THE MEDIATING ROLE OF GOVERNANCE IN FOREIGN DIRECT INVESTMENT INFLOWS AND ECONOMIC PERFORMANCE NEXUS: NEW EVIDENCE FROM NIGERIA

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ABSTRACT: *The recent FDI-growth literature suggests that the varying effects of foreign direct investment on economic growth in host countries might be due to certain domestic factors that determine the benefits of FDI. Among these factors is the quality of governance; thus, this study examined how the interaction between foreign direct investment (FDI) and governance affects the performance of the Nigerian economy by relying on annual time series data spanning 1986 to 2021. The results from the autoregressive distributed lag (ARDL) model revealed that the interaction between governance and foreign direct investment exerts a positive and highly significant impact on economic performance. Apparently, the interaction between governance and foreign direct investment appears to be elastic. The foregoing suggests that governance is a significant moderating factor between foreign direct investment and economic performance in Nigeria.*

KEYWORDS: Governance, Foreign direct investment, Economic performance, Institution, New endogenous growth theory, Nigeria.

INTRODUCTION

Foreign direct investment (FDI) represents one of the critical means of economic, social and political globalization. It is a major driver of economic growth and sustainable development especially in emerging economies where capital flows are insufficient due low level of domestic investment and national savings (Pekarskiene & Susniene, 2015; Iheanachor & Ozegbe, 2021). FDI constitutes an aspect of international economic relations which is a critical proponent of development in recipient economies (Gokmenoglu et al., 2019). Generally, FDI is viewed not only as an essential source of cross-border private capital inflows but also as an important source of technology transfer, and management know-how to host economies (Buzdugan & Tuselmann, 2018). Due to its level of stability relative to other forms of capital flows, it is argued that FDI contributes substantially to economic growth and sustainable development (Ciftci & Durusu-Ciftci, 2022). As such, the quest for a continuous rise in FDI flows to emerging economies like Nigeria remains a prime priority for the national government, other stakeholders and researchers alike. However, the divergence of opinions as to the real effects of FDI on economic performance remains a topical subject of debate in the literature. These divergences can be attributed to what constitutes the core transmission channels to which FDI impacts economic performance. Arguably, the absorptive capacity of the recipient nations remains a cardinal point of discourse in the literature. The diversity of channels through which domestic absorptive capacity has been viewed ranges from physical capital accumulation (Chengying et al., 2023), human capital development (Henok & Kaulihowa, 2022), trade policy orientation (Bao *et al.,* 2022) and contemporary opinions relating to the natural resources endowment, market size and financial sector development (Ibrahiem & Sameh, 2022). Therefore, it is pertinent to shift attention in this research space to emerging issues relating to state institutions and governance, which plays an essential role in the growth process of national economies.

Against the backdrop of the foregoing, the objective of this study is to investigate the interaction effect of FDI and governance on the performance of the Nigerian Economy. Following the motivation behind this present study, it is important to raise pertinent question(s) that guide the investigation process. Does the interaction between FDI and governance have any significant impact on Nigeria's economic performance? Providing empirical answers to this question will reveal the essential role of governance in the FDI-Growth nexus within the Nigerian context.

The decision to focus on governance, which is a relatively new strand of discussion in the FDI-Growth nexus, has a number of justifications. First, effective governance and institutional quality appear to be significant proponents of FDI inflows from the advanced economies to the emerging economies (Minh, 2019; Bouchoucha & Benhammou, 2020; Huynh *et al.,* 2020; Ozegbe & Kelikume, 2022). Second, poor governance and weak institutions raise the cost associated with economic instability and distortions (Cuervo-Cazurra et al., 2022). Beyond these contrasting arguments, there are propositions asserting that ineffective governance accelerates FDI inflows in certain regions of the world (Fagbemi & Bello, 2019; Awadhi *et al.,* 2022). In addition, the empirical studies by Tran and Dat (2019) and Gherghina *et al.* (2019) lend credence to the argument that weak governance attracts multinational companies (MNCs) to some selected South America and Eastern European nations respectively rather than discouraging their entry. Following the ongoing debate in the literature and the paucity of empirical and theoretical studies on FDI-governance-growth nexus from the Nigerian

perspective, this present study filled the earlier identified empirical gaps by investigating the interaction effects of FDI and governance on the growth of the Nigerian economy. Therefore, this study is anchored on the new endogenous growth theory, which posits that economic growth is determined by two critical factors which are: technological progress and human capital stock (Romer, 1986; Lucas, 1988).

The remaining sections of the article are organized as follows: section two lays out the literature review, section three is devoted to methodology, section four comprises the results and discussion, while section five presents the conclusion, implications and direction for future research.

LITERATURE REVIEW AND THEORETICAL FOUNDATION

Theoretical Foundation- The New Endogenous Growth Theory

The new endogenous growth theory posits that economic growth is determined by two critical factors which are technological progress and human capital stock (Romer, 1986; Lucas, 1988). Also, Zhou *et al.* (2021) contended that the new endogenous growth model considers long-term economic growth as dependent on technological changes and therefore, provides a theoretical foundation through which FDI inflows can persistently increase host nation's economic growth through spill-over effects, diffusion and technological transfer. The theory further asserts that the specification of the total factor productivity influences the overall efficiency of an economy. It argues that total factor productivity function is beyond technological progress and therefore permits the incorporation of other factors such as governance and institutions which have a vital impact on the economic growth process of nations. As such, the concept of governance is included in the examination of the FDI-economic growth nexus in this study due to the proposition that governance and state institutions are critical drivers of economic growth (Shittu *et al.,* 2020; Raza *et al.,* 2021; Saidi *et al.,* 2023). This position aligns with the hierarchy of institution hypothesis (Acemoglu et al., 2005) which argued that political institutions determine the activities of the economic institutions. The former role is indirect but is transmitted through their impact on a nation's economic institutions and their effects on the overall economic performance. Therefore, a persistent rise in FDI inflows and effective governance seems to accelerate economic growth and sustainable development. Furthermore, Paul and Jadhav (2019) and Awadhi *et al.* (2022) explained that the governance system and institutions (the "rule of the game") majorly decide the approaches and performances of firms in cross-border markets. Regarding FDI, the institutional theory posits that firms are confronted with uncertainty and complex business environments. Therefore, the host country's governance systems such as regulatory institutions are incorporated into firms' investment decisions (Song *et al.,* 2020). Based on the assertions in the literature, it is expected that the interaction effects of FDI and governance would accelerate Nigeria's economic growth.

FDI and Economic Performance Relationship

Bouchoucha and Ali (2019) investigated the impact of FDI inflows on Tunisia's economic growth from 1980 to 2015 using the autoregressive distributed lag (ARDL) bound test approach. The results revealed that FDI has a positive impact on economic growth in the short-run and long-run, respectively. Dinh *et al.* (2019) examined the impact of FDI on economic growth in developing countries of the lower-middle-income group from 2000 to 2014. The study employed the vector error correction model (VECM) as its analytical tool and the result shows that FDI helps in the stimulation of the economy in the long-term; however, it reported that FDI exerted a negative impact on economic growth in the short-run.

Owusu-Nantwi and Erickson (2019) explored the impact of FDI on the economic growth of Latin America countries; in addition, the study examined the causal connection between FDI and economic growth of the region using vector error correction model (VECM) as its analytical technique. The study reported a significant positive impact of FDI on the region's economic growth in the long-run, while the short-run result indicates bidirectional causality between FDI and economic growth. Yeboua (2021) investigated the mediating effect of institutions in the FDI-growth relationship in Africa. The study employed a panel smooth transition regression model in a sample of 27 nations for the period 1990 to 2017. The result indicates that FDI inflows lead to economic growth among the countries that have effective institutional structures. However, in the countries where institutional structure is ineffective, FDI either has a negative or insignificant impact on economic growth. Olofin *et al.* (2019) used the spatial econometrics, and the fully modified ordinary least squares (FMOLS) to estimate the impact of FDI on Nigeria's economic growth. The study reported that there is a negative and statistically significant relationship between FDI inflows and economic growth in Nigeria. Ovat and Amba (2018) examined the relationship between FDI and economic growth in Nigeria for the period 2000 to 2015. The study employed co-integration and error correction methods as its analytical technique. The result indicates that FDI has a positive and significant impact on Nigeria's economic growth within the period under review.

Governance and Economic Performance Nexus

In the economic literature, the neoclassical growth model and the endogenous growth model have been crucial in the economic performance of nations (Nguyen & Bui, 2022). Economic performance is a function of the growth of technical know-how and human capital based on the assumption of the neoclassical school of thought. This implies that governance has no role to play in the economic growth process. However, in the endogenous growth model, it is assumed that governance and other variables influence economic performance on a long-term basis. Governance plays an essential role in the allocation of resources in the allocation of resources in an economy and as such has a significant influence on economic performance. However, governance proxied by different indicators is considered a critical determinant in many countries (Loizides & Vamvoukas, 2005). Governance does not only imply addressing the needs of the public sector but also helps in regulating private sector activities (Arestis *et al.,* 2021). Therefore, the role of governance in economic performance has been rising significantly in countries that are pursuing sustainable economic growth and development. Furthermore, it is asserted that governance can determine a nation's economic performance in two ways: making positive contributions via effective and efficient provision of public goods and services, and making negative contributions via ineffective and inefficient provision of public goods and services (Grossman & Helpman, 1990).

In the light of the above premise, Fayissa and Nsiah (2013) empirically examined the role of governance in evaluating the sub-optimal economic performance of some selected African economies. The result revealed that the absence of good governance contributes to the distortion in per capita income between the poorer and richer African nations. In addition, the study posited that the role of governance on economic performance is a function of the level and type of income growth of the nations under investigation. Ramadhan (2019) investigated the effects of governance on economic growth and poverty reduction in Indonesia. The result shows that weak governance has a negative impact on the nation's economic performance, which invariably leads to rising levels of poverty.

Nazier and Ezaat (2013) investigated the role of governance and institutions in supporting economic growth with a special reference to Arab countries. Governance indicators were tested in the study to explain growth performance variations across countries in the region. The status of governance in these countries is relatively poor, as per international measures. The majority of the nations examined appear to suffer from various levels of governance deficits, compared to the international averages and their income level. Huang and Ho (2017) utilized a frequency domain approach to ascertain the existence of Granger causality stemming from governance to economic performance in 12 Asian nations over the period 1996-2014. The result indicates that except South Korea, "Free" countries showed no significant causality stemming from different form governance to economic performance, especially in the area of rule of law and government effectiveness in order to accelerate the growth of per capita GDP.

Kraipornsak (2018) explored the linkages between good governance and economic growth in Thailand and some selected Asian nations for the period 1996 to 2016, utilizing the fixed effect model indicated by the Hausman test. Apart from total factor productivity growth and capita per head, the outcome reveals that effective governance has the potential to significantly boost income per head growth.. Awan *et al*. (2018) tested the connections among governance, corruption and economic performance in five selected SAARC nations by conducting a panel regression analysis using the fixed effect method of estimation based on Huasman's specification test results. The result indicated that governance proxied by political stability and government effectiveness has a positive and significant effect on the economic performance of the investigated countries. In the empirical literature, this topic has been extensively examined; however, there are still contentious opinions.

METHODOLOGY

Data and Sources

To examine the interaction effects of FDI and governance on Nigeria's economic performance, this study employed annual time series data covering the period 1986-2020. The year 1986 was chosen as the starting point in this study because it marked the commencement of the infamous structural adjustment programme (SAP) which was designed to liberalize and stimulate the Nigerian economy. The data used for the study were obtained from the World Development Indicators (WDI) and Worldwide Governance Indicators (WGI). Specifically, that data on economic performance, foreign direct investment and trade openness are derived from the World Bank's world development indicators (World Bank, 2020). However, the data on governance was obtained from the worldwide governance indicators (World Bank, 2020).

Definition of Variables

In terms of variable measurements, economic performance is measured as real gross domestic product GDP at constant (US $). Foreign direct investment FDI is measured as net inflows as a percentage of GDP. Governance is measured by using government effectiveness from the worldwide governance indicators, which is made up of the quality of policy formulation and execution, quality of civil service and the level of its independence from political interference, quality of civil service and the credibility of government and its willingness to enforce its rules and regulations. Good governance connotes quality of institutions and absence of corruption which implies that foreign direct investment is allocated to productive sectors of the economy in order to accelerate economic performance. As such, the coefficient of governance is expected to be positive. In addition, good governance is expected to have a positive impact on economic performance given that it raises consumer demand (through increased income) in an economy when aggregate demand is low (Lin, 1994; Onifade *et al.*, 2020; Bakare & Ozegbe, 2021). The coefficient of trade openness is expected to be positive because trade openness brings about access to new inventions, technological advancement and creates employment opportunities which transcends into positive economic performance.

Data Analysis Techniques

Sequentially, the study's empirical process includes the preliminary analysis, estimation and post estimation. Descriptive statistics, unit roots test, and co-integration test are part of the preliminary analysis. To test for stationarity and linear combinations in the variables under study, pre-tests including the unit root test and cointegration test are necessary. To investigate the short-run and long-run relationship between co-integration (bounds co-integration test) and estimation, the study utilized Autoregressive Distribution Lag (ADRL). A long run relationship can be inferred if the computed F-statistics surpass the upper bound critical value. If the F-statistic falls below the lower bound, there will be no cointegration, whereas a value within the lower and upper bounds will produce an inconclusive result. To ensure the adequacy of the specified model, post-estimation tests were conducted, including serial correlation, heteroscedasticity, normality, and structural stability CUSUM tests.

Empirical Model

To estimate the interaction effect of FDI and governance on the performance of the Nigerian economy, the following models were specified following the empirical studies (Mengistu & Adams, 2007; Fayissa & Nsiah, 2013; Shittu *et al.*, 2020; Iheanachor & Ozegbe, 2021).

$$RGDP_t = f(FDI_t, GOV_t, FDI_t * GOV_t, TOP_t) \quad\quad\quad (3.1)$$

Where $RGDP$ = real GDP

FDI = foreign direct investment

GOV = governance indicator (institutional quality)

TOP = trade openness

$FDI*GOV$ = interaction between foreign direct investment and governance indicator

Hence, the specific ARDL model for this study is expressed as follows:

$$RGDP_t = \theta + \sum_{i=1}^{p} \alpha_i RGDP_{t-i} + \sum_{i=0}^{q_1} \beta_{1i} FDI_{t-i} + \sum_{i=0}^{q_2} \beta_{2i} GOV_{t-i}$$
$$+ \sum_{i=0}^{q_3} \beta_{3i}(GOV*TOP)_{t-i} + \sum_{i=0}^{q_4} \beta_{4i} TOP_{t-i} + \varepsilon_t \quad (3.2)$$

where p, q_1, q_2, q_3 and q_4, are the respective maximum lags of the dependent variable ($RGDP$) and the explanatory variables (FDI, GOV, $GOV*FDI$ and TOP) while α_i, β_{1i}, β_{2i}, β_{3i}, and β_{4i} are the respective coefficients associated with the dependent variable ($RGDP$) and the explanatory variables at the respective lags.

The ARDL Error Correction Model (ECM) specification is given as:

$$\Delta RGDP_t = \theta + \sum_{i=1}^{p} \alpha_i \Delta RGDP_{t-i} + \sum_{i=1}^{q_1} \beta_{1i} \Delta FDI_{t-i} + \sum_{i=1}^{q_2} \beta_{2i} GOV_{t-i}$$
$$+ \sum_{i=1}^{q_3} \beta_{3i} \Delta(GOV*TOP)_{t-i} + \sum_{i=1}^{q_4} \beta_{4i} \Delta TOP_{t-i} + \emptyset ECM_{t-i}$$
$$+ \epsilon_t \quad (3.3)$$

In equation (3.3), the coefficient ($\emptyset$) of the ECM term called the speed of adjustment is expected to be negative in order to restore the model to equilibrium, *i.e.* $\emptyset < 0$.

Given equation (3.4), the long run form of the ARDL is specified as follows:

$$RGDP_t = \delta_0 + \delta_1 FDI_t + \delta_2 GOV_t + \delta_3(FDI*GOV)_t + \delta_4 TOP_t \quad (3.4)$$

The *a priori* expectation

The *a priori* expectations are defined as follows:

$$\delta_1 > 0, \delta_2 > 0, \delta_3 > 0, \delta_4 > 0$$

RESULTS AND FINDINGS

This section presents the results of the empirical analysis involving descriptive analysis, unit root test analysis, co-integration test, estimation, and model diagnostic tests.

Descriptive Statistics

This section provides the descriptive or summary statistics of the variables being examined in the study, such as real GDP (*RGDP*), foreign direct investment (*FDI*), institutional quality as the governance indicator (*GOV*) and trade openness (*TOP*).

Table 4.1: Summary Statistics

Sample Period: 1986 – 2020

Statistics	Variable			
	RGDP	**FDI**	**GOV**	**TOP**
Obs.	35	35	35	35
Mean	208625.1	0.257	0.788	34.953
Median	104911.9	0.372	0.775	34.458
Maximum	546676.4	1.756	0.938	53.278
Minimum	27752.20	1.634	0.640	9.136
Std. Dev.	177526.4	0.736	0.094	10.297
Skewness	0.5024	-0.2223	0.0287	-0.3635
Kurtosis	1.6152	3.0579	1.5981	2.8363
Jarque-Bera	4.2692	0.2932	2.8707	0.8099
p-value	0.1183	0.8637	0.2380	0.6670

Source: *Authors' Computation, 2023.*

Table 4.1 reports the summary statistics of the variables being investigated. Except FDI, other variables have their standard deviations below their respective mean values. This suggests that there are moderation variations in the variables over time, and thus, may have high predictive power. However, FDI may demonstrate high variability in its movement, having its standard deviation above the mean value. The distribution patterns of RGDP and GOV are positively skewed, with a long right tail, while FDI and TOP are negatively skewed, with a left tail. Besides the FDI series, other series being examined appear to be flat-topped distributed (platykurtic) having coefficients of kurtosis less than the threshold level of 3 for a moment distribution. However, FDI appears to be moderately peaked (mesokurtic) relative to the normal distribution, having a coefficient of kurtosis approximately equal to the threshold level of 3. Remarkably, the Jarque-Bera statistics for normality test indicate that all the variables being investigated meet the normal distribution assumption having their respective p-values above the 5% level of significance, thus, having insignificant normality test results.

Pre-Estimation Tests

In this section, pre-tests such as unit root and co-integration tests are provided so as to evaluate the statistical property of the variables such stationarity and existence of linear combination among the variables being examined in the study.

Unit Root Tests

The unit root tests were conducted prior to model estimation to ascertain the stationarity conditions of the variables being examined. Thus, the Augmented Dickey-Fuller (ADF) test was employed to evaluate the stationarity status of the series.

Table 4.2: Unit Root Test Results

Sample Period: 1986 – 2020

| Variable | Test form | ADF- Statistics | | | $I(d)$ |
		Constant	Constant & Trend	None	
RGDP	*Level*	-0.1762	-1.8263	1.5825	**I(1)**
	1st Difference	-4.6154***	-4.5352***	-4.2091***	
FDI	*Level*	-3.4762**	-4.0107**	-3.1487***	**I(0)**
	1st Difference	-	-	-	
GOV	*Level*	-0.2575	-2.4699	-0.7700	**I(1)**
	1st Difference	-7.9158***	-8.3052***	-7.9417***	
TOP	*Level*	-4.6240***	-4.2545***	0.2320	**I(0)**
	1st Difference	-	-	-	

Source: *Authors' Computation (2023)*

*Note: ***, ** and * denote statistical significance at 1%, 5% and 10% respectively*

Table 4.2 presents the result of the unit test using the ADF unit root test. Thus, series such as FDI and TOP appear to be integrated of order zero, that is, they are I(0) series. However, the RGDP and GOV series are integrated of order one, i.e., they are I(1) processes. This suggests that the series had to be different once to meet the stationarity status. Thus, as proposed by Pesaran et al. (2001), the combinations of I(0) and I(1)) orders of integration of the variables validate the use of bounds co-integration test to examine the existence of a linear combination among the variables.

Bounds Co-integration Test

Having different orders of integration suggests the use of bounds co-integration test (the ARDL bounds test) to examine the existence of long-run equilibrium among the variables.

Table 4.3: Result Bounds Co-Integration Test

Sample Period: 1986 – 2020

F – Statistic:	8.1204	
Level of significance	Lower bounds – *I(0)*	Upper bounds – *I(1)*
1%	3.81	4.92
5%	3.05	3.97
10%	2.68	3.53

Source: Authors' Computation, 2023.

The table 4.3 presents the results of the bounds co-integration test of the ARDL approach. Thus, since the F-statistic (8.1204) exceeds the critical values at the upper bounds at 1%, 5% and 10% levels of significance. This implies the evidence of a long-run relationship or linear combination among the variables. In other words, real GDP (RGDP), foreign direct investment (FDI), governance (GOV) and trade openness (TOP) appear to have a long-run relationship in spite of having different orders of integration. Thus, the empirical panic of having a spurious relationship has been dissolved.

Model Estimation

Since there is evidence of cointegration among the variables, the model estimation provides both long-run and short-run estimates. Estimation involved the log transformation of all the variables. Thus, estimates obtained are elasticities.

Estimation of ARDL Short-run coefficients

Table 4.4: Estimated ARDL Short Run Coefficients

Sample Period: 1986 – 2020

Dependent Variable: *RGDP*

Independent Variable	Coefficient	Std. Error	t-Statistic	*p*-value
C	17.8372	2.1649	8.2391	0.0000
$\Delta RGDP_{t-1}$	0.4948	0.1402	3.5293	0.0037
$\Delta RGDP_{t-2}$	0.5456	0.1558	3.5027	0.0039
ΔFDI	0.0549	0.1120	0.4904	0.6320
ΔFDI_{t-1}	-1.0458	0.1668	-6.2694	0.0000
ΔFDI_{t-2}	-0.6587	0.1414	-4.6583	0.0004
ΔGOV	1.7038	0.4074	4.1823	0.0011
$\Delta(FDI*GOV)$	0.4347	0.3292	1.3207	0.2094
$\Delta(FDI*GOV)_{t-1}$	-2.7025	0.4696	-5.7551	0.0001
$\Delta(FDI*GOV)_{t-2}$	-1.6904	0.4117	-4.1061	0.0012
ΔTOP	-0.0566	0.0864	-0.6551	0.5238
ΔTOP_{t-1}	0.3234	0.0835	3.8714	0.0019
ΔTOP_{t-2}	0.3303	0.0997	3.3134	0.0056
ECT_{t-1}	-0.1432	0.0174	-8.2135	0.0000
R-squared	0.8638			
Adjusted R-squared	0.7656			

Source: *Authors' Computation, 2023*

Table 4.4 presents the result of the short run form (error correction model) of the ARDL. The coefficient (-0.1432) of the ECT term (error correction term or speed of adjustment coefficient) is negative and statistically significant (p = 0.0000 < 0.01). Theoretically, the coefficient is expected to lie between -1 and 0 for convergence. Thus, this suggests that GDPG adjusts to FDI, GOV, TOP and FDI*GOV in the long run. In other words, the system corrects its disequilibrium in the previous period at a speed of 14.32%, thereby restoring to equilibrium in the current period. Meanwhile, all the variables appear to have statistically significant impact on economic performance (RGDP) at the first and second lag (short-run) periods. Besides, the explanatory power (adjusted R-squared) of the model is sizably high (76.56%) and thus, suggests that FDI, GOV, TOP and FDI*GOV are good predictors of economic performance in the short-run.

Estimation of ARDL long run coefficients

Table 4.5: Estimated Long run Estimates

Sample Period: 1986 – 2020

Dependent Variable: *RGDP*

Independent Variable	Coefficient	S.E	t-Stat.	*p*-value.
FDI	0.9247***	0.1590	5.8172	0.0001
GOV	2.3493***	0.5479	4.2878	0.0009
*FDI*GOV*	2.4402***	0.4934	4.9453	0.0003
TOP	-0.4128*	0.2078	-1.9870	0.0684
T	0.0769***	0.0064	11.946	0.0000

Source: *Authors' Computation, 2023.*

*Note: * & *** denote statistical significance at 10% and 1% levels.*

Table 4.5 reports the result of the long run estimates for the given sample period. The estimated long-run equation shows changes foreign direct investment (FDI, p = 0.0001 < 0.01) and governance (GOV, p = 0.0009 < 0.01) exert positive and highly significant effects on economic performance (RGDP) in the long-run, in which economic agents and institutions operate at optimal capacity. However, trade openness (TOP, p = 0.0684 < 0.1) appears to have a negative and weak significant effect on economic performance (RGDP). Apparently, the negative effect may be attributed to the high level of import and trade deficit in the Nigerian foreign trade arrangement, thus resulting in the adverse effect on economic performance. Numerically, a one percent rise (fall) in FDI and governance index (GOV) will, respectively, yield about 0.96 and 2.25 percent rise (fall) in RGDP on average. Thus, FDI appears to be RGDP inelastic, while GOV is RGDP elastic.

Meanwhile, the interaction of governance measure (institutional quality) and foreign direct investment (FDI) exerts positive and highly significant impact (FDI*GOV, p = 0.0003 < 0.01) on RGDP (economic performance). Institutional quality (GOV) interaction leads to a 2.24% increase (decrease) in RGDP for every 1% increase (decrease) in FDI. Apparently, FDI*GOV appears to be RGDP elastic. The foregoing suggests that institutional quality, as a governance measure, is a significant moderating factor between FDI and economic performance (RGDP). Concisely, economic performance (RGDP) responds positively and significantly to the changes

in the interaction between foreign direct investment and institutional quality in the long-run in Nigeria.

Model Adequacy Tests

The model adequacy tests (*i.e.* the post estimation tests) include serial correlation test, Heteroscedasticity test, normality test, linearity or specification error test (Ramsey RESET test) and stability test (CUSUM test).

Table 4.6:   Results of Post Estimation tests

Sample Period: 1986 – 2020

Serial correlation test:		*p*-value
F-statistic	0.2905	0.5997
LM Statistic	0.7564	0.3844
Heteroscedasticity test:		*p*-value
F-statistic	0.0110	0.9172
LM Statistic	0.0117	0.9137
Normality Test:		*p*-value
Jarque-Bera	0.6061	0.7386
Linearity Test		*p*-value
t-statistic	1.3474	0.2027
F-statistic	1.8156	0.2027

Source: *Authors' Computation, 2023*

Table 4.6 presents the results post estimation tests. Apparently, all the post estimation test results appear to be satisfactory (yielding statistically insignificant results), thereby fulfilling the fundamental assumptions required for the application OLS technique. The foregoing suggests that the estimates obtained are valid for drawing inferences.

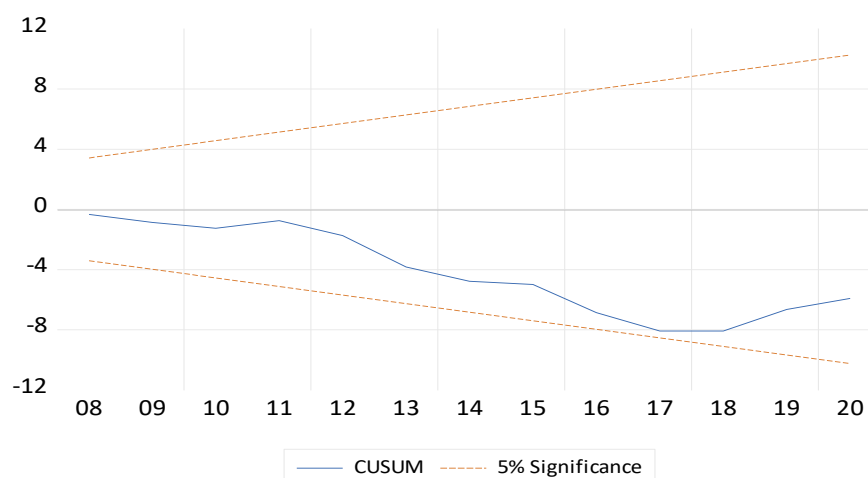Meanwhile, the CUSUM test result is presented as figure 4.1 below:

Figure 4.1:   Plot of Cumulative Sum (CUSUM) of Recursive Residuals

Source: Authors' Computation, 2023

Figure 4.1 shows the result of the stability test using the CUSUM criterion. The estimates obtained are structurally stable since the plot stays within the critical bounds at a 5% level of significance. The ARDL model parameters are suitable for long-term decision making and are stable. The post-estimation tests suggest that the short-run and long-run estimates from the model are valid for forecasting and policy-making purposes.

DISCUSSION

The theoretical foundation for this present is based on the new endogenous growth theory, which posits that the economic performance of a nation is determined by two critical factors which are: technological progress and human capital stock (Romer, 1986; Lucas, 1988). The theory further asserts that the specification of the total factor productivity influences the overall efficiency of an economy. It argues that total factor productivity function is beyond technological progress and therefore permits the incorporation of other factors such as governance and institutions which have a vital impact on the economic growth process of nations. As such, the concept of governance is included in the examination of the FDI-economic growth nexus in this study due to the proposition that governance and state institutions are critical drivers of economic growth (Shittu et al., 2020; Raza *et al.,* 2021; Saidi *et al.,* 2023).

As such, the long-run estimated results show changes foreign direct investment and institutional quality exerts positive and highly significant effects on economic performance. By implication, economic agents and institutions operate at optimal capacity. This finding corroborates the result of other empirical studies such as (Bouchoucha & Ali, 2019; Owusu-Nantwi & Erickson, 2019; Nguyen & Bui, 2022). Meanwhile, the interaction of governance and foreign direct investment exerts a positive and highly significant impact on economic performance. Apparently, the interaction between governance and foreign direct investment appears to be elastic. The foregoing suggests that governance is a significant moderating factor between foreign direct investment and economic performance in Nigeria. Concisely, economic performance responds positively and significantly to the changes in the interaction between governance and foreign direct investment in the long-run.

CONCLUSION

The primary objective of this study is to examine how the interaction between foreign direct investment (FDI) and governance affects the performance of the Nigerian Economy using the new endogenous growth model as its theoretical foundation. The study revealed that changes in foreign direct investment and governance exert positive and highly significant effects on economic performance, by implication, economic agents and institutions operate at optimal capacity. Meanwhile, the interaction between governance and foreign direct investment also exerts a positive and highly significant impact on economic performance. Apparently, the interaction between governance and foreign direct investment appears to be elastic. The empirical revelation above indicates that governance is a significant moderating factor between foreign direct investment and economic performance in Nigeria. Concisely, economic performance responds positively and significantly to the changes in the interaction between governance and foreign direct investment on a long-run basis.

Future Research

This study is to examine how the interaction between foreign direct investment (FDI) and governance affects the performance of the Nigerian Economy using the new endogenous growth model as its theoretical foundation. However, the study has some criticism and limitations that could form the basis of future research endeavors. Since the study was based on a single country, it may be challenging to generalize the results. However, the findings are likely applicable to other emerging economies besides Nigeria. Future research can explore how FDI interacts with economic, social, and institutional quality through cross-country analysis to ensure that their findings are applicable to a wider context. Future studies can enhance their methodology by incorporating more sophisticated analytical techniques, such as VAR, ARIMA, NARDL and Maximum Likelihood (ML).

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