cross-sectional dependence, heteroskedasticity, and serial correlation. The results reveal that increases in both FDI and trade openness significantly stimulate economic growth in West African countries, with higher institutional quality amplifying these effects. Similarly, both FDI and trade openness were found to positively influence economic development, and sound institutional quality enhances these developmental impacts. The study further established that institutional quality exerts a direct and positive effect on both economic growth and economic development in the sampled countries. In light of these findings, the study recommends that West African countries sustain and, where necessary, deepen trade and capital account liberalization policies to facilitate greater trade and FDI flows. Also, the policymakers in the region should prioritize comprehensive institutional reforms.

Keywords: *Institutional Quality, Foreign Direct Investment, Trade Openness, Economic Growth, Development*

Introduction

Promoting economic growth and development is one of the key mandates of policymakers in virtually all economies of the world in consideration of the need to improve the living standard of their populace, reduce unemployment, increase foreign exchange earnings and public revenues among other numerous benefits.

However, achieving this goal requires improvement in technology, skills, managerial expertise and significant domestic investment which are grossly inadequate in many underdeveloped and developing countries (Makiela & Ouattara, 2018; Mien, 2023). As a result, these categories of nations often need substantial foreign capital inflows as well as cross-border transfers of technology and skills to enhance the level of investment and growth of their economies which are largely provided by the emerging economies with surplus capital, particularly those in the Western world (Eniekezimene *et al.*, 2024).

Foreign Direct Investment (FDI) flows as one of the strategies through which developing nations enhance their growth potentials is defined as a package of capital, technology, management, and entrepreneurship, which allows a firm to operate and provide goods and services in a foreign market. The investment entails acquiring a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. FDI represents the aggregate flow of capital into a country, including equity investments, reinvested profits, and other short- and long-term capital movements (World Bank, 2024).

The West African countries had over the last three decades seen a significant rise in the quantum of FDI inflows and trade volume. According to the United Nations Conference on Trade and Development (UNCTAD, 2023), FDI flows to the West African region rose by 734.43 per cent from $1,553.428 (about 0.758185 per cent of the global FDI inflows) in 1990 to $12,962.231 (nearly a 1.89392 per cent of the global FDI inflows) in 2023 while the value of total trade in merchandise in the region increased by 625.33 per cent from $36,475.512 in 1990 to $264,567.012 in 2023. This expansion in FDI and trade flow may be linked to the increased implementation of trade and financial liberalization policies and reforms by the individual countries in the region. The growth in the trade and FDI flow to the region is expected to have helped in stimulating and stabilizing the region's growth and development indicators through increased capital formation, technology transfer and improved employment opportunities.

However, the region's growth has been low and unstable over the last two decades. This is evidenced by the reduction in the annual average growth rate of the region from 5.8403 per cent to about 2.08895 per cent over the period covering 2005 to 2010 and the period 2015 through 2020, respectively before rebounding to 3.74338 per cent for the period 2020 through 2023 (UNCTAD, 2023). With regards to development indicators, about 32.47 per cent of the people in the West African region are living below the poverty threshold of less than $2.15 a day and analysis of the region's progress towards achieving the goal of extreme poverty eradication reveals that no country in the region is on track to achieve the target by 2030 (ECA, 2023; World Bank, 2023). Furthermore, the Human Development Index (HDI) values in the region range from 0.4 to 0.662, making it one of the lowest in the world compared with the global HDI average of 0.732 (Adamu & Obumneke Ezie, 2025). This calls for examining the possible factors that have generated this economic instability in the region in the face of rising trade and FDI flows including the region's weak institutional quality.

Sound institutional quality is a prerequisite condition for achieving sustainable economic growth because it encourages investment and consumption, increases productivity, allocates resources more effectively, protects property rights, and promotes freedom of choice while bad institutions are

associated with poor human capital, inefficient financial markets, poor infrastructure, inefficient resource allocation, corruption and poor management of public institutions all of which can retard the growth of an economy (Nguyen *et al.*, 2018; Mkhize, 2021). Furthermore, weak institutions can hinder economic growth by driving up investment and business costs due to rent-seeking activities, while also exacerbating social insecurity, heightening political risks, and undermining property rights enforcement (Mkhize, 2021). There is evidence in the literature which suggests that sound institutions stimulate economic growth (Duwal *et al.*, 2024; Mehmood *et al.*, 2023).

Moreover, it is also argued that institutional quality impacts economic growth and development indirectly through FDI flows (Nguyen *et al.*, 2018). High-quality institutions can enhance the economic growth impact of foreign direct investment by more effectively promoting the processes of technology transfer and knowledge spillover (Guenichi & Omri, 2024; Anh & Khanh Linh, 2021; Hayat, 2019). Similarly, better institutional quality tends to enhance trade benefits like economies of scale and specialization, which has been shown to strengthen the economic growth and development effect of trade openness (Boubechtoula *et al.*, 2024; Ayub *et al.*, 2023; Atiq-ur-Rehman *et al.*, 2021). Nonetheless, the literature offers no insights on how institutional quality moderates the effect of FDI and trade on economic growth and development in the West African countries which are gradually becoming more open to trade and FDI inflows but largely scored badly in terms of sound quality indicators.

It is against the backdrop that the study sought to examine the moderating effect of institutional quality on the relationship among foreign direct investment, trade openness, economic growth and development in West Africa.

Review of Empirical Literature

Foreign Direct Investment and Economic Growth

Le *et al.* (2024) compiled an unbalanced panel dataset consisting of 90 middle-income economies covering the period 1990 through 2020 to investigate the dynamic relationship between FDI, total factor productivity, and economic growth using the system Generalized Method of Moments (GMM) estimator to address potential endogeneity and unobserved heterogeneity. The study provides empirical evidence suggesting that FDI inflows exert a positive and statistically significant impact on economic growth across the sampled countries. In light of these findings, the study recommended the development of reliable and efficient infrastructure as well as the establishment or institutional strengthening of investment promotion agencies, which are critical to enhancing the investment climate and attracting sustainable FDI inflows.

Drawing on country-specific empirical evidence, Mose and Kipchirchir (2024) investigated the impact of FDI on economic growth in Kenya by employing the Autoregressive Distributed Lag (ARDL) bounds testing approach and Granger causality tests. The empirical results reveal that FDI inflows exert a positive and statistically significant effect on economic growth in the long run, suggesting that sustained increases in foreign investment contribute to economic growth in Kenya. In light of these findings, the study recommended the formulation and implementation of comprehensive FDI attraction strategies, including macroeconomic stabilization policies, the

enhancement of an investor-friendly regulatory and institutional framework, and the reformation of bureaucratic procedures.

Utouh *et al.* (2024) assessed the impact of FDI on economic growth in Tanzania over the period 1988 through 2021 using the Vector Autoregressive (VAR) model and pairwise Granger causality tests. The VAR estimation results revealed that FDI exerts no statistically significant impact on economic growth in Tanzania. Similarly, the pairwise Granger causality reveals no directional causality between FDI and economic growth, suggesting that FDI is a key driver of growth in the country. Based on these outcomes, the study underscores the need for Tanzania to enhance its investment climate by addressing structural bottlenecks, improving regulatory efficiency, and strengthening institutional frameworks to better leverage FDI as a catalyst for long-term economic transformation.

Trade Openness and Economic Growth

The empirical evidence on the relationship between trade openness and economic growth remains mixed. Nguyen *et al.* (2023) employed the panel ARDL approach to examine the relationship between trade openness and three dimensions of macroeconomic stability, growth stability, inflation stability, and exchange rate stability in 20 Asian countries from 2011 to 2019. Economic stability was measured using the standard deviation of the annual GDP growth rate. The key findings revealed that trade openness is negatively associated with growth stability in the sampled countries. Consequently, the study recommended that Asian countries should accelerate the process of trade liberalization in order to foster long-run economic growth and strengthen exchange rate stability.

In contrast, Ijirshar (2019) suggested that, in the long run, trade openness accelerates growth, whereas in the short run, its impact is mixed. The study examined the impact of trade openness on economic growth among ECOWAS countries using annual data from 1975 to 2017 and applied the Pooled Mean Group (PMG) and Mean Group (MG) estimators. Economic growth was proxied by GDP per capita, while labour force, gross fixed capital formation, FDI, government expenditure, and exchange rate were included as control variables. Based on the evidence, the study recommended that ECOWAS member states should strengthen cooperation among economic agents, for instance through export consortia, to enhance the access of small and medium-sized enterprises to international markets.

Similarly, Wani *et al.* (2023) investigated how institutional quality influences economic growth and trade openness in India using the ARDL model. Real GDP was used as a proxy for economic growth, while institutional quality, human capital, and physical capital served as control variables. The study found evidence of a long-run relationship among the variables and concluded that total trade exerts a negative effect on economic growth, whereas exports have a positive impact. Accordingly, the study recommended improving the quality of institutions in India in order to maximize the growth benefits of trade openness.

Institutional Quality and Economic Growth

Gebrue (2025) conducted an empirical analysis to examine the impact of institutional quality on economic growth in upper-middle-income African countries over the period 2002-2021. To account for country-specific heterogeneity, the study employed both random and fixed effect models, estimated using generalized least squares (GLS). The empirical findings provide robust evidence that institutional quality is a significant determinant of economic growth in these countries. Specifically, the study found that four key dimensions of institutional quality, namely, political stability, voice and accountability, control of corruption, and absence of violence, had a statistically significant positive impact on economic growth. Accordingly, the study suggested that improving institutional quality is crucial for promoting economic growth in upper-middle-income African countries.

More so, for country-specific studies, Abdulrahman (2025) examined the relationship between institutional quality indicators and economic growth in Iraq over the period 2004 to 2019 using semi-annual data. The study employed the VECM to capture both the short-run dynamics and long-run equilibrium relationships among the variables. The findings of the study revealed that institutional factors, particularly regulatory quality, rule of law, cost of business start-up procedures, cost of property registration, and the overall score for starting a business, exert a statistically significant and positive long-run impact on economic growth, hence suggesting the importance of an enabling institutional environment in fostering sustainable economic performance. Moreover, the error correction term indicated a sluggish speed of adjustment toward long-run equilibrium, suggesting that the Iraqi economy demonstrates a relatively slow response in correcting disequilibria following external or internal shocks.

Baruwa (2025) explored the relationship between institutional quality and inclusive growth in Nigeria over the period 1984 to 2020 by employing the VECM estimator. The study's findings revealed a nuanced relationship between institutional quality and inclusive growth, with short-run effects differing from long-run effects. In the short run, institutional quality was found to have a negative and significant impact on income growth and inclusive growth. In contrast, the long-run analysis indicated that institutional quality had a positive and significant effect on income growth, income equality, and inclusive growth. These findings suggest that institutional quality has a negative impact on inclusive growth in the short run but contributes positively to growth inclusiveness in the long run. The study highlights the importance of policy reforms aimed at enhancing public service quality and institutional effectiveness to promote inclusive growth in Nigeria.

Institutional Quality, Foreign Direct Investment and Economic Growth

Guenichi and Omri (2024) employed the Panel Smooth Threshold Regression (PSTR) model to investigate the presence of threshold effects within the tripartite nexus among FDI, institutional quality, and economic growth using a panel dataset comprising 160 countries over the period 2002 to 2021. The findings of the study demonstrated that institutional quality plays a pivotal moderating role in enhancing the growth-inducing impact of FDI. Specifically, the analysis indicated poor

institutional quality was found to exacerbate investor uncertainty and elevate transaction and operational costs, thereby impeding the FDI-driven growth.

Similarly, Anh and Khanh Linh (2021) investigated the moderating role of institutional quality in the relationship between FDI and economic growth by utilizing secondary panel data from 10 Asian countries over the period 2011 to 2018. The findings of the study affirmed that higher institutional quality significantly enhances the growth-inducing effects of FDI, implying that robust institutional frameworks characterized by transparency, regulatory efficiency, political stability, and effective governance serve to reinforce the developmental impact of foreign capital inflows. In light of these findings, the study emphasized the need for ASEAN member states to prioritize institutional reforms and capacity-building initiatives as complementary strategies to FDI attraction in order to achieve inclusive and sustained economic growth.

Hayat (2019) employed the GMM estimation model to evaluate the direct impact of institutional quality on economic growth and the indirect impact of institutional quality on economic growth by enhancing FDI-induced economic growth using a panel dataset of 104 countries. The findings of the study suggested that middle-income countries experienced FDI-led growth and that better institutional quality was also found to be stimulating FDI-led economic growth. Among the recommendations offered by the study is that developing countries with low per capita GDP and low levels of institutions should strive to improve the quality of their institutions to achieve faster economic growth and prosperity.

Institutional Quality, Trade Openness and Economic Growth

Boubechtoula *et al.* (2024) examined both the direct effects of trade openness and institutional quality, as well as the moderating role of institutional quality in the trade openness–economic growth nexus of the Arab Maghreb Union (AMU) countries from 1996 to 2022, employing fixed-effect and random-effect models. The findings of the empirical analysis indicated that trade openness enhances the economic growth of AMU countries, whereas the direct impact of institutional quality on economic growth is insignificant. Moreover, the study revealed that the effect of trade openness is positively and significantly associated with growth across all levels of institutional quality, suggesting the importance of institutional quality in shaping the trade openness–growth nexus in the AMU. Based on these findings, the study recommended that trade policies should be adjusted to further stimulate economic growth, create employment opportunities, foster innovation, and ensure the optimal allocation of resources in the region.

In a related study, Abdullahi *et al.* (2024) investigated the relationship between trade openness, institutional quality, and economic growth in Nigeria using the ARDL estimation technique. The findings revealed that while trade openness stimulates economic growth in the short run, it hampers growth in the long run. Accordingly, the study recommended strengthening governance to balance the short-term benefits of trade with long-term sustainable growth, and emphasized the need for policy reforms to address institutional weaknesses.

Adetokunbo and Yusuf (2024) analyzed the role of institutions in shaping the effects of economic openness, both trade and financial, on economic growth in Nigeria by employing the VECM and

causality tests. The results of the empirical analysis indicated that economic openness has an insignificant positive impact on economic growth. The study therefore recommended the implementation of policies aimed at improving the flow of goods and services, with particular emphasis on reducing imports and promoting exports, alongside the development of stronger, higher-quality institutions capable of formulating and implementing trade and financial liberalization policies that can significantly enhance economic growth.

Foreign Direct Investment and Economic Development

Hakhlo and Nilufar's (2025) study explored the short-term and long-term relationships between various factors influencing the economic development of the Republic of Uzbekistan, with a particular focus on the impact of foreign direct investment. The study employed Ordinary Least Squares (OLS) and Vector Autoregression (VAR) models to analyse time series data spanning from 2004 to 2023, capturing the country's economic potential and traditional economy. The findings suggest that targeted policy measures, such as tax incentives and infrastructure development, can enhance Uzbekistan's investment climate, attract increased FDI inflows, and foster sustainable economic growth. The study recommended that the Republic of Uzbekistan should create a favourable business environment and stimulate economic growth.

Chizema (2025) studied the impact of inward foreign direct investment (FDI) on economic growth in South and Southeast Asia over the period 2006-2022. Utilising a comprehensive panel dataset and multiple econometric techniques, the study employed Feasible Generalized Least Squares (FGLS) as the baseline estimation method, supplemented by robustness checks using Fixed Effects with Driscoll-Kraay standard errors, the Common Correlated Effects Mean Group (CCEMG) estimator, and Two-Stage Least Squares (2SLS). The empirical findings consistently revealed that FDI and Gross Capital Formation (GCF) significantly promoted economic growth, whereas the Human Capital Index (HCI), Trade Openness (TO), and Inflation (I) had limited or adverse effects. Notably, government spending (GS) was found to be negatively associated with growth, suggesting inefficiencies in public resource allocation. Based on the empirical evidence, the study recommends several policy interventions, including the adoption of performance-based budgeting and independent audits, expansion of public-private partnerships in technical and vocational education, and development of digital investment platforms to reduce trade costs and improve the investment climate.

Adamu and Obumneke Ezie (2025) examined the heterogeneous FDI on human development across West African countries using panel data spanning from 2010 to 2022. The study employed Panel Quantile Regression methodology to account for distributional variations and unobserved heterogeneity across different levels of human development, as measured by the Human Development Index (HDI). The empirical findings revealed a differential impact of FDI on human development: specifically, FDI exerts a negative effect in countries with low HDI, whereas it contributes positively to human development in countries with relatively high HDI. In light of these findings, the study recommended that West African countries should prioritize addressing structural constraints such as insecurity, macroeconomic instability, and weak institutional frameworks. Enhancing these foundational elements is deemed essential not only to attract higher-quality FDI

but also to ensure that such investments translate into tangible improvements in human development outcomes.

Institutional Quality and Economic Development

Kunawotor *et al.* (2025) explored the relationships between government size, institutional quality, and economic welfare in Africa, utilising a comprehensive panel dataset of 52 African economies spanning from 2000 to 2018. Employing the System Generalized Method of Moments (GMM) estimation strategy, the study provided robust insights into the linkages between these variables. The empirical findings revealed that government size has a negative impact on economic welfare, suggesting that larger governments may be associated with inefficiencies and bureaucratic red tape that can hinder economic development. In contrast, institutional quality was found to have a positive impact on economic welfare, highlighting the importance of strong institutions in promoting economic growth and development. By highlighting the importance of institutional quality, the study emphasizes the need for African governments to focus on building strong institutions that can support economic development and improve the well-being of their citizens.

Uddin *et al.* (2023) examined the impact of institutional quality on economic development across 70 developing countries over the period 2002 to 2018. The study employed the Fully Modified Ordinary Least Squares (FMOLS), Dynamic Ordinary Least Squares (DOLS), Augmented Mean Group (AMG) estimators, Impulse Response Function (IRF), and Variance Decomposition Analysis, in order to capture both the long-run relationships and the dynamic interactions among the variables. The outcome of the empirical investigation revealed that institutional quality, encompassing factors such as governance effectiveness, rule of law, regulatory quality, and control of corruption, along with globalization, exerts a statistically significant and positive influence on economic development. In light of these findings, the study recommended that policymakers in developing economies should prioritize institutional reform.

Adefeso and Aransi (2022) investigated the short and long run links between institutional quality and development in 51 African countries panel from 1972 to 2020 using the ARDL model. The study employed principal component analysis to generate data for political institution, economic institution and legal institution as well as total/overall institution. The study found an insignificant positive relationship between all institutional indices and GDP per capita in the short run, with the exception of economic institution, which has a negative impact. In line with the findings, the study recommended that African leaders should improve and ensure strong institutions for development.

Institutional Quality, Foreign Direct Investment and Economic Development

Thi Cam Ha *et al.* (2024) used the Generalized Method of Moments estimator to study the relationship between foreign direct investment, institutional quality and human development in host countries from 2002 to 2019 by utilising a panel dataset of 143 countries, including both developed and developing economies. The study documented a significant positive relationship between FDI and human development, with a stronger effect observed in developing countries compared to developed countries. The study concluded that improving governance quality can enhance the positive impact of FDI on human development in host countries, especially in developing countries.

Dang *et al.* (2023) examined the role of institutional quality on the impact of foreign direct investment on economic development in 63 provinces/cities in Vietnam, covering the period 2005 to 2022 by employing the Pooled OLS, Fixed Effect Model, Random Effect Model, Generalized Method of Moments, and Panel VAR. The study found that foreign direct investment and institutional quality have a positive impact on economic development, suggesting that institutional quality is an important factor in attracting FDI, determining both the quality and quantity of inflows from other countries into Vietnam. The study hence recommends that provinces and cities in the country need to take measures to promote private investment, strengthen technological capacity, and improve the quality of local institutions.

Theoretical Framework

Endogenous Growth Theory

Endogenous growth theory was pioneered by Romer (1986) and Lucas (1988)**,** who challenged the neoclassical view that long-run economic growth is driven by exogenous technological progress. In contrast to the neoclassical growth theory, endogenous growth theory explains sustained economic growth as arising from factors generated within the economy. It emphasizes the central role of human capital accumulation, innovation, and knowledge in enhancing output per capita, with these factors producing positive spillover effects that promote long-run growth (Lucas, 1988).

The earliest formalization of the theory is the AK model developed by Romer (1986), which addressed key weaknesses of neoclassical models by allowing for increasing returns, although it did not clearly distinguish between physical and human capital. Subsequent developments in endogenous growth theory improved on this framework by explicitly differentiating human capital from physical capital and by incorporating policy-related factors such as education, research and development (R&D), and institutional quality. The theory was further extended by Romer (1990) through R&D-driven models of technological change, by Aghion and Howitt (1992) with the Schumpeterian model of creative destruction, and by Grossman and Helpman (1991), who highlighted the links between innovation, trade, and long-run economic growth.

FDI-led-Growth Hypothesis

The FDI-led growth hypothesis, pioneered by Hymer (1960) and later formalized by Dunning (1977, 1981)**,** provides the theoretical foundation for understanding the role of multinational enterprises and foreign direct investment in economic growth. The hypothesis posits that FDI acts as a catalyst for growth by supplementing domestic capital, facilitating the transfer of advanced technology and managerial skills, creating employment, and improving access to international markets. Through spillover effects such as technology diffusion, human capital development, and increased competition, FDI enhances productivity and efficiency in host economies.

The theoretical underpinnings of the hypothesis are rooted in both neoclassical and endogenous growth theories**.** From the neoclassical perspective, FDI is viewed as an exogenous source of capital that augments domestic investment and expands the stock of physical capital, thereby raising productive capacity and fostering economic growth.

Methodology

This study adopted an ex post facto research design to examine the causal relationships among foreign direct investment, trade openness, institutional quality, economic growth and development, as framed within the context of endogenous growth theory. The chosen design facilitates an understanding of the extent to which the independent and moderating variables influence the dependent variables. All relevant data were sourced from secondary databases and analyzed using appropriate econometric techniques. To ensure the robustness of the analysis, the study conducted several preliminary diagnostic tests, including cross-sectional dependence, unit root, multicollinearity, serial correlation, and heteroskedasticity tests to assess the statistical properties of the dataset. Based on the outcomes of these diagnostics, the estimation method best suited to handle the characteristics of the data was selected to ensure reliable results. Finally, the estimation results were evaluated using both theoretical and statistical criteria.

The study focused on West African countries. The analysis spans 28 years, from 1996 to 2023. The choice of the period is informed by data availability, as institutional quality indicators are not available prior to 1996. Also, the selected period coincides with major institutional, economic, and trade reforms in West African countries, alongside deeper integration into the global economy. Also, the study employed a non-probability sampling approach, specifically the convenience sampling technique, to select 14 out of the 15 countries within the West African region based on data availability. Liberia was excluded from the analysis due to the unavailability of data for some of the variables required for the study. The data were sourced entirely from secondary sources, specifically the World Bank's World Development Indicators (WDI) and World Governance Indicators (WGI) databases, as well as the United Nations Conference on Trade and Development (UNCTAD).

Economic growth and economic development serve as the dependent variables, traditionally proxied by real GDP and GDP per capita, respectively. The primary explanatory variables are FDI and trade openness, while institutional quality is introduced as a moderating variable. To control for potential model specification errors, additional control variables, namely domestic private investment, government spending, inflation, and labour force, are included. A summary and brief description of all variables used in the analysis are presented in Table 3.2 below.

Models Specification

Model I: Moderating Effect of Institutional Quality on the Relationship between Foreign Direct Investment and Economic Growth

$$\mathrm{RGDP}_{i,t} = \beta_0 + \beta_1 \mathrm{FDI}_{i,t} + \beta_2 \mathrm{LF}_{i,t} + \beta_3 \mathrm{DI}_{i,t} + \beta_4 \mathrm{GS}_{i,t} + \beta_5 \mathrm{INF}_{i,t} + \beta_6 \mathrm{INSQ}_{i,t} + \beta_7 \mathrm{FDIIQ}_{i,t} + \mathrm{V}_{i,t} \quad --- \quad (3.3)$$

Where: RGDP= real GDP,

FDI= foreign direct investment inflow,

LF= labour force,

DI= domestic investment,

GS= government spending,

INFL= inflation rate,

INSQ= institutional quality,

FDIIQ= moderator coefficient with respect to FDI,

V= error term.

A priori, all the explanatory variables are expected to positively impact economic growth except the inflation rate.

Model II: Moderating Effect of Institutional Quality on the Relationship between Trade Openness and Economic Growth

$$\mathrm{RGDP}_{i,t} = \beta_0 + \beta_1 \mathrm{TR}_{i,t} + \beta_2 \mathrm{LF}_{i,t} + \beta_3 \mathrm{DI}_{i,t} + \beta_4 \mathrm{GS}_{i,t} + \beta_5 \mathrm{INF}_{i,t} + \beta_6 \mathrm{INSQ}_{i,t} + \beta_7 \mathrm{TRIQ}_{i,t} + \mathrm{V}_{i,t} \quad --(3.5)$$

Where:

RGDP= real GDP,

TR= trade openness,

LF= labour force,

DI= domestic investment,

GS= government spending,

INFL= inflation rate,

INSQ= institutional quality,

TRIQ= moderator coefficient with respect to trade openness,

V= error term.

Model III: Moderating Effect of Institutional Quality on the Relationship between Foreign Direct Investment and Economic Development

$$\mathrm{GDPP}_{i,t} = \beta_0 + \beta_1 \mathrm{FDI}_{i,t} + \beta_2 \mathrm{DI}_{i,t} + \beta_3 \mathrm{GS}_{i,t} + \beta_4 \mathrm{INSTQ}_{i,t} + \beta_5 \mathrm{FDIIQ}_{i,t} + \mathrm{V}_{i,t} --- (3.8)$$

Where:

GDPP= GDP per capita, proxy for economic development,

FDI= foreign direct investment,

DI=domestic investment,

GS= government spending,

INSTQ= institutional quality,

FDIIQ= moderator term and V is the residual term.

Model IV: Moderating Effect of Institutional Quality on the Relationship between Trade Openness and Economic Development

$$GDPP_{i,t} = \beta_0 + \beta_1 TR_{i,t} + \beta_2 DI_{i,t} + \beta_3 GS_{i,t} + \beta_4 INSTQ_{i,t} + \beta_5 TRIQ_{i,t} + V_{i,t} - - - - - - (3.10)$$

Where:

GDPP= GDP per capita, proxy for economic development,

TR= trade openness,

DI=domestic investment,

GS= government spending,

INSTQ= institutional quality,

TRIQ= moderator term,

V is the residual term.

Estimation Technique

Although the result of the Pedroni co-integration test suggests the presence of long-run relationship which could be captured through the application of panel dynamic models such as the Panel Mean Group (PMG) that is based on the Ordinary Least Square (OLS) estimator, this study employed the Panel Feasible Generalized Least Squares (FGLS) estimator developed by Bai *et al.* (2021) to estimate the specified models of the study in light of the presence of cross-sectional dependence, serial correlation, and heteroskedasticity found within the dataset of the study.

Results and Discussion

Table 4.19: Feasible Generalized Least Square Results for Models I and II

	MODEL I		MODEL II	
VARIABLE	**Coefficient**	**P-value**	**Coefficient**	**P-value**
LFDI	0.0275569***	0.000	-	-
LTR	-	-	0.081602***	0.000
LLF	0.9235329***	0.000	0.8464226***	0.000
DI	0.0021663***	0.000	0.0010876**	0.019
GS	-0.0008487*	0.079	0.0001284	0.871
INF	-0.000236	0.302	0.0002117	0.554
INSQ	-0.0199932	0.317	0.0914834***	0.000
FDIIQ	0.002148**	0.025	-	-
TRIQ	-	-	0.0176072***	0.004
CONST	8.289516***	0.000	9.979787***	0.000

Source: Author's estimation

Note: *, ** and *** indicate the rejection of the hypothesis at 10%, 5% and 10%, respectively.

Table 4.20: Feasible Generalized Least Square Results for Models III and IV

	MODEL III		MODEL IV	
VARIABLE	**Coefficient**	**P-value**	**Coefficient**	**P-value**
LFDI	0.1569107***	0.000	-	-
LTR	-	-	0.2332461***	0.000
DI	-0.0002195	0.839	0.0158872***	0.000
GS	-0.0006734	0.657	0.0152793***	0.000
INSQ	-0.0819695	0.130	0.1511959***	0.000
FDIIQ	0.0072004***	0.007	-	-
TRIQ	-	-	0.2023255***	0.000
CONST	3.411996***	0.000	6.182902***	0.000

Source: Author's estimation

Note: *, ** and *** indicate the rejection of the hypothesis at 10%, 5% and 10%, respectively.

In line with the postulations of the FDI-led growth hypothesis, the empirical findings of this study reveal that FDI exerts statistically significant and positive effect on economic growth across the West African region. From the empirical literature, these results are consistent with the findings of Ayenew (2022), which examined the relationship between FDI and economic growth in Sub-Saharan Africa and reported a similar growth-enhancing effect. Furthermore, studies outside the West African region, including those by Mose and Kipchirchir (2024) for Kenya, Utouh *et al.* (2024) for Tanzania, and Kaddouri and Benelbar (2024) for Algeria, corroborate the positive role of FDI in stimulating growth. However, the findings of this study contrast with those of Dagume *et al.* (2024), which reveal that increased FDI flows to South Africa have adverse implications for growth. Similarly, the results diverge from the short-run negative effect of FDI on economic growth observed by Chowdhury and Anuradha (2020) in the case of India.

In line with the propositions of the export-led and import-led growth hypotheses, the empirical findings reveal that trade openness exerts a statistically significant and positive impact on economic growth in the West African region. These findings corroborate the results of Ijirshar (2019), which indicate that trade openness accelerates long-term growth within ECOWAS, but contradict the evidence reported by Nguyen *et al.* (2023), which found that trade openness negatively affects growth stability in Asian countries.

In line with the theoretical postulation of the endogenous growth theory, which theorizes that high-quality institutions create incentives and an enabling environment for investment, innovation, and productive economic activities, the findings of this study provide empirical support for the positive impact of institutional quality on economic growth in West Africa. On another hand, this result aligns with some empirical findings, such as Nayak and Pradhan (2024) which suggested the significance of governance indicators in fostering economic growth in Asian economies and Mkhize (2021) which concluded that institutional soundness plays a critical role in Africa's growth prospects. Furthermore, country-level studies, including Chidiebere *et al.* (2024) in Nigeria, Oussama and Abdellah (2024) in Morocco. However, the finding is not in tandem with the theoretically inconsistent outcome reported by Ozegbe and Kelikume (2022) and Utile *et al.* (2021), suggesting a negative impact of institutional quality on economic growth in Nigeria.

Building upon the earlier established findings that FDI and institutional quality exert significant positive impact on economic growth in West African countries, an outcome consistent with theoretical postulations and existing empirical literature, the study further revealed that institutional quality act as a significant moderating factor in enhancing the growth-inducing effects of FDI. To the previous studies, this finding corroborates the conclusion drawn by Guenichi and Omri (2024), which found that institutional quality positively moderates the effect of FDI on economic growth. Furthermore, the result is in agreement with the outcomes of other panel empirical analyses conducted by Anh and Khanh Linh (2021) and Hayat (2019), both of which suggest the role of sound institutional quality in promoting the growth-enhancing impact of FDI. Nonetheless, the result disagrees with the finding documented by Nguyen *et al.* (2018), suggesting that high institutional quality tends to weaken the positive effects of FDI in emerging economies.

Building on the earlier findings that both trade openness and institutional quality have a significant positive impact on economic growth in West African countries, the study further established that institutional quality plays a crucial moderating effect in amplifying the growth-enhancing effects of trade openness. Drawing from the empirical literature, this finding aligns with the results of several previous studies. For instance, Boubechtoula *et al.* (2024) found that institutional quality plays a significant role in the trade openness–growth nexus among AMU countries. However, this finding is not in line with that of Duodu and Baidoo (2020), which reported that institutional quality does not influence the impact of trade openness on economic growth in Ghana.

Empirical findings from the study reveal that FDI exerts a statistically significant and positive effect on economic development in West Africa. Related to previous empirical evidence, this finding is consistent with the empirical evidence suggested by Nakouwo (2019) and Gökmenoğlu *et al.* (2018) that FDI has a significant and positive influence on the income dimension of development in Africa and Nigeria, respectively. However, contradictory findings emerge in studies employing human development indicators. Adamu and Obumneke Ezie (2025), for example, found that FDI exerts a negative effect on human development in West African countries with low Human Development Index (HDI), while yielding positive outcomes in countries with relatively higher HDI scores.

The empirical findings indicate that trade openness exerts a statistically significant and positive impact on economic development in the West African region. This implies that greater participation in international trade contributes not only to higher levels of economic growth but also to improved welfare and living standards across the region. The developmental effects of trade openness can be attributed to the wide range of economic opportunities it creates, including both direct and indirect employment generated through increased trade activities by the MNCs, medium-sized enterprises, and small-scale businesses.

Consistent with the expectation of this study, empirical evidence revealed a statistically significant positive impact of institutional quality and economic development in West Africa. This empirical finding aligns with the findings of Uddin *et al.* (2023), which concluded that institutional quality and globalization exert a positive and significant influence on economic development in developing economies However, the finding disagrees with the finding reported by Adefeso and Aransi (2022),

suggesting that institutional quality retards the long-term economic development in African countries.

In addition to the earlier established empirical evidence signifying that FDI and institutional quality exert statistically significant and positive effects on economic development across West African countries, another evidence found in this study demonstrates that institutional quality enhances the developmental impact of FDI. By comparing it with other empirical evidence established previously, the finding aligns with the empirical finding reported by Thi Cam Ha *et al.* (2024), demonstrating that the developmental impact of FDI on human development indicators tends to be larger in countries characterized by moderately high institutional quality, regardless of their income levels.

The empirical findings revealed that institutional quality is a significant moderating factor that strengthens the growth-enhancing effects of trade openness. This evidence implies that, in the presence of sound institutional frameworks in the West African region, trade openness contributes more effectively not only to rapid economic growth but also to improvements in key developmental indicators such as poverty reduction, welfare enhancement, and higher living standards.

Conclusion and Recommendations

Based on the findings, this study conclude that all the variables employed in the study as well as the moderating interactions positively and significantly influenced economic growth and development during the period of the study. In light of the empirical findings derived from this study, the following policy recommendations are proposed for the consideration of policymakers across West African countries:

i. West African countries should remove restrictions on capital flows to facilitate increased inflows of FDI, which is essential for augmenting capital accumulation, promoting technology transfer, and promoting overall economic growth and development in the region.

ii. Governments across West African states are encouraged to establish new and enhance the operational capacity of existing Investment Promotion Agencies (IPA).

iii. To avert the reversal of FDI and to optimize its growth-enhancing impact, West African countries must formulate and implement targeted strategies and policy frameworks designed to ensure the retention of accumulated FDI.

iv. Regional policymakers should promote public-private partnerships (PPPs) between West African governments and foreign investors to facilitate infrastructure development, technology transfer, and capacity building.

v. To foster an environment conducive to both investment and trade, West African governments should implement a comprehensive strategy aimed at enhancing the investment climate of their countries.

vi. To maximize the benefit of trade, West African countries should strengthen their participation in both regional and global trade by actively signing and effectively implementing trade agreements and treaties.

vii. Countries within the West African region should adopt deliberate policy measures aimed at diversifying their export base by focusing on sectors in which they have comparative advantages, such as agriculture, mining, and agro-processing.

viii. West African governments should establish new, and strengthen existing, export credit facilities, insurance schemes, and trade promotion agencies to provide comprehensive support for local firms seeking access to international markets.

ix. To enhance export performance and attract export-oriented industries, countries in the West African region should make substantial investments in human capital development, particularly through vocational and technical education.

x. Since sustainable economic growth and development in the region are linked to the quality of the region's institutions, it is imperative for the policymakers in the West African countries to initiate and sustain sound institutional reforms aimed at improving institutional frameworks in their respective countries

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