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IMPACT OF FOREIGN CAPITAL INFLOWS ON ECONOMIC GROWTH IN NIGERIA

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Abstract

Nigeria's economic landscape is marked by its position as one of the leading recipients of capital inflows in Africa, but has been facing challenges in effectively harnessing capital inflows for productive investments. Despite efforts to attract foreign investment through policy reforms and incentives; structural impediments such as inadequate infrastructure, weak institutional frameworks and low human capital development persist. Hence, this study examined the impact of foreign capital inflows on economic growth in Nigeria. The analysis considers variables including real gross domestic product, foreign direct investment, remittances, foreign portfolio investment, official development assistance, external debt, government capital expenditure on infrastructure, government expenditure on health, government expenditure on education, and institutional quality. Using an autoregressive distributed lag (ARDL) model, the findings revealed that foreign direct investments, Remittances, official development assistance and external debt positively influence economic growth in both the short and long run. Importantly, infrastructure development and institutional quality, not only directly enhance growth, but also amplify the effectiveness of other economic variables like foreign direct investment and remittances. Based on the findings, it is recommended that there should improvement of Nigeria's absorptive capacity through better infrastructure and institutional quality to optimize the benefits of capital inflows. Moreover, addressing structural barriers will enable Nigeria to better harness foreign capital inflows and drive economic growth.

***Keywords*:** Foreign capital inflows, Economic growth, Government expenditure, ARDL model
JEL Codes: F21, F43

1. Introduction

Nigeria's economic growth has been characterized by periods of rapid expansion as well as significant challenges, (International Monetary Fund [IMF], 2023). Nigeria has

struggled with persistent issues such as fluctuating oil prices, inadequate infrastructure, high unemployment rates, and political instability (Ojo & Olaniyan, 2020). These challenges have impeded sustainable growth and economic diversification, making the country highly vulnerable to external shocks. The dependence on oil revenues has led to a neglect of other critical sectors, resulting in an economy that is not only vulnerable but also unable to fully harness its vast potential in agriculture, manufacturing, and services (Muhammad & Afroz, 2023). In this context, foreign capital inflows can play a pivotal role in revitalizing Nigeria's economic growth. The infusion of foreign capital through mechanisms such as foreign direct investment (FDI), portfolio investments, and remittances provides essential financial resources that can stimulate economic growth, enhance productivity, and foster technological advancements (Ibe & Ude, 2021). Foreign capital inflows can bridge the savings-investment gap, providing much-needed funds for infrastructural development and industrialization, which are critical for economic diversification.

Nigeria faces challenges in effectively harnessing capital inflows for productive investments. Despite efforts to attract foreign investment through policy reforms and incentives, structural impediments such as inadequate infrastructure, weak institutional frameworks, and bureaucratic inefficiencies persist (Adekunle & Suliamon, 2018). These barriers deter foreign investors and constrain the transformative potential of capital inflows on the economy. Furthermore, there are concerns about the misallocation of resources, with a significant portion of foreign investment directed towards sectors such as real estate and financial speculation rather than productive sectors that could drive sustainable growth and development, (United Nations Conference on Trade and Development [UNCTAD], 2023). Addressing these challenges requires comprehensive reforms to improve the investment climate, enhance infrastructure, and strengthen institutions to ensure that capital inflows contribute meaningfully to Nigeria's economic development agenda.

To attract foreign capital inflows, the Nigerian government has implemented a series of strategic initiatives and policy reforms aimed at creating a conducive investment climate (IMF, 2023). Key among these efforts is the establishment of the Nigerian Investment Promotion Commission (NIPC), which serves as a one-stop agency for investment

facilitation, providing investors with necessary information and assistance (Ewubare & Nwabueze, 2019). Additionally, the government has made significant strides in improving the ease of doing business by streamlining regulatory procedures, reducing bureaucratic bottlenecks, and enhancing transparency (Dauda & Ibrahim, 2022). The enactment of the Companies and Allied Matters Act (CAMA) 2020 has modernized business registration processes, making it easier for foreign companies to establish operations in Nigeria. Furthermore, various sector-specific incentives, such as tax holidays, duty exemptions, and investment allowances, have been introduced to attract investments in key sectors like agriculture, manufacturing, and technology.

In Nigeria, periods of significant foreign capital inflows have coincided with notable economic expansions, as evidenced by the growth spurts following economic liberalization policies in the mid-1980s and the early 2000s (Iheanacho, 2020). However, the volatility of these inflows, often influenced by global economic conditions and domestic policy uncertainties, poses challenges for sustainable growth. The reliance on volatile portfolio investments, in particular, has exposed the Nigerian economy to external shocks, necessitating robust economic management and policy responses (Olokoyo, Adetunji, & Oke, 2019). Despite widely acknowledged potentials of capital inflow to spur economic growth, scholarly consensus on their overall impact remains elusive. Scholars such as Ibrahim and Alagidede (2018); Edo, Osadolor and Ede (2020); Nwosa (2021), argue that foreign investments, notably FDI, can significantly boost economic growth by providing capital, transferring technology, and fostering employment opportunities. Conversely, scholars like Adams (2018), Lensink and Morrissey (2020), Kim (2020) caution against overestimating the benefits, citing factors such as institutional quality, financial development, and absorptive capacity as crucial determinants. They warn of potential drawbacks, including crowding out domestic investments and exacerbating economic instability. The debate underscores the nuanced relationship between foreign capital inflows and economic growth, highlighting the need for context-specific analyses. In Nigeria, where economic performance fluctuates and the effects of foreign investments vary across sectors, this debate is particularly pertinent. Therefore, this study examined the impact of capital inflows on economic growth in Nigeria.

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2. Review of Related Literature

This section of the work deals with the theoretical and empirical reviews. Foreign capital inflows have been a subject of extensive theoretical and empirical investigation, with scholars presenting diverse views on their impact on economic growth. The mixed empirical findings highlight the complexity of this relationship, indicating that the effects of foreign capital inflows can significantly vary based on the host economy's context and conditions.

The Neoclassical growth theory posits that capital accumulation is a key driver of economic growth. Foreign capital inflows, such as foreign direct investment (FDI), can complement domestic savings, leading to higher investment levels and, consequently, economic growth. By transferring technology, skills, and managerial know-how, FDI can enhance productivity and growth (Ukoh, 2023). Furthermore, endogenous growth theory suggests that foreign capital inflows can directly affect growth through technological innovation and human capital development. According to this theory, policies that attract FDI can lead to sustained economic growth by fostering innovation and improving human capital (Cyprian, 2020).

Empirical Literature

Empirical studies offer diverse findings on the relationship between foreign capital inflows and economic growth, reflecting the complex interplay of various factors in different contexts. Nwankwo and Chukwu (2023) examined the impact of foreign capital inflows on economic growth in Ghana from 1990 to 2020. They used variables such as real GDP, foreign direct investment (FDI), portfolio investment, external debt, and remittances. Employing the autoregressive distributed lag (ARDL) model and Granger causality tests, the study found that while FDI positively influenced economic growth, both external debt and portfolio investment negatively impacted GDP. Remittances had a negligible effect on growth. The study concluded that excessive reliance on foreign capital could lead to economic vulnerabilities. In a similar vain, Afolayan and Adeyemi (2023) investigated the effect of foreign capital inflows on economic performance in Kenya between 1985 and 2021. The variables included GDP, FDI, external debt, foreign aid, and remittances. Using vector error correction model (VECM), they discovered that external debt and foreign aid had a significant negative impact on GDP. Foreign direct investment showed a positive but insignificant effect, but

remittances had a negative and insignificant impact. The study highlighted the risks associated with high levels of foreign debt and aid dependency.

Mbogo and Kamau (2023) analysed the influence of foreign capital inflows on economic growth in Tanzania from 1995 to 2020. The study incorporated variables like real GDP, FDI, portfolio investment, and remittances. Using the generalized method of moments (GMM) for dynamic panel data, the findings indicated that portfolio investment negatively affected economic growth, while FDI had a minimal positive impact. Remittances showed no significant effect on GDP. The study emphasized the destabilizing effects of volatile foreign portfolio investments. Bello and Suleiman (2023) studied the relationship between foreign capital inflows and economic growth in Nigeria between 1981 and 2020. Variables included real GDP, FDI, external debt, foreign aid, and remittances. The researchers employed the ARDL model and ECM and the results revealed that external debt had a significant negative effect on economic growth, while FDI and foreign aid had positive but insignificant impacts. Remittances also negatively affected GDP. The study underscored the adverse effects of growing external debt on Nigeria's economy.

Ayebaemi and Moses (2022) examined the effect of foreign capital inflows on economic performance in Nigeria between 1981 and 2020.The variables used in this study are real gross domestic product (RGDP) remittance (REM) net official assistance (NOA), foreign direct investment (FDI), gross capital formation (GCF) and real interest rate. Using a system-wise Johansen cointegration test, ECM, and the Granger causality test, the study finds a negative and negligible link between FDI and GDP. The association between REM and NOA and GDP is favourable but negligible. The study discovered that foreign capital inflow factors such as FDI, REM, and NOA had a negligible short-run effect on economic development in Nigeria. However, if the influx is steady throughout time, they had a major effect in the long run. Additionally, the study discovered that gross capital formation had a substantial effect on economic growth in both the short and long run. Chude and Chude (2022) examined the effect of international capital inflows on economic growth in Nigeria, between the period of 1981 to 2021. The variables used were foreign direct investment, international

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workers' remittance, foreign aid as well as real gross domestic product. The researcher employed the ECM and the findings revealed that foreign aid had a positive impact and is statistically significant. Foreign direct investment was also positive and statistically significant. Workers' remittance was negative and statistically insignificant. The study concluded that international capital inflows had positive and significance effect on the economic growth of Nigeria.

Ayenew (2022) investigates the impact of foreign financial inflows on the economic growth of 31 sub-Saharan African countries over the period 2009 to 2019. The variables used are; remittance inflows, foreign direct investment, official development assistance, and external debt. The study employed a two-step system GMM due to its practical advantage on the dynamic panel data set. The finding shows that only foreign direct investment has a significant and positive contribution to economic growth. Official development assistance and external debt affect economic growth negatively, and they are statistically significant. Remittance inflow affects economic growth negatively, but it is statistically insignificant. Urama, et al. (2022) empirically investigate the effect of foreign capital inflows and some selected macroeconomic variables on economic growth in Nigeria for the period, 1981-2020. The variable used are real gross domestic product, export earnings, foreign direct investment, official development assistance, external debt, personal remittances, exchange rate, money supply and gross domestic investment. The study applied the autoregressive distributed lag (ARDL) model and found that foreign capital inflows, FDI, gross fixed capital formation and personal remittances had significant impact on real gross domestic product in Nigeria. Similarly, Oluwole (2022) investigated how foreign capital inflows affected economic development in Nigeria from 1986 to 2019. The variables used for the study were per capita income, foreign direct investment, foreign portfolio investment, exchange rate, and inflation. The study made use of ARDL for estimation and found that foreign capital inflows had a significant impact on per capita income in Nigeria.

Oyegoke and Amali (2022) empirically estimated the effects of international labour emigration and remittances on economic development in Nigeria, using annual time series data for the period 1977-2021. The variables are human capital development index proxy for economic development, remittance, and net migration rate. The

findings revealed a significant positive effect on economic development in Nigeria by applying the OLS technique. Egburu, Nwikina and Gbarato (2022) also examined the growth effect of foreign capital inflows and investment on Nigeria from 1986 to 2020. Foreign direct investment (FDI), foreign portfolio investment (FPI), external debt stock (EXD), foreign aid (FA) were used as proxies for foreign capital inflows and investment, while GDP per capita (GDPPC) was used as the measure of economic growth. Data were analysed using autoregressive distributed lag (ARDL) technique and the results revealed that FDI, FPI, and FA positively influenced GDP per capita in Nigeria. However, EXD and EXR exhibit negative influence on GDPPC.

Nguyen, Pham, Tran, Nguyen (2021) examine the impact of foreign capital inflows on economic growth in Vietnam from 1995 to 2018.The variables includes FDI, foreign aid, foreign loans, exports and GDP approach. The study adopted both correlation and regression analysis and found that FDI (net inflows), foreign aid, foreign loans, exports, and GDP (current) had positive effects on economic growth. An increase in FDI (net inflows), foreign aid, foreign loans, and exports had beneficial effects on the Vietnamese economy in the study period. In a similar study in Ethopia from 1980 to 2019, Assefa (2021) found that foreign capital inflow, export, labour force, and human capital had positive significant effects on economic growth. While, gross fixed investment was positively affected by foreign capital inflow, export and external debt.

Ndugbu, Otiwu and Uzowuru (2021) examined the relationship between foreign portfolio investment and economic growth in Nigeria between the periods 1986 to 2017. The variables are market capitalization, foreign portfolio investment and trade openness were the independent variables while gross domestic product is proxy for economic growth in Nigeria. The study employed the ECM and granger causality test technique. Findings revealed that only trade openness and market capitalization proved to be significant in promoting economic growth in Nigeria while foreign portfolio investment is negative and insignificant. Origin, Ubah and Njideka (2021) examined the effect of capital importation on economic growth in Nigeria (2010-2019) the variables used are RGDP, FDI, portfolio investment, and other financial investment. The study made use of vector Auto regression (VAR) as estimation technique. The finding showed that capital

importation had positive and significant effects on economic growth in Nigeria. The study did not properly disaggregate capital inflows to include remittances and foreign aids.

3. Methodology

To empirically assess the impact of foreign capital inflows on economic growth in Nigeria, this study employs time series data which was sourced from Central Bank of Nigeria Statistical Bulletin (2023) and World Development indicators, WDI (2023). The study made use of the ARDL model to capture both the short-term and long-term effects of foreign capital inflows on the Nigerian economy. This methodology is consistent with recent empirical studies, such as Urama et al. (2022), which have successfully applied ARDL in similar contexts to uncover dynamic relationships between economic variables.

The functional specification is specified as follows;

RGDP = (FDI, REM, ODA, FPI, ED, GCEI, INSTQI, GEH, GEE) (3.1)

Where; RGDP = Real gross domestic product proxy for economic growth; FDI= foreign direct investment; REM= remittance inflows; ODA= official development assistance; FPI= foreign portfolio investment; ED= external debt; GCEI= government capital expenditure on infrastructural development; INSTQI= institutional quality index; GEH= government expenditure on health; GEE= government expenditure on education.

Equation (3.1) is specified in ARDL form as follows:$\Delta LRGDP_t = \propto_0 +$

$$\Delta LRGDP_t = a0 + \sum_{i=1}^{p} \delta_i \, \Delta LRGDP_{t-1} + \sum_{k=0}^{p} \beta_k \, \Delta LFDI_{t-k} + \sum_{k=0}^{p} \theta_k \, \Delta LREM_{t-k} + \sum_{l=0}^{p} y_l \, \Delta LODA_{t-l} + \sum_{l=0}^{p} y_l \, \Delta LFPI_{t-l} + \sum_{l=0}^{p} y_l \, \Delta LGEH_{t-l} + \uparrow \sum_{1=0}^{P} \gamma_1 \Delta LGCEI_{t-1} + \uparrow \sum_{1=0}^{P} \gamma_1 \Delta LINSTQI_{t-1} + \lambda_1 LRGDP_{t-1} + \lambda_2 LFDI_{t-1} + \lambda_3 LREM_{t-1} + \lambda_4 LODA_{t-1} + \lambda_5 LFPI_{t-1} + \lambda_6 LGEH_{t-1} + \lambda_7 LGCEI_{t-1} + \lambda_8 LINSTQI_{t-1} + \lambda_9 LGEE_{t-1} + \mu_t \quad (3.2)$$

where a_0 and refer to the autonomous component and white noise, respectively. The expression with the signs of summation in the equation is error correction. The parameter coefficients, δ, β, θ and γ denote the short run effects while lambda (λ) is the corresponding relationship in the long run.

4. Discussion of Results

Table 4.1: Descriptive Statistics Result

Var	Mean	Std	Max	Min	Skew	JB	Prob.
RGDP	44579.53	19805.54	74639.47	21462.73	0.187	3.605	0.165
FDI	2985.89	2627.41	8841.06	186.79	0.874	4.428	0.109
REM	111702.4	98054.63	243110.2	100.09	-0.099	4.867	0.088
ODA	1884.48	2280.26	11431.96	151.99	2.449	111.681	0.000
FPI	1701.21	3770.74	3691.34	-14992.4	-1.967	43.721	0.000
ED	35179.51	16172.85	76214.59	12961.87	1.239	9.840	0.007
GCEI	18.17	11054.63	31.82	2.59	0.352	3.256	0.002
INSTQ	0.87	25172.15	1.01	0.012	1.078	8.840	0.007
GHE	315.20	276.33	1102.46	2.34	1.127	8.419	0.0149
GEE	83.79	81.40	303.66	1.49	0.939	4.879	0.087

Source: Researchers' Computation using Eviews 10.

The descriptive statistics provided offer insights into the central tendencies, dispersion, and distribution of the variables used in the analysis, which are critical for understanding their behaviour in relation to Nigeria's economic context. Real gross domestic product (RGDP), representing economic growth, exhibits moderate variability, reflecting the fluctuations in Nigeria's economic performance over time. The distribution is nearly symmetric, suggesting that the growth rates do not deviate significantly from the mean. Foreign direct investment shows considerable variability, which is indicative of the volatility in foreign investments coming into the country. The skewness indicates a slight positive skew, meaning that there have been periods of relatively higher-than-average FDI inflows.

Remittances (REM), a significant source of foreign exchange for Nigeria, displays a distribution that suggests large variations, possibly due to fluctuations in global economic conditions affecting remittance flows. Official development assistance (ODA), which is crucial for supporting various development projects had an almost symmetric distribution, though it still shows a high level of dispersion, reflecting significant differences in aid received during different periods. Foreign portfolio investment (FPI) is

notably volatile and negatively skewed, which implies a higher frequency of lower values or potential outflows. This indicates instability in portfolio investments that might be influenced by global and domestic economic uncertainties. External debt (ED) reflects substantial growth over time as indicated by its positively skewed distribution. This suggests that Nigeria's external debt has been increasing, with several periods where the debt levels were significantly higher than average. Government capital expenditure on infrastructure (GCEI) and institutional quality index (INSTQI), crucial for sustainable development, show modest variation and are positively skewed. Government expenditure on health (GEH) and government expenditure on education (GEE) both demonstrate considerable dispersion and positive skewness. This indicates that while there have been instances of higher spending, such periods are not typical, and these expenditures are generally below average.

Table 4.2: Augmented Dickey Fuller (ADF) Statistic Result

Variables	ADF Statistic at level	ADF Statistic at first difference	Critical values of 5% at level	Critical values of 5% at first difference	P-values at level	P-values at first difference	Order of integration
RGDP	-1.211	-7.345	-2.965	-2.973	0.456	0.000*	I(1)
FDI	-1.328	-8.221	-2.965	-2.973	0.082	0.040*	I(1)
REM	-3.487	- 1.785	-2.965	-2.973	0.001*	0.562	I(0)
ODA	-2.349	-9.234	-2.965	-2.973	0.366	0.000*	I(1)
FPI	-1.587	-6.123	-2.965	-2.973	0.238	0.001*	I(1)
ED	-3.454	- 2.056	-2.965	-2.973	0.010*	0.471	I(0)
GCEI	-3.464	- 2.057	-2.965	-2.973	0.030*	0.471	I(0)
INSTQ	-1.587	-5.123	-2.965	-2.973	0.338	0.001*	I(1)
GEH	-1.345	-7.435	-2.965	-2.973	0.450	0.000*	I(1)
GEE	-1.322	-7.345	-2.965	-2.973	0.456	0.001*	I(1)

Note: * indicates significant at 5% of significance.

Source: Researchers' Computation using Eviews 10

Table 4.2 provides results from the Augmented Dickey-Fuller (ADF) test, which is used to determine the stationarity of the variables in the model. Real gross domestic product (RGDP), FDI, ODA, FPI, INSQ, GEH and GEE are non-stationary at the level. However, after the first difference, the ADF statistic became highly significant, meaning that they became stationary at the first difference, or integrated of order one, I(1). But, REM, ED and GCEI are stationary at the level, or integrated of order zero, I(0). This

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indicates that they do not require differencing to achieve stationarity, suggesting stability over time without trends or drifts.

Table 4.3: ARDL Bounds Co-integration Test Result

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	17.884	10%	1.894	2.891
K	9	5%	2.175	3.237
		1%	2.738	3.912

Source: Researchers' Computation using Eviews 10

Table 4.3 indicated the existence of co-integration. With a calculated F-statistic of 17.884, exceeding the critical values at significance levels (10%, 5%, 1%). It suggests the presence of co-integration, indicating a stable long-run relationship between the variables. This further informs our decision to adopt an ARDL Model for our analysis. The result of the ARDL model is presented in Table 4.4.

Table 4.4: Short Run ARDL Result

Dependent Variable: D(RGDP)

Variable	Coeff.	Std. Error	t-Stat	Prob.
C	0.541775	1.486232	0.364529	0.7213
D(LNRGDP(-1))	0.211307	0.023240	9.092384	0.0002
D(LNFDI(-1))	0.482112	0.079131	6.092580	0.0043
D(LNREM(-1))	0.542168	0.102511	5.288876	0.0055
D(LNODA(-1))	0.348470	0.054381	6.407937	0.0006
D(LNFPI(-1))	0.942059	0.422810	5.283462	0.0001
D(LNED(-1))	0.843341	0.345124	6.564631	0.0002
D(LNGCEI(-1))	0.943341	0.045124	6.464631	0.0000
D(LNINSTQ(-1))	0.553341	0.145124	7.764631	0.0000
D(LNGHE(-1))	0.961203	0.456343	7.064535	0.0001
D(LNGEE(-1))	0.532051	0.463242	5.352215	0.0011
ECT(-1)	-0.942059	0.411890	-2.287162	0.0016

Source: Researcher's Computation using Eviews 10

The results presented in Table 4.4 reveal important insights into the short-run dynamics of economic growth in Nigeria, as influenced by various economic factors. The constant term (C) is not statistically significant, suggesting that the intercept does not meaningfully contribute to explaining changes in RGDP, highlighting that other factors in the model are more critical in driving economic growth. The lag of RGDP shows a significant positive coefficient, indicating that past levels of economic growth positively influence current levels. Foreign direct investment (FDI) also had a significant positive impact on economic growth, emphasizing the importance of foreign investments in driving economic performance in the short run. This result suggests that increases in FDI inflows contribute positively to Nigeria's economic growth, supporting the role of FDI as a catalyst for economic expansion. Remittances significantly and positively affect economic growth. This implies that higher remittance inflows boost household consumption and investment, thereby supporting economic growth. Official development assistance (ODA) had a positive and significant effect on economic growth, suggesting that aid received by Nigeria positively impacts short-term economic growth, potentially by funding infrastructure and social programs.

Foreign portfolio investment (FPI) exerts a strong positive influence on economic growth, indicating that despite its volatility, FPI plays a crucial role in boosting economic activity in the short run. External debt also had a significant positive impact on economic growth. This finding suggests that when external debt is utilized effectively, it can contribute to economic expansion in the short run, likely by financing development projects. The significant positive coefficient for government capital expenditure on infrastructure underscores the critical role of infrastructure development in driving short-term economic growth. Government spending on infrastructure, such as roads, electricity, and communication networks, is shown to be instrumental in creating an environment conducive to economic activities and enhancing productivity. Institutional quality also emerged as a vital factor, with a positive and significant impact on economic growth. Improvements in institutional quality, including better governance and regulatory frameworks, provide the necessary foundation for economic growth by ensuring efficient resource allocation and stable economic activities. Government expenditure on health significantly and positively impacted economic growth, highlighting the role of health spending in promoting economic

growth by improving the overall productivity of the workforce. Similarly, government expenditure on education positively influenced economic growth, emphasizing the importance of investments in education for enhancing human capital and economic performance. Finally, the ECT is negative and statistically significant, indicating the speed at which the economy returns to its long-run equilibrium after a shock. The significant negative value suggests that deviations from the long-run equilibrium are corrected relatively quickly, with the economy adjusting back to its equilibrium path

Table 4.5: Long Run ARDL Result

Variable	Coefficient	Std. Error	t-Stat.	Prob.
LNFDI	0.568151	0.088120	6.447469	0.0010
LNREM	0.710387	0.098502	7.211904	0.0002
LNODA	0.541696	0.066938	8.092504	0.0000
LNFPI	0.452324	0.067871	8.023113	0.0010
LNED	0.562345	0.096781	7.034511	0.0001
GCEI	0.462345	0.026781	8.052504	0.0000
INSTQ	0.362345	0.036781	8.062504	0.0000
LNGHE	0.573234	0.075643	7.113462	0.0003
LNGEE	0.542431	0.678569	8.234511	0.0000

Source: Researchers' Computation using Eviews 10

The results presented in Table 4.5 provide insights into the long-run relationship between various economic factors and the dependent variable (economic growth). Each coefficient represents the expected change in the dependent variable for a one-unit increase in the respective independent variable, assuming all other variables are held constant. Foreign direct investment (FDI), indicated by the coefficient for LNFDI, had a positive and statistically significant impact on the dependent variable. The high t-statistic and low p-value confirm that increases in FDI lead to positive changes in economic growth in the long run. This result underscores the importance of sustained foreign investments in fostering long-term economic performance. Remittances (REM), represented by LNREM, also exhibit a strong positive and significant relationship with the dependent variable. The significant coefficient and t-statistic suggest that higher remittance inflows contribute to long-term economic growth, likely by bolstering household income and investment capacity. Official development assistance denoted by LNODA, had a positive and

statistically significant effect on the economic growth. The results indicate that increased aid flows are associated with long-term economic growth, potentially by financing essential public goods and services that drive economic development. Foreign portfolio investment (FPI), represented by LNFPI, positively influenced growth within the period. This suggests that portfolio investments, despite their potential volatility, are crucial for supporting economic growth over the long term by providing necessary capital for investment. External debt (ED), represented by LNED is positive and significant. This implies that, when managed properly, external debt can be a valuable tool for financing projects that contribute to sustainable economic growth over time.

Government capital expenditure on infrastructure (GCEI) is another critical factor, as shown by its positive and significant coefficient. This result indicates that long-term government spending on infrastructure, such as transportation, energy, and communication networks, plays a vital role in fostering sustained economic growth. Institutional quality (INSTQ) also had a positive and statistically significant effect on the dependent variable. The strong coefficient and t-statistic suggest that improvements in institutional quality, including governance, regulatory frameworks, and the rule of law, are crucial for achieving long-term economic growth. Better institutional quality ensures a stable environment for economic activities, attracting both domestic and foreign investments. Government expenditure on health (GHE), represented by LNGHE, had a significant positive impact on the dependent variable. This finding highlights the importance of health spending in the development process; as a healthier workforce contributes to higher productivity and economic growth. Similarly, government expenditure on education (GEE), shown by LNGEE, positively influences economic growth. The significant coefficient and t-statistic emphasize the critical role of education in long-term economic performance by enhancing human capital, which is essential for innovation, productivity, and growth.

In summary, the long-run ARDL results demonstrate that foreign investments, remittances, aid, external debt, and government expenditures on infrastructure, health, and education significantly contribute to economic growth. These findings suggest that a comprehensive approach, combining effective governance with strategic

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investments in critical sectors, is essential for achieving long-term economic growth in Nigeria.

Table 4.6: Serial Correlation Test

F-statistic	9.300232	Prob. F(2,12)	0.0891
Obs*R-squared	12.52466	Prob. Chi-Square(2)	0.0619

Source: Researchers' Computation using Eviews 10

From the result in Table 4.6, there is no significant evidence of serial correlation in the residuals of the regression model. A high F-statistic and a low probability value (below 0.05) would indicate serial correlation. In this case, with the F-statistic of 9.3 and the probability value of 0.09 < 0.05, we fail to reject the null hypothesis of no serial correlation.

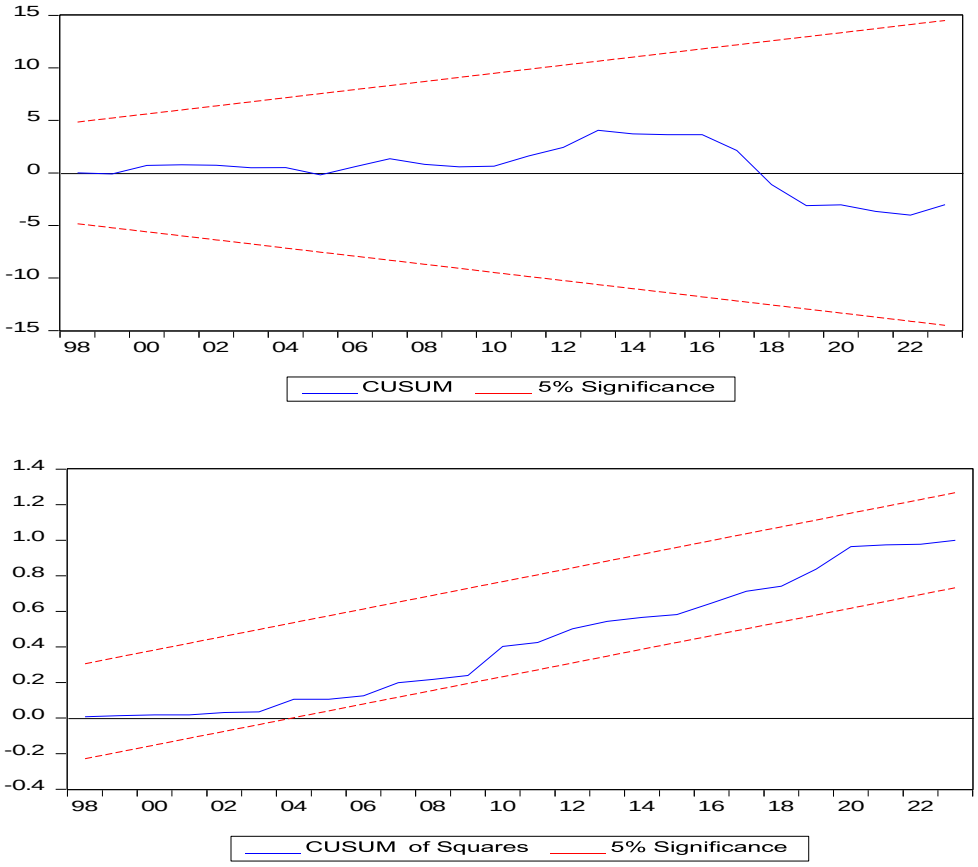

Fig 1: Stability test
Source: Computation using Eviews 10

The results from the stability test (Figure 1) reveals that the ARDL short-run model is

relatively stable and has passed the entire diagnostic test. Both the CUSUM and CUSUMSQ tests suggest that there is no evidence of autocorrelation in the results at the 5% level of significance.

5. Conclusion and Policy Suggestions

The findings from the analysis reveal that both short-run and long-run economic growth in Nigeria is significantly influenced by various economic factors, including foreign direct investment, remittances, official development assistance, foreign portfolio investment, and external debt. These factors positively contribute to economic growth, demonstrating their importance in driving Nigeria's economic performance. The results underscore the critical role of government expenditures on infrastructure, health, and education, which not only directly boost economic growth but also enhance the effectiveness of other economic variables. Moreover, the mediating role of institutional quality in these relationships highlights the necessity of sound governance and regulatory frameworks for sustained economic development. Based on the findings, we recommend that policymakers should prioritize improvements in institutional quality, including governance, regulatory frameworks, and the rule of law. Strengthening these areas will create a stable and conducive environment for both domestic and foreign investments, thereby enhancing the impact of economic factors like FDI and remittances on long-term economic growth. The government should continue to invest in infrastructure development, such as transportation, energy, and communication networks. These investments are crucial for fostering short- and long-term economic growth by creating an environment that supports economic activities and productivity. Allocating more resources to health and education sectors is vital for improving human capital, which is essential for sustainable economic growth. A healthier and more educated workforce will lead to higher productivity and innovation, contributing to long-term economic performance. Government should ensure that borrowed funds are properly managed and invested in developing infrastructure, health, and education to maximize their impact on the economy. The government should create an environment that will attract more FDI and encourage remittances. These inflows are significant drivers of economic growth and should be leveraged to support national development objectives.

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