



Does Governance Matter in the Nexus Between Cross-border Capital Inflows and Economic Performance?

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Abstract

This study aims to examine the interactive effect of governance and cross-border capital inflows on economic performance in Nigeria, where there is a dearth of empirical evidence on how governance moderates the effect of various forms of capital inflows on the economy. The study employs the longitudinal research design to analyse the roles of governance in the impact of various forms of cross-border capital inflows on economic performance. The pre-estimation tests for stationarity confirmed the adoption of the Autoregressive Distributed Lag (ARDL) estimator, which simultaneously analyses short-run and long-run impacts. Independently, governance and remittances bear a negative impact on economic performance, while FDI is growth-enhancing with a positive influence. Also, the interactive effect of governance on remittances-economic performance nexus (coeff. = 0.0631; t-value = 0.1766; p-values > 0.05) and (coeff. = 1.1464**; t-value = 2.1659; p-values < 0.05) for the interactive effect of governance on foreign direct investment-economic performance relation implies that governance variable matters for FDI to impact economic performance. However, governance is an insignificant consideration for remittances to influence economic performance. Nigeria needs to strengthen its institutions so that remittances are tracked and committed to the purposes for which it is remitted and ensure that FDI is invested in real productive sectors that could become the new growth engine. This study elicits findings that depart from earlier studies by using the ARDL estimator to analyse the interactive effect of governance on remittances and foreign direct investment (measures of cross-border capital inflows) for Nigeria.

Keywords

Cross-border, Capital inflows, Governance, Economic Performance, JEL Code: F21, F43, F35, O15, Q43

1. Introduction

The quest to attaining an optimal rate of growth and sustainable development is the primary thrust of national economies (Musibau *et al.*, 2019). As such, national governments and critical economic stakeholders are mandated to formulate and execute strategies and policies that set the economies on the path of accelerated growth and development. It is public knowledge that the performance of every nation's economy is a function of its public or private sector or both (Acheampong and Dana, 2017). Also, Acheampong and Dana (2017) asserted that private sector reforms are critical for attaining positive economic performance in Africa. However, Acquah and Ibrahim (2020) argued that most economies on the African continent depend on the public sector to drive economic growth because of the poor state of the private sector. Also, it is reported that insufficient local investment occasioned by low domestic savings has prevented the private sector in emerging economies from making significant contributions to economic performance (Shabbir *et al.*, 2021; Iheanachor and Ozegbe, 2021).

From the theoretical standpoint, the neoclassical school of thought asserted that cross-border capital inflows are critical drivers of economic growth and therefore, it can be inferred that frontier nations like Nigeria can transform her economic performance through the attraction of massive cross-border inflows in the form of portfolio equity, external borrowing, Diaspora remittances, foreign aid and FDI. As such, several questions could be raised based on the contextual problems discussed above. Does governance facilitate cross-border capital inflows to accelerate economic performance in Nigeria? Are these cross-border capital inflows lacking complementarity of good governance, which negates their efficacy in enhancing economic performance in Nigeria? How does the interaction between governance and cross-border

capital inflows affect Nigeria's economic performance? This current study seeks to answer these questions in the literature from the Nigerian purview. Therefore, this study is motivated by the quest to examine succinctly the effects of cross-border capital inflows and governance on the performance of the Nigerian economy from 1986 to 2022. The study contributed to the extant literature on three strands. First, existing inquiries on the subject especially those that focused on Nigeria have estimated the nexus between capital inflows and economic performance in isolation by concentrating on FDI without paying sufficient attention to other types of cross-border capital inflows (Tanna *et al.*, 2018; Ehigiamusoe and Lean 2019; Depken *et al.*, 2021; Iheanachor and Ozegbe, 2021). In addition, the interaction between capital inflows and governance, which has been identified as a critical determinant of economic performance (Duodu and Baidoo (2022) were ignored by previous studies from Nigerian perspective. As such, this current study adds to the body of literature by investigating other kinds of capital inflows to ascertain their interactions with governance (institutional quality) affects Nigeria's economic performance.

Second, a detailed observation of the empirical literature from the Nigerian perspective shows that most recent studies used data that are up to 2019, and this implies that new investigations are required on the subject. Given that policies and reforms keep changing and their impact also keep evolving due to the dynamic nature of national economies, making further investigations a worthwhile venture. As such, this present inquiry extends the data scope to 2022, and this would facilitate the studying of the phenomenon from a more contemporary standpoint, and also highlight fresh insights on the nexus between capital inflows, governance and economic performance.

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

2. Literature Review

The debate surrounding cross-border capital inflows and economic performance has led to the postulation of diverse theories in the literature. As such, the foundation of the study is based on the neoclassical growth theory (Romer, 1986; Lucas, 1988) and the structuralist theory (Andrews, 1994) which explains the linkages between cross-border capital inflows and economic performance from two different perspectives.

2.1 Capital Inflows and Economic Performance Nexus

Several scholars have empirically investigated the relationships that exist between cross-border capital inflows and economic performance. For instance, Tahir *et al.* (2019) studied the effects of capital inflows (external debt, remittances, aid, FDI, and trade) on the economic performance in South Asia from 2008 to 2015. Foreign aid and FDI were found to have a positive impact on the economies of the investigated countries. Meanwhile, trade openness and foreign debt were found to have adverse effects on the nation's economic performance. Furthermore, the study indicated that no association was found between diaspora remittances and the economic performance of the countries. Similarly, Depken *et al.* (2021) evaluated the linkages between external borrowing, FDI, and economic performance of European Union Transition economies from 2004 to 2016, employing a panel data estimation technique. It revealed that the effects of cross-border inflows varied from country to country. Tanna *et al.* (2018) examined the association between capital inflows and the economic growth of some selected developing economies using multiple threshold estimation techniques and indicated that foreign direct investment is positively related to economic performance depending on the level of foreign borrowing. Kadozi (2019) studied the connection between remittances inflows and on economic performance in the Sub-Saharan region of Africa with Rwanda as a primary focus from 1980 to 2014. The finding from the cross-sectional analysis revealed that remittance inflows do not have a serious impact on the economies of the SSA nations. In contrast, the same result shows a positive and significant growth impact on Rwanda. The findings of the country-level estimation showed plausible evidence of long-term causality ranging from remittances to per capita GDP in Rwanda, but not vice versa. Ehigiamusoe and Lean (2019) used the Autoregressive Distributed Lagged (ARDL) bound test approach to explore the impact of external capital inflows on Nigeria's economic prosperity from 1980 to 2015. The study revealed that external portfolio investment exerts a positive impact on economic prosperity. However, foreign debt imposed an adverse impact on growth. Furthermore, foreign aid and foreign direct investment have an insignificant impact on economic prosperity. This implies that foreign aid and foreign direct investment are not dependable drivers of economic progress in Nigeria. Duodu and Baidoo (2022) explored the impact of capital inflows on the economy of Ghana and also investigated the interaction effects of foreign capital inflows and institutional quality on growth. The study employed the ARDL model to analyse the annual time series data covering the period from 1984 to 2018. The results of the non-interaction model revealed that it has a positive effect on economic growth. Moreover, FDI and foreign aid have adverse effects on economic growth. However, the result of the interaction model shows that foreign debt and remittances have a positive and significant impact on Ghana's economic growth.

2.2 Governance and Economic Performance Nexus

There has been an extensive debate about the governance and economic growth nexus in the literature. Huang and Ho (2017) determined the existence of Granger causality between economic growth and governance in 12 Asian countries from 1996 to 2014 by employing the frequency domain technique. The findings showed that apart from South Korea, countries categorised as "Free" did not demonstrate significant causality between governance structure and economic

performance, particularly in terms of rule of law and government effectiveness, both of which are vital for driving per capita GDP growth. Kraipornsak (2018) used the fixed effect model to investigate the linkages between good governance and economic growth in Thailand and some selected Asian economies from 1996 to 2016. The findings indicate that good governance has the potential to influence the growth of income per capita, in addition to total factor productivity growth and capita per head. Awan *et al.* (2018) explored the relationship between corruption institutional quality and economic growth among five South Asian Association of Regional Cooperation (SAARC) nations through a panel regression analysis. Political stability and government effectiveness were found to have a positive and significant impact on the economies of the investigated nations. Ogbuabor *et al.* (2020) asserted that political instability, government effectiveness, control of corruption, poor regulatory quality and rule of law are critical drivers of economic growth in the thirteen selected West African economies by employing the Generalised method of moments (GMM) and two-stage least square (2SLS) approaches. Similarly, Olaoye and Aderajo (2020) adopted the Driscoll and Kraay's nonparametric covariance matrix estimator to examine the governance-growth nexus in a panel of fifteen West African countries. The study revealed that economic institutions can only deliver desirable economic outcome in the region only when political institutions are transformed beyond a certain threshold. Orji *et al.* (2022) employed multiple regression analysis to identify that corruption accelerates economic growth in Nigeria. The study revealed that improving the level of corruption control accelerates economic growth by 0.54% while other economic factors remain constant. Also, Hamid *et al.* (2022) argued that good governance and entrenchment of democratic institutions play a critical role in reducing environmental pollution, which invariably translates to the attraction of cross-border capital inflows and robust economic performance. Mahran (2023) used the special regression technique to examine the nexus between governance and economic growth by employing a sample of 116 nations globally. The study indicates that governance has a statistically significant impact on economic growth. However, at a point where economic control variables are constant, a one percent rise in governance quality increases economic performance on average by one percent, five percent, and ten percent levels of significance, respectively. Iskandar *et al.* (2023) estimated the influence of governance on the economic performance of East Asia nations from 2000 to 2020 using the generalised method of the moment Arellano-Bond technique. The study reported that government effectiveness, rule of law, voice and accountability, political stability, and absence of violence have no significant influence on East Asia economies. Nevertheless, control of corruption and regulatory quality has a significant effect on the growth of the economies. The empirical literature extensively covers this topic, but there are still conflicting viewpoints.

3. Data and Methodology

3.1 Data and Sources

To achieve the objective of this study, the study used annual time series data covering the period 1986-2022. We chose 1986 as the starting point in this study because it marked the commencement of the infamous Structural Adjustment Programme (SAP) which was designed to liberalise 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, data on economic performance, remittances, and trade openness are derived from the World Bank's world development indicators (World Bank, 2022). However, the data on governance was obtained from the worldwide governance indicators (World Bank, 2022).

3.2 Definition of Variables

Economic performance is quantified by measuring real GDP at constant (US \$). The measure of cross-border capital inflows includes personal remittances received as a percentage of GDP, which proxies diaspora remittance, and net inflows of foreign direct investment (FDI) as a percentage of GDP. Governance is evaluated through government effectiveness indicators, encompassing policy quality, civil service autonomy, and government credibility and enforcement of regulations. Trade openness is measured as the sum of a country's exports and imports as a share of that country's GDP. Good governance connotes the quality of institutions and the absence of corruption, which implies that cross-border capital inflows are allocated to productive sectors of the economy to accelerate economic performance. As such, the coefficient of governance is expected to be positive (Duodu and Baidoo, 2022). In terms of a priori expectation, it is assumed that all the indicators of cross-border capital inflows will exert a positive impact on economic performance, except for foreign debt. This is because cross-border capital inflows are expected to stimulate investment through capital accumulation and therefore boost economic performance (Iheanachor and Ozegbe, 2021). Anticipated to be positive, the coefficient of trade openness is driven by its role in granting access to new inventions, fostering technological advancement, and generating employment opportunities, all of which contribute to positive economic performance (Keho, 2017).

3.3 Empirical Model

To estimate the interactive effects of cross-border capital inflows and governance on economic performance, the following models were specified following the empirical studies (Romer, 1986; Lucas, 1988; Tahir *et al.*, 2019; Iheanachor and Ozegbe, 2021).

$$Z_t = f(CBC_t, TOP_t, GOV_t, CBC_t * GOV_t) \dots\dots\dots (1)$$

Where, $Z_t = RGDP_t$, and CBC_t is proxied by $DREM_t$ and FDI_t

The ARDL (p, q_1, q_2, q_3, q_4) model is specified as follows:

$$\begin{aligned} \Delta RGDP_t = & \gamma + \sum_{j=1}^p \alpha_j \Delta GDP_{t-j} + \sum_{j=0}^{q_1} \beta_{4j} \Delta FDI_{t-j} + \sum_{j=0}^{q_2} \beta_{4j} \Delta DREM_{t-j} + \sum_{j=0}^{q_3} \beta_{3j} \Delta GOV_{t-j} + \sum_{j=0}^{q_4} \beta_{4j} \Delta TOP_{t-j} \\ & + \sum_{j=0}^{q_4} \beta_{4j} \Delta (FDI * GOV)_{t-j} + \sum_{j=0}^{q_4} \beta_{4j} \Delta (DREM * GOV)_{t-j} + \lambda GDP_{t-1} + \delta_1 FDI_{t-1} + \delta_2 DREM_{t-1} \\ & + \delta_3 GOV_{t-1} + \delta_4 TOP_{t-1} + \delta_5 (FDI * GOV)_{t-1} + \delta_6 (DREM * GOV)_{t-1} + \mu_i + \epsilon_{it} \dots \dots \dots (2) \end{aligned}$$

Where p, q_1, q_2, q_3 and q_4 are the respective maximum lags of the dependent variable (GDP) and the explanatory variables ($FDI, DREM, TOP,$ and GOV) while $\alpha_j, \beta_{1j}, \beta_{3j}, \beta_{1j},$ and β_{4j} are the coefficients associated with the dependent variable and the explanatory variables at the various lags. Furthermore, μ_i is the country-specific effect and ϵ_{it} is the error term Following equation (2), the ARDL Error Correction Model (ECM) specification is given as follows:

$$\begin{aligned} \Delta RGDP_t = & \gamma + \sum_{j=1}^p \alpha_j \Delta RGDP_{t-j} + \sum_{j=1}^{q_1} \beta_{1j} \Delta FDI_{t-j} + \sum_{j=1}^{q_2} \beta_{2j} \Delta DREM_{t-j} + \sum_{j=1}^{q_3} \beta_{3j} \Delta GOV_{t-j} + \sum_{j=1}^{q_4} \beta_{4j} \Delta TOP_{it-j} \\ & + \sum_{j=1}^{q_4} \beta_{4j} \Delta (FDI * GOV)_{t-j} + \sum_{j=1}^{q_4} \beta_{4j} \Delta (DREM * GOV)_{t-j} + \theta ECT_{it-j} + \mu_i + \epsilon_{it} \dots \dots \dots (3) \end{aligned}$$

Equation (3) states the ECM form of the ARDL model, which closes the gap between the disequilibrium and equilibrium in the short-run and long-run, respectively. The coefficient (θ) of the error correction term (ECT) term called the speed of adjustment is expected to be negative to restore the model to equilibrium, *i.e.*, $\theta < 0$.

Following equation (2), the long-run form model is expressed as follows:

$$RGDP_t = \varphi_0 + \varphi_1 FDI_t + \varphi_2 DREM_t + \varphi_3 TOP_t + \varphi_4 GOV_t + \varphi_5 FDI * GOV_t + \varphi_6 DREM * GOV_t \dots \dots \dots (4)$$

Thus, the long-run coefficients in relation to equation (2) are defined as follows:

$$\varphi_1 = \frac{-\delta_1}{\lambda}, \varphi_2 = \frac{-\delta_2}{\lambda}, \varphi_3 = \frac{-\delta_3}{\lambda}, \varphi_4 = \frac{-\delta_4}{\lambda}, \varphi_5 = \frac{-\delta_5}{\lambda}, \text{ and } \varphi_6 = \frac{-\delta_6}{\lambda} \dots \dots \dots (5)$$

From equations (5), the parameters φ_1 to φ_6 , are the respective long-run impacts of $FDI, DREM, TOP, GOV, FDI*GOV,$ and $DREM*GOV$ on $RGDP$. Economic performance (Z_t) is the dependent variable, while cross-border capital inflows (CBC_t) including FDI and $DREM_t$, are the independent variables. Trade openness (TOP_t) is the control variable used in the study, with governance (GOV_t) serving as the moderating variable. The equation takes into account the interactive terms of cross-border capital inflows and governance, $FDI_t * GOV_t$ and $DREM_t * GOV_t$, as highlighted in the study’s introductory section.

4. Results and Discussion

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

4.1 Descriptive Statistics

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

Table 1 Summary Statistics (Sample Period: 1986–2022)

Statistics	Variable				
	RGDP	DREM	FDI	TOP	GOV
Obs.	35	35	35	35	35
Mean	40051.67	2.995	1.660	34.953	0.788
Median	33346.63	2.191	1.450	34.458	0.775
Maximum	72094.09	8.312	5.791	53.278	0.938
Minimum	17180.54	0.005	0.195	9.136	0.640
Std. Dev.	19857.97	2.516	1.252	10.297	0.0943
Skewness	0.4559	0.3331	1.6700	-0.3635	0.0311
Kurtosis	1.5938	1.7866	5.7272	2.8363	1.5958
Jarque-Bera	4.0962	2.7942	27.1160	0.8099	2.8811
p-value	0.1290	0.2473	0.0000	0.6670	0.2368

Source: Authors’ computation

Table 1 displays the summary statistics for the study variables. The standard deviations of the variables in question are all below their mean values. Modulation differences in the variables might suggest a noteworthy predictive capability. The series RGDP, DREM, FDI, and GOV demonstrate positive skewness with a longer right tail, in contrast to TOP, which has negative skewness. It appears that the RGDP, DREM, TOP, and GOV series have flat-topped distributions, with kurtosis coefficients that surpass the threshold of 3. However, only FDI seems to have a peaked distribution (leptokurtic) compared to the normal distribution, with a kurtosis coefficient above the threshold of 3. Based on the Jarque-Bera statistics, the RGDP, DREM, TOP, and GOV series are normally distributed, as indicated by their p-values greater than the 5% significance level. Among all variables, FDI is the exception, as it has a p-value (0.0168) below 5% and deviates from the normal distribution. Therefore, most variables satisfy the assumption of normality.

4.2 Pre-Estimation Tests

Different pre-tests are conducted in this section, such as unit root and co-integration tests, to evaluate the statistical characteristics of the variables under study, like stationarity and the existence of linear combinations.

4.2.1 Unit Root Tests

Before estimating the model, unit root tests were performed to evaluate the stationarity of the variables. The Augmented Dickey-Fuller (ADF) test was used to determine the stationarity status of the series.

Table 2 Unit Root Test Results (Sample Period: 1986 – 2022)

Variable	Test form	ADF- Statistics			I(d)
		Constant	Constant & Trend	None	
RGDP	Level	-0.7189	-3.3559*	2.4380	I(0)
	Δ	-	-	-	
DREM	Level	-3.7157***	-2.0868	-2.2824**	I(0)
	Δ	-	-	-	
FDI	Level	-3.4750**	-4.0097**	-3.1478***	I(0)
	Δ	-	-	-	
GOV	Level	-0.2594	-2.4738	-0.7716	I(1)
	Δ	-7.9069***	-8.2927***	-7.9325***	
TOP	Level	-4.76240***	-4.2545**	0.2320	I(0)
	Δ	-	-	-	

Source: Authors' computation

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

Table 2 displays the outcome of the unit test conducted with the ADF unit root test. Hence, RGDP, DREM, FDI, and TOP seem to be I(0) series, suggesting they are integrated at order zero. However, the GOV series is an integrated process of order one, or I(1). The series needed to be differenced once to achieve stationarity. According to Pesaran et al. (2001), the combination of I(0) and I(1) orders of integration supports the use of bounds co-integration test to analyse the presence of linear combinations among the variables.

4.2.2 Bounds Co-integration Test

Table 3 Result Bounds Co-Integration Test (Sample Period: 1986–2022)

F-Statistic: 5.1920		
Level of significance	Lower bounds-I(0)	Upper bounds-I(1)
1%	3.27	4.39
5%	2.63	3.62
10%	2.33	3.25

Source: Authors' computation

Table 3 presents the outcomes of the bounds co-integration test conducted using the ARDL approach. Given that the F-statistic (5.1920) exceeds the critical value at significance levels of 1%, 5%, and 10%, thus. The variables exhibit a long-term relationship or can be expressed as a linear combination. Regardless of varying levels of integration, there seems to be a long-term relationship between real GDP, diaspora remittances, foreign direct investment, trade openness, and governance. This leads to the elimination of the fear of being in a deceptive relationship.

4.3 Model Estimation

The model estimation considers both the long-run and short-run based on the evidence of cointegration among the variables. To make estimates, log transformation was applied to all variables.

Table 4 Estimated ARDL Short Run Coefficients (Sample Period: 1986–2022; Dependent Variable: RGDP)

Independent Variable	Coefficient	Std. Error	t-Statistic	p-value
<i>C</i>	3.6758	0.4547	8.0836	0.0000
$\Delta DREM$	-0.0167	0.0165	-1.0102	0.3308
$\Delta DREM_{t-1}$	0.0434	0.0164	2.6458	0.0202
ΔFDI	0.0376	0.0248	1.5133	0.1541
ΔFDI_{t-1}	-0.1268	0.0261	-4.8659	0.0003
ΔGOV	0.0553	0.0946	0.5846	0.5689
$\Delta(DREM*GOV)$	0.0164	0.0532	0.3080	0.7630
$\Delta(DREM*GOV)_{t-1}$	0.1035	0.0527	1.9640	0.0713
$\Delta(FDI*GOV)$	0.0508	0.0777	0.6546	0.5241
$\Delta(FDI*GOV)_{t-1}$	-0.3311	0.0772	-4.2878	0.0009
ΔTOP	-0.0607	0.0187	-3.2455	0.0064
ΔTOP_{t-1}	0.0689	0.0167	4.1342	0.0012
ECT_{t-1}	-0.3831	0.0479	-7.9939	0.0000
R-squared	0.8231			
Adjusted R-squared	0.7169			

Source: Authors' computation

4.3.1 Estimation of ARDL Short-Run Coefficients

Table 4 displays the results of the error correction model in the short-run form of the ARDL. The ECT term coefficient (-0.3831) is negative and statistically significant (p-value = 0.0000) at a 1% level of significance. The expected convergence range for the coefficient is theoretically between -1 and 0. Hence, this indicates that the GDPG responds to DREM, FDI, TOP, and GOV in the long term. To put it differently, the system adjusts its imbalance from the previous period by 38.31% and returns to equilibrium in the current period. As a result, the variables are now in equilibrium or a long-term relationship has been reestablished. The model's adjusted R-squared indicates a significantly higher explanatory power (53.64%), suggesting that DREM, FDI, TOP, and GOV are strong predictors of short-term economic performance.

4.3.2 Estimation of ARDL Long-Run Coefficient

Table 5 Estimated Long Run Estimates (Sample Period: 1986–2022; Dependent Variable: RGDP)

Independent Variable	Coefficient	S.E	t-Stat.	p-value
<i>DREM</i>	-0.1002	0.1210	-0.8276	0.4228
<i>FDI</i>	0.5583**	0.2110	2.6451	0.0202
<i>GOV</i>	-0.8830	0.8545	-1.0334	0.3203
<i>DREM*GOV</i>	0.0631	0.3572	0.1766	0.8625
<i>FDI*GOV</i>	1.1464**	0.5293	2.1659	0.0495
<i>TOP</i>	-0.1908	0.1204	-1.5841	0.1372
<i>T</i>	0.0820	0.0189	4.3515	0.0008

Source: Authors' computation

Note: ** denote statistical significance at 5% level.

Table 5 presents the result of the ARDL's estimated long-run form for the specified sample period. The estimated long-run equation suggests that changes in remittances, institutional quality, and trade openness have negative effects on economic performance, but these effects are not statistically significant. Nevertheless, changes in FDI (p-value = 0.0202 & lt; 0.05) demonstrate a positive and significant long-term effect on economic performance (RGDP). On average, a one percent change in FDI leads to a 0.56 percent change in RGDP. Apparently, FDI appears to be RGDP inelastic. The interaction between remittance-institutional quality has a positive, but insignificant impact on long-run economic performance. In contrast, the interaction between institutional quality and FDI has a long-term positive effect on RGDP. When interacting with institutional quality (GOV), a one percent increase (decrease) in FDI, on average, will cause about a 1.15 percent increase (decrease) in RGDP. Apparently, FDI*GOV appears to be RGDP inelastic. Based on the above, it can be inferred that institutional quality has a substantial impact on the connection between FDI and economic performance (RGDP). In short, Nigeria's economic performance (RGDP) has a limited positive response to changes in the interaction between remittances and institutional quality in the long term. The long-run economic performance (RGDP) in Nigeria is directly and consequentially influenced by the interaction between foreign direct investment and institutional quality.

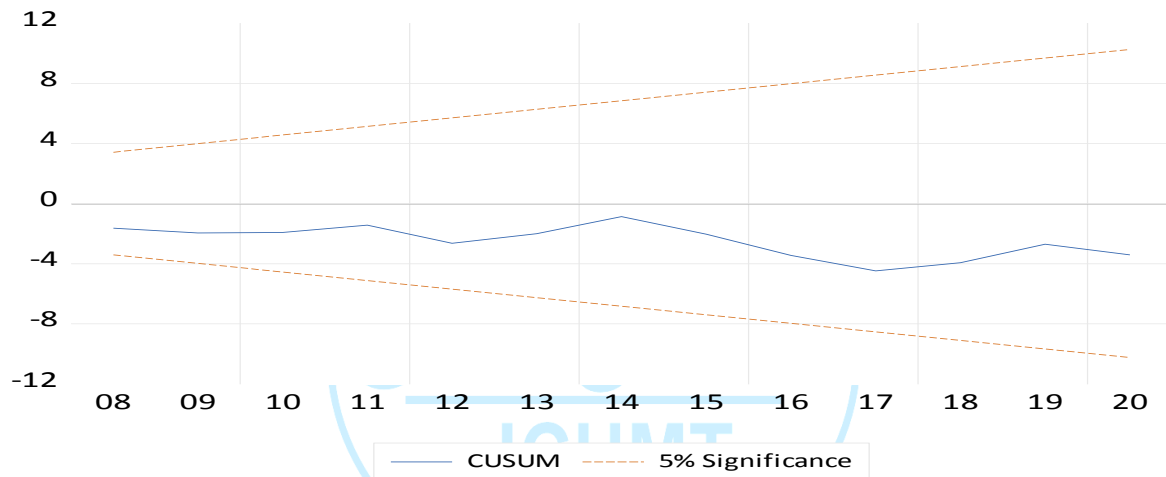
4.3.3 Post Estimation Tests (Residual Diagnostics)

Table 6 Results of Post Estimation tests (Sample Period: 1986–2022)

Serial correlation test		<i>p</i> -value
F-statistic	0.9186	0.3567
LM Statistic	2.3466	0.1256
Heteroscedasticity test		<i>p</i> -value
F-statistic	0.2819	0.5994
LM Statistic	0.2979	0.5852
Normality Test		<i>p</i> -value
Jarque-Bera	0.9084	0.6350s
Linearity Test		<i>p</i> -value
t-statistic	1.5174	0.1551
F-statistic	2.3024	0.1551

Source: Authors' computation

The outcomes of the tests for serial correlation, heteroscedasticity, normality, and linearity are displayed in Table 6. The outcomes of the post-estimation tests are adequate, indicating no statistical significance and satisfying the assumptions for applying the ARDL technique. It can be concluded that the estimates obtained are valid, considering the preceding information. Meanwhile, the CUSUM test result is presented in Figure 1 below:



Source: Authors' computation

Fig. 1 Plot of Cumulative Sum (CUSUM) of Recursive Residuals

Figure 1 displays the outcome of the stability test using the CUSUM criterion. As long as the plot doesn't exceed the critical bounds at a 5% level of significance, the model will remain structurally stable. In simpler terms, the estimated ARDL model parameters are stable and well-suited for long-term decision-making. Consequently, the test results demonstrate the reliability and validity of the ARDL model's short-run and long-run estimates for forecasting and policymaking.

5. Discussion of Findings

The estimated long-run equation shows changes in remittances (DREM, p -value = 0.4228 > 0.1), institutional quality (GOV, p -value = 0.3203 > 0.1) and trade openness (TOP, p -value = 0.1372 > 0.1) appear to have negative effects on economic performance (RGDP). The findings of this present study align with the results reported in previous studies (Anetor, 2019; Tahir *et al.*, 2019; Kadozi, 2019; Peprah *et al.*, 2019). However, the findings are inconsistent with the empirical report of some previous scholars who argued that remittances are the main tool for accelerating economic growth, as they reported that there is a positive and significant linkage between remittances and economic performance (Bayer, 2015; Sobiech, 2019). However, changes in (FDI p -value = 0.0202 < 0.05) exert a positive and significant long-run effect on economic performance (RGDP). Numerically, an increase (decrease) of one percent in FDI, on average, leads to about a 0.56 percent increase (decrease) in RGDP. FDI appears to be RGDP inelastic. By implication, this present result indicates that FDI stimulates economic performance, which aligns with previous empirical studies (Tanna *et al.*, 2018; Ehigiamusoe and Lean 2019; Depken *et al.*, 2021; Tahir *et al.*, 2019; Iheanachor and Ozegbe, 2021). However, the result is inconsistent with the findings of some other empirical studies (Belloumi, 2014; Jawaid and Saleem, 2017; Bermejo *et al.*, 2018; Abouelfarag and Abed, 2020). Meanwhile, remittance-institutional quality interaction exerts a positive long-run impact (DREM*GOV, p -value = 0.8625 > 0.1) on RGDP (economic performance). This result is consistent with the empirical outcome of (Bayer, 2015; Karamelikli & Bayer, 2015; Saad and Ayoub, 2019; Adu-Darko and Aidoo, 2022) these studies argued that the interaction between remittances and the various indicators of governance

such as control of corruption, rule of law, governance effectiveness, voice and accountability and political stability control exert a positive impact on economic growth. This implies that a higher quality of governance (property rights, enforcement of contracts, and absence of corruption) could reassure migrants and recipient households about the situation in their country and therefore encourage their initiatives to invest, innovate contribute to economic activity. Furthermore, the interaction of governance and foreign direct investment (FDI) exerts a positive and statistically significant long-run effect ($FDI*GOV$, p -value = 0.0495 > 0.05) on RGDP (economic performance). This present result aligns with some previous empirical findings (Bouchoucha and Yahyaoui, 2019; Farooque and Khandaker, 2019; Yeboua, 2021; Dada and Abanikanda, 2022; Ozegbe and Kelikume, 2022) who reported that governance in most African countries is quite weak and detrimental to economic performance. However, the interaction between governance and FDI inflows led to accelerated economic performance.

6. Conclusion

This study looks at how cross-border capital inflows impact Nigeria's economy, and how the interaction between capital inflows and governance affects the country's performance. By employing the autoregressive distributed lag (ARDL) estimation technique, the study analysed annual time series data spanning from 1986 to 2022. The results revealed that diaspora remittances, which are one of the indicators of cross-border capital inflows, have a negative and negligible impact on Nigeria's economic performance. The majority of diaspora remittance inflows are not used for productive activities but for personal consumption. However, it is reported that FDI inflows have a positive and significant impact on Nigeria's economic performance as an indicator of cross-border capital inflows. This signifies that FDI as an indicator of cross-border capital flow is a critical stimulator of the Nigerian economy on a long-term basis. The interaction between diaspora remittances and governance has a positive effect on the nation's economic performance. Improved governance (property rights, contract enforcement, and reduced corruption) can instil trust in migrants and recipient households, motivating them to invest, innovate, and actively participate in the economy rather than solely focusing on personal spending. This study also reported that the interaction between FDI and governance has a positive impact on Nigeria's economic performance. However, other factors besides governance can attract FDI and boost economic performance in emerging economies as Nigeria. These include macroeconomic conditions, exchange rate policy, a stable business environment, improved security, technological advancements, risk reduction, tax exemption policies, and the quality of human resources, among others. There are a few drawbacks to this particular study. This study's main limitation is solely relying on government effectiveness as a gauge of governance, disregarding other significant indicators like rule of law, political stability, control of corruption, voice, accountability, and absence of violence. This investigation's findings cannot be applied to other emerging and frontier economies due to its focus on a specific country. Further inquiries in this research space can focus on broadening the measurement of governance as a moderator of the FDI-economic performance nexus by incorporating other indicators of governance to ensure the robustness of the findings. To ensure the findings are applicable in a broader context, future research could include a cross-country analysis of emerging and frontier economies.

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