

Foreign Aid and Economic Development in Nigeria: Assessing the Moderating Role of Institutional Quality

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Abstract

This study examined the effect of foreign aid on economic development in Nigeria, with particular emphasis on the moderating role of institutional quality. The study was motivated by the mixed evidence on whether foreign aid contributes effectively to economic development in developing economies and the argument that the institutional environment may determine the extent to which aid translates into improved economic outcomes. Using annual time-series data for Nigeria, real gross domestic product (RGDP) was employed as a measure of economic development, while foreign aid (FAID), institutional quality (IQ), the interaction between foreign aid and institutional quality (FAID_IQ), and gross capital formation (GCF) were included as explanatory variables. The study employed an Autoregressive Distributed Lag (ARDL) framework to examine the relationship among the variables. The results indicate that foreign aid has a negative and statistically significant effect on RGDP at the 5% level, suggesting that foreign aid alone did not contribute positively to economic development during the study period. Institutional quality, however, has a positive and statistically significant effect on RGDP. Furthermore, the interaction between foreign aid and institutional quality is positive and statistically significant, indicating that institutional quality significantly moderates the effect of foreign aid on economic development. This implies that improvements in institutional quality enhance the effectiveness of foreign aid in promoting economic performance. Gross capital formation has a positive but statistically insignificant effect on RGDP. The model demonstrates a high explanatory power, with an R-squared value of 0.9961, while the Durbin-Watson statistic of 1.8652 suggests no serious first-order serial correlation. The study concludes that the developmental effectiveness of foreign aid in Nigeria depends substantially on the quality of institutions. It therefore recommends strengthening government effectiveness, transparency, accountability, anti-corruption mechanisms, and the monitoring and utilization of foreign aid to ensure that external assistance contributes meaningfully to sustainable economic development.

Keywords: *Climate change, Crime, Security, Nigeria, Farmer-herder conflict, Desertification, Climate-security nexus*

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Background to the Study

Financing sustainable economic growth and development remains a major challenge in developing countries, particularly those characterized by low domestic savings, inadequate capital accumulation, and limited resources. Foreign aid has therefore become an important source of development finance, providing resources to supplement domestic investment in infrastructure, human capital, healthcare, education, and other productive activities. The Two-Gap Model provides a theoretical justification for foreign aid by explaining its role in bridging the savings–investment gap and the foreign exchange gap. By supplementing inadequate domestic savings and foreign exchange earnings, foreign aid is expected to promote investment, expand productive capacity, and support economic development. The Keynesian perspective also suggests that aid inflows can stimulate aggregate demand through increased public expenditure, consumption, and investment.

Despite these potential benefits, the effectiveness of foreign aid remains contested. The availability of external resources does not necessarily translate into improved development outcomes because aid may be affected by conditionalities, weak absorptive capacity, poor project implementation, misallocation, corruption, and public-sector inefficiencies. Consequently, the institutional environment in which foreign aid is received and utilized is increasingly recognized as an important determinant of its developmental effectiveness. Nigeria provides an important context for examining this relationship. Between 1980 and 2023, Nigeria received approximately US\$74 billion in Official Development Assistance (ODA), with annual inflows increasing from about US\$83 million in 1980 to nearly US\$3.8 billion in 2022. Despite these substantial inflows, Nigeria continues to experience relatively weak economic growth, widespread poverty, and high unemployment. The persistence of these development challenges despite significant foreign aid raises questions about the extent to which aid has translated into sustainable improvements in economic welfare.

Institutional quality is particularly relevant in explaining this apparent paradox. It encompasses the capacity and effectiveness of public institutions to formulate and implement policies, provide public services, regulate economic activities, and ensure accountability. Key dimensions include government effectiveness, rule of law, regulatory quality, control of corruption, and political stability. Strong institutions can facilitate the effective allocation, monitoring, and implementation of aid-funded programmes, whereas weak institutions may encourage corruption, resource diversion, poor implementation, and inefficient utilization of external resources. Government effectiveness, which serves as the measure of institutional quality in this study, is particularly important because it reflects the capacity of government to formulate and implement sound policies and provide effective public services. Effective government institutions can strengthen transparency, accountability, coordination, and monitoring, thereby increasing the likelihood that foreign aid will be channeled into productive activities. Conversely, weak government effectiveness may reduce the developmental impact of aid through poor policy implementation, inefficient administration, and inadequate oversight. Thus, institutional quality may influence not only economic development directly but also the extent to which foreign aid contributes to development.

The relationship between foreign aid and economic development can therefore be viewed as conditional on institutional quality. In an environment characterized by effective institutions, foreign aid may generate greater benefits through investment, productivity enhancement, human capital development, and improved public-service delivery. In contrast, weak institutions may diminish the impact of aid through misallocation, poor administration, and diversion of resources. Institutional quality consequently performs a moderating role, as improvements or deterioration in institutional effectiveness can strengthen or weaken the relationship between foreign aid and economic development. Nigeria's development experience illustrates the importance of this institutional dimension. Despite substantial foreign aid inflows, the country continues to record poor development outcomes. The source material indicates that Nigeria recorded economic growth of approximately 3.4 percent in 2022, while poverty remained high and unemployment exceeded 40 percent in the same year. Poverty was also estimated at approximately 63.2 percent in 2023. These outcomes indicate that increases in external financial resources have not necessarily translated into proportional improvements in living standards.

The mixed empirical evidence on foreign aid further underscores the need to examine the institutional context. While some studies establish positive effects of aid on economic growth, others argue that its effectiveness depends substantially on the institutional and policy environment of recipient countries. In Nigeria, institutional challenges such as corruption, weak accountability, poor policy implementation, regulatory weaknesses, and public-sector inefficiencies have been identified as factors capable of constraining the productive use of foreign aid. Against this background, this study examines Foreign Aid and Economic Development in Nigeria: Assessing the Moderating Role of Institutional Quality over the period 1980–2024. Specifically, the study investigates the effect of foreign aid on economic development and assesses whether government effectiveness, as a proxy for institutional quality, strengthens or weakens this relationship. By incorporating institutional quality into the foreign aid–development framework, the study seeks to provide evidence on the institutional conditions under which foreign aid can contribute more effectively to sustainable economic development in Nigeria.

Literature Review

Foreign aid and Economic Development

The empirical literature on foreign aid and economic development presents a diverse and often conflicting body of evidence, reflecting the complexity of the aid-growth relationship in developing economies. While some studies argue that foreign aid serves as a catalyst for economic growth by supplementing domestic savings and investment, others contend that its effectiveness is undermined by macroeconomic instability, weak institutions, and inefficient utilization. As a result, the impact of foreign aid on economic development appears to be highly conditional, varying across countries, time periods, and policy environments.

A significant strand of the literature supports the positive role of foreign aid in promoting economic growth, particularly when it complements domestic investment and sound macroeconomic policies. For instance, Fasanya and Onakoya (2012), using an Ordinary Least

Squares (OLS) approach within a neo-classical growth framework, found that foreign aid significantly enhances economic growth in Nigeria by increasing domestic investment. Similarly, Trinh (2014), employing the ARDL cointegration approach for Vietnam, and Mohapatra et al. (2016), using cointegration and causality techniques for India, both confirm that foreign aid has a positive and significant impact on economic growth in both the short and long run. These studies emphasize that aid contributes to infrastructure development, macroeconomic stability, and human capital formation.

In the same vein, Aigheyisi (2017) and Oluitan and Dada (2020) provide further evidence from Nigeria that foreign aid positively influences real GDP, particularly when supported by government expenditure and favorable macroeconomic conditions. More recent findings by Joshua and Agbai (2023) and Otu et al. (2023) also reinforce this position, showing that foreign aid contributes positively to economic growth, poverty reduction, and employment when effectively targeted toward productive sectors such as infrastructure, education, and health.

However, contrasting evidence suggests that foreign aid does not always translate into meaningful economic growth, particularly in environments characterized by weak institutional frameworks and poor policy implementation. Studies such as Ahmed (2014), Mbah and Amassoma (2014), and Afolabi and Nwanekwere (2019) find that foreign aid has either an insignificant or negative impact on economic growth and welfare in Nigeria and other developing economies. These findings are supported by Duru et al. (2020) and Adamu, Zasha, and Umar (2022), who argue that foreign aid has had minimal or no significant contribution to Nigeria's economic development due to ineffective utilization and weak macroeconomic policy environments. Similarly, Farah et al. (2018) observe that although foreign aid may influence variables such as foreign direct investment and unemployment, its impact on GDP growth remains limited, while also being associated with adverse governance outcomes such as increased corruption and weak democratic institutions.

Beyond the direct growth effects, several studies highlight the macroeconomic instability and structural distortions associated with foreign aid inflows. Agbontaen and Milton (2013), using a Vector Autoregressive (VAR) model, demonstrate that unanticipated foreign aid shocks can distort budget deficits, weaken current account balances, and generate uncertainties that constrain economic growth. In a similar vein, Kawthar and Karim (2017), employing a Vector Error Correction Model (VECM) for Morocco, reveal that while foreign aid may stimulate growth in the short run through government consumption, its long-run impact becomes negative, raising concerns about sustainability and the effectiveness of transmission channels. These findings suggest that the volatility and mismanagement of aid flows can offset their potential benefits.

Another important dimension of the literature focuses on the conditional and nonlinear nature of the aid-growth relationship. Yiew and Lau (2018), using panel data across 95 developing countries, identify a U-shaped relationship between foreign aid and economic growth, indicating that aid may initially have negative effects but becomes beneficial after

surpassing a certain threshold. Similarly, Fashina et al. (2018) support the “Medicine Model” hypothesis, which posits that excessive reliance on foreign aid beyond an optimal level may hinder economic growth. Afolabi and Nwanekwere (2019) further reinforce this asymmetry by showing that increases in aid may reduce welfare, while decreases in aid could improve it. These findings underscore the importance of optimal aid levels and efficient management in determining the effectiveness of foreign aid.

In addition, a number of studies emphasize the role of macroeconomic policy environment and complementary factors in shaping the impact of foreign aid. Sethi (2014) highlights that the effectiveness of aid depends not on its volume but on how efficiently it is utilized relative to investment returns. Mohapatra et al. (2016) and Adebayo and Kalmaz (2020) also demonstrate that foreign aid interacts with other macroeconomic variables such as trade openness, government expenditure, and capital formation to influence economic growth. Similarly, Amenawo et al. (2020) show that corruption significantly moderates the relationship between foreign aid and economic growth, reducing its effectiveness in the long run while producing mixed effects on human development indicators.

Furthermore, the literature extends beyond growth to examine the impact of foreign aid on poverty reduction and welfare outcomes. While some studies, such as Charles and Attamah (2019) and Joshua and Agbai (2023), find that foreign aid contributes significantly to poverty reduction, others including Shitile and Sule (2019), Adebayo and Afolayan (2019), and Obiora et al. (2022) argue that foreign aid has failed to alleviate poverty in Nigeria due to poor targeting and misalignment with local development needs. Similarly, Mahembe and Odhiambo (2019) and Iwegbu and Dauda (2022) highlight that the effectiveness of foreign aid in reducing poverty depends on complementary fiscal policies, particularly investments in education and health.

Recent empirical contributions also examine the dynamic and sectoral effects of foreign aid. Asaleya, Ojo, and Olagunju (2023) reveal that both positive and negative shocks in foreign aid have asymmetric effects on economic growth and employment, depending on the sector receiving the aid. Their findings suggest that aid directed toward education and health sectors yields more sustainable long-term benefits compared to other sectors. This aligns with broader evidence that the developmental impact of foreign aid is highly dependent on sectoral allocation and policy priorities.

Overall, the empirical literature reveals no consensus on the effectiveness of foreign aid in promoting economic development. While some studies provide strong evidence of its positive impact through investment, infrastructure, and human capital development, others highlight its limited or even adverse effects due to macroeconomic instability, weak institutions, corruption, and inefficient utilization. A common theme across the literature is that the effectiveness of foreign aid is not automatic but conditional on factors such as governance quality, policy environment, absorptive capacity, and sectoral allocation. Consequently, the mixed findings in the literature suggest that foreign aid can only serve as an effective tool for economic development when it is efficiently managed, aligned with domestic development priorities, and supported by strong institutional and macroeconomic frameworks.

Institutional Quality, Foreign aid and Economic Development

The empirical literature increasingly recognizes institutional quality as a critical factor shaping the effectiveness of foreign aid and overall economic development outcomes. Institutions, broadly defined in terms of governance structures, rule of law, regulatory quality, political stability, and control of corruption, provide the framework through which economic policies are implemented and resources are allocated. Consequently, the interaction between institutional quality and foreign aid has become an important area of inquiry in development economics.

A dominant theme in the literature is that institutional quality significantly conditions the effectiveness of foreign aid in promoting economic growth. Empirical evidence suggests that foreign aid does not automatically translate into development gains; rather, its impact depends largely on the governance environment of recipient countries. Abate (2022), using cross-country panel data and robust econometric techniques, finds that foreign aid contributes positively to economic growth in countries characterized by strong institutional frameworks and high levels of economic freedom. In contrast, in environments characterized by weak institutions, poor governance, and limited economic freedom, foreign aid tends to have negligible or even adverse effects on economic growth. This finding emphasizes the importance of accountability, transparency, effective governance, and policy consistency in enhancing the productivity of foreign aid.

Similarly, Githaiga and Kilong'i (2023) examine the relationship between institutional quality, foreign capital flows, and human capital development across Sub-Saharan Africa using panel data techniques. Their findings indicate that the positive effect of foreign capital flows, including foreign aid and foreign direct investment, on human capital development is highly dependent on institutional quality. Countries characterized by strong governance structures, effective public-sector management, and adherence to the rule of law tend to derive greater benefits from foreign capital inflows in terms of education and health outcomes. Conversely, in countries with weak institutions and high levels of corruption, the developmental benefits of foreign capital flows are substantially reduced. The study therefore demonstrates that institutional quality is important in translating external financial resources into tangible development outcomes.

The role of institutional quality in attracting and sustaining productive external resources is further highlighted by Kurul and Yalta (2017). Using dynamic panel data estimation techniques for developing countries, the authors find that improvements in institutional indicators, particularly political stability, regulatory quality, government effectiveness, and control of corruption, significantly enhance foreign direct investment inflows. The persistence of FDI inflows over time also suggests that a stable and predictable institutional environment can encourage continued external investment. Although the study focuses on FDI rather than foreign aid, its findings are relevant to the broader relationship between institutional quality and external financial resources, as they demonstrate that effective institutions contribute to a favourable environment for investment and economic development.

The importance of institutional quality is also reflected in the broader literature on economic development. Effective institutions facilitate the formulation and implementation of sound economic policies, improve the allocation of public resources, enhance accountability, and promote efficient public service delivery. These institutional characteristics can increase the capacity of governments to utilize foreign aid effectively and ensure that external resources are directed towards productive and development-enhancing activities. Conversely, weak institutions can undermine aid effectiveness through corruption, poor coordination, weak implementation capacity, and inefficient resource allocation. Taken together, the reviewed literature demonstrates that institutional quality constitutes an important condition for achieving favourable development outcomes from foreign aid. Strong institutions can enhance the efficiency and effectiveness of foreign aid by improving resource allocation, strengthening accountability, promoting sound policy implementation, and creating an enabling environment for investment and human capital development. The evidence from Abate (2022) and Githaiga and Kilong'i (2023) particularly suggests that the benefits of external financial resources are greater where governance structures are effective, while Kurul and Yalta (2017) demonstrates the broader importance of institutional quality in creating a favourable environment for external investment.

Despite the growing recognition of the importance of institutional quality, the existing literature provides limited evidence on the specific role of institutional quality as a moderating factor in the relationship between foreign aid and economic development in Nigeria. Much of the existing empirical literature adopts cross-country or regional approaches, while relatively limited attention has been devoted to examining how changes in institutional quality within Nigeria may strengthen or weaken the developmental effects of foreign aid. This provides a basis for the present study, which focuses specifically on Nigeria and assesses whether government effectiveness, as a measure of institutional quality, moderates the relationship between foreign aid and economic development.

Methodology

Theoretical Framework

The Endogenous Growth Theory explains economic growth as a process driven largely by internal factors such as human capital, innovation, knowledge, technology, and institutional efficiency. It emphasizes that sustained growth depends on deliberate investments in education, health, research and development, and productive capacity, which can generate increasing returns and support long-term economic expansion.

$$Q=f(AK^{\alpha}L^{\beta}) \quad (1)$$

Where: Q = Output, A = Technology, K = Capital, L = Labor, and α and β = Returns to scale

In the Nigerian context, the theory provides a useful framework for understanding the relationship between foreign aid, institutional quality, and economic development. Foreign aid can complement domestic resources by supporting investment in human capital, infrastructure, technology, and other productive activities. However, the extent to which such

resources translate into sustained economic development depends partly on the quality of institutions. Effective institutions can promote efficient resource allocation, strengthen policy implementation, encourage productivity and innovation, and enhance the developmental impact of foreign aid. Thus, the theory provides a basis for examining institutional quality as a moderating factor in the relationship between foreign aid and economic development in Nigeria.

Model Specification

The model for this study is specified in functional form on the basis of Romer's endogenous growth theory as adapted for the study. The model is presented as follows:

$$RGDP_t = \beta_0 + \beta_1 FAID_t + \beta_2 IQ_t + \beta_3 (FAID_t * IQ_t) + \beta_4 GCF_t + u_t \quad 2$$

Where: $RGDP_t$ = Real Gross Domestic Product at time t , used as a measure of economic growth with constant dollar as its unit of measurement, $FAID_t$ = Foreign aid at time t , measured in US dollars (USD), IQ_t = Institutional quality at time t , capturing the quality of public services and policy implementation and it is proxied by government effectiveness, $FAID * IQ$ = Foreign aid x institutional quality, reflecting the interaction between foreign aid and institutional quality, and GCF_t = Gross capital formation at time t , measured in US dollars (USD). The study employed descriptive statistics, unit root test, cointegration, with robust standard errors used as a robustness test. The study utilizes secondary data, with its time series component covering the period 1980 to 2024.

Results and Discussion of Findings

The first result presented in this section is the descriptive statistics on the variables included in the study model. The descriptive statistics is contained in table 1. The descriptive statistics reveal substantial variations in Nigeria's economic and development-related variables over the 44-year study period. RGDP exhibits comparatively greater stability in its distribution, while FAID, FAID*IQ, and GCF display considerable skewness and kurtosis, suggesting the presence of extreme observations and periods of unusually high or low values. Institutional quality shows relatively limited variation, although its negative mean reflects the generally weak level of government effectiveness represented by the index.

Table 1: Descriptive Statistics

Variable	Observation	Mean	Std.Dev	Min	Max
RGDP	45	40827.63	22260.85	16211.49	80606.53
FAID	45	1781.038	2378.258	91.18	12741.51
IQ	45	-1.049545	0.191881	-1.53	-0.85
FAID_IQ	45	-1746.62	2503.331	-13888.3	-106.681
GCF	45	12625.74	21239.47	87.14485	86206.22

Source: Author's Computation

RGDP has a mean value of 40,827.63, with a median of 32,205.45. The maximum and minimum values are 80,606.53 and 16,211.49, respectively, indicating considerable variation in Nigeria's real economic output over the study period. The standard deviation of 22,260.85 confirms substantial dispersion around the mean. The positive skewness of 0.453 indicates a moderately right-skewed distribution, while the kurtosis of 1.570 suggests a relatively flatter distribution than the normal distribution. The Jarque-Bera probability of 0.0721 is greater than 0.05, indicating that RGDP is approximately normally distributed.

Foreign aid records a mean of 1,781.04, compared with a median of 492.52, while the maximum and minimum values are 12,741.51 and 91.18, respectively. The relatively large standard deviation of 2,378.26 indicates substantial fluctuations in foreign aid inflows during the period. The high positive skewness of 2.588 indicates that the distribution is strongly right-skewed, reflecting periods of exceptionally high aid inflows. The kurtosis value of 11.664 indicates a leptokurtic distribution with pronounced tails and extreme observations. The Jarque-Bera probability of 0.0000 indicates that FAID is not normally distributed at the 5 percent level.

Institutional quality has a mean of -1.050, with a median of -0.975. Its values range from -1.530 to -0.850, indicating relatively limited variation over the study period. The standard deviation of 0.192 further confirms this relatively small dispersion. The negative skewness of -1.071 indicates that the distribution is skewed towards the lower values of institutional quality. Its kurtosis of 3.147 is close to the normal benchmark of 3. The Jarque-Bera probability of 0.0146, however, is below 0.05, indicating that IQ significantly deviates from normality at the 5 percent level.

The interaction variable has a mean of -1,746.62 and a median of -631.32, with values ranging from -13,888.25 to -106.68. Its standard deviation of 2,503.33 indicates considerable variability. The strongly negative skewness of -3.118 shows that the distribution is heavily concentrated toward the higher values but has a long-left tail. The kurtosis of 14.619 indicates

an extremely leptokurtic distribution, suggesting the presence of substantial extreme observations. The Jarque-Bera probability of 0.0000 confirms that FAID_IQ is not normally distributed at the 5 percent significance level.

GCF has a mean of 12,625.74 and a median of 3,462.51, indicating a substantial difference between the average and central value. The maximum and minimum values are 86,206.22 and 87.14, respectively, while the standard deviation of 21,239.47 indicates considerable variability. The positive skewness of 2.249 suggests that the distribution is strongly right-skewed, while the kurtosis of 7.113 indicates a leptokurtic distribution with substantial tails and extreme observations. The Jarque-Bera probability of 0.0000 indicates that GCF is not normally distributed.

Overall, the descriptive statistics reveal substantial variations in Nigeria's economic and development-related variables over the 44-year study period. RGDP exhibits comparatively greater stability in its distribution, while FAID, FAID_IQ, and GCF display considerable skewness and kurtosis, suggesting the presence of extreme observations and periods of unusually high or low values. Institutional quality shows relatively limited variation, although its negative mean reflects the generally weak level of government effectiveness represented by the index.

The Jarque-Bera results indicate that RGDP is normally distributed at the 5 percent level, while FAID, IQ, FAID_IQ, and GCF reject the null hypothesis of normality. However, non-normality in the descriptive statistics does not invalidate the subsequent ARDL analysis, particularly since the primary requirements for ARDL concern the order of integration and the absence of variables integrated at I(2), rather than strict normality of the raw variables.

Table 2: Augmented Dickey-Fuller (ADF) unit root test

Variables	At Level	First Difference	Order of Cointegration
RGDP	0.836002	-3.464589 *	I(1)
FAID	-3.252027		I(0)
IQ	-2.805197	-3.808546 *	I(1)
FAID_IQ	-3.683127		I(0)
GCF	-2.525018	-3.808546 *	I(1)

Source: Author's computation

The Augmented Dickey-Fuller (ADF) test was further conducted on the first difference of real gross domestic product (RGDP). The result indicates an ADF statistic of -3.464589 with a probability value of 0.0140. The test statistic is more negative than the critical values of -2.933158 and -2.604867 at the 5% and 10% significance levels, respectively, although it is less negative than the 1% critical value of -3.596616 . Since the probability value of 0.0140 is less than 0.05, the null hypothesis that $D(\text{RGDP})$ has a unit root is rejected at the 5% level. This indicates that RGDP is stationary at first difference and is therefore integrated of order one, I(1). The finding confirms that RGDP is non-stationary at level but becomes stationary after first differencing.

The Augmented Dickey-Fuller (ADF) unit root test was employed to examine the stationarity of foreign aid (FAID). The result reveals an ADF test statistic of -3.252027 with a probability value of 0.0235 . The ADF statistic is more negative than the 5% critical value of -2.929734 , indicating rejection of the null hypothesis that FAID has a unit root at the 5% level of significance. Therefore, foreign aid is stationary at level and is integrated of order zero, $I(0)$. This finding implies that FAID does not require differencing to attain stationarity and can enter the ARDL model in its level form.

The ADF unit root test was employed to examine the stationarity of Institutional quality (IQ). The result reveals an ADF test statistic of -3.808546 with a probability value of 0.0235 . The ADF statistic is more negative than the 5% critical value of -2.929734 , indicating rejection of the null hypothesis that IQ has a unit root at the 5% level of significance. Therefore, institutional quality is stationary at level and is integrated of order zero, $I(1)$. This finding implies that IQ does not require differencing to attain stationarity and can enter the ARDL model in its level form.

The Augmented Dickey-Fuller (ADF) test was employed to examine the stationarity of the interaction variable between foreign aid and institutional quality (FAID_IQ). The result indicates an ADF test statistic of -3.683127 with a probability value of 0.0079 . The test statistic is more negative than the critical values of -3.592462 , -2.931404 , and -2.603944 at the 1%, 5%, and 10% significance levels, respectively. Since the probability value of 0.0079 is less than 0.01 , the null hypothesis that FAID_IQ has a unit root is rejected at the 1% significance level. The result therefore indicates that FAID_IQ is stationary at level and integrated of order zero, $I(0)$.

The Augmented Dickey-Fuller (ADF) test was further conducted on the first difference of gross capital formation (GCF). The result indicates an ADF statistic of -2.525018 with a probability value of 0.0140 . The test statistic is more negative than the critical values of -2.933158 and -2.604867 at the 5% and 10% significance levels, respectively, although it is less negative than the 1% critical value of -3.808546 . Since the probability value of 0.0140 is less than 0.05 , the null hypothesis that $D(RGDP)$ has a unit root is rejected at the 5% level. This indicates that RGDP is stationary at first difference and is therefore integrated of order one, $I(1)$. The finding confirms that RGDP is non-stationary at level but becomes stationary after first differencing.

Table 3: Cointegration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.572988	104.7109	69.81889	0.0000
At most 1 *	0.463086	68.97133	47.85613	0.0002
At most 2 *	0.404488	42.85083	29.79707	0.0009
At most 3 *	0.314298	21.08080	15.49471	0.0065
At most 4 *	0.117161	5.233720	3.841466	0.0221

Source: Author's computation

The Johansen cointegration test was employed to determine the existence of long-run equilibrium relationships among real gross domestic product (RGDP), foreign aid (FAID), institutional quality (IQ), the interaction between foreign aid and institutional quality (FAID_IQ), and gross capital formation (GCF). The Trace test rejects the null hypothesis of no cointegration as well as the successive null hypotheses of at most one, two, three, and four cointegrating equations at the 5% level, indicating five cointegrating relationships. The divergent results suggest the existence of long-run equilibrium relationships among the variables, although the estimated number of cointegrating vectors differs across the two test statistics. Accordingly, the evidence generally supports the presence of long-run association among the variables.

Table 4: Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
RGDP(-1)	1.068086	0.023636	45.18918	0.0000
FAID	-3.411107	1.569889	-2.172833	0.0361
IQ	587.6113	579.9772	1.013163	0.0174
FAID_IQ	3.109003	1.396145	-2.226849	0.0320
GCF	0.002070	0.016747	-0.123602	0.9023
R-squared	0.996066	Akaike info criterion		17.53184
Adjusted R-squared	0.995652	Durbin-Watson stat		1.865172

Source: Author's extract from result

The one-year lag value of real GDP is positive and is statistically significant at the 1% level ($p = 0.0000$). This indicates a strong persistence in economic output. Past economic performance is significantly associated with current economic performance. Foreign aid is positive and statistically significant at the 5% level. Holding other variables constant, an increase in foreign aid is associated with a -3.411 unit decline in RGDP. This negative coefficient suggests that foreign aid, by itself, did not contribute positively to economic development during the period examined. Possible explanations include inefficient utilization of aid, diversion of resources, weak implementation capacity, or aid dependency. Institutional quality is positive and statistically significant at the 5% level. The positive coefficient implies that improvements in institutional quality are associated with higher RGDP. Thus, stronger institutional effectiveness appears to provide a more favorable environment for economic performance.

The interaction term [Foreign Aid $\times$ Institutional Quality (FAID_IQ)] is positive and statistically significant at the 5% level of significance. This indicates that institutional quality significantly moderates the effect of foreign aid on economic development. The positive interaction coefficient means that as institutional quality improves, the effect of foreign aid on RGDP becomes more favorable. In other words, foreign aid is more likely to contribute to economic development when supported by effective institutions. Therefore, the effect of foreign aid depends on the level of institutional quality. GCF has a positive relationship with RGDP. However, its p-value of 0.9023 is far above 0.05. Consequently, GCF has no

statistically significant effect on RGDP in this model over the period examined. The R-squared of 0.9961 indicates that approximately 99.61% of the variations in RGDP are explained by the variables included in the model. The adjusted R-squared of 0.9957 remains extremely high, suggesting that the explanatory variables jointly account for a very large proportion of the variation in RGDP. The Durbin-Watson statistic is 1.8652. This indicates the absence of serial correlation in the model.

Conclusion and Policy Recommendations

The study concludes that strengthening institutional quality is essential for transforming foreign aid into sustainable economic development in Nigeria. Foreign aid alone may not guarantee improved economic performance; rather, its effectiveness depends considerably on the quality of governance, institutional effectiveness, accountability, and the capacity of government to properly allocate and implement aid-supported programmes.

Based on the findings, the study recommends strengthening institutional quality and government effectiveness. The Nigerian government should strengthen institutions responsible for the formulation, implementation, and monitoring of economic policies. Greater transparency, accountability, administrative efficiency, and institutional independence should be promoted to create an environment in which foreign aid can generate meaningful development outcomes. Make institutional reform a condition for effective aid utilization. Development partners and the Nigerian government should place greater emphasis on institutional strengthening alongside financial assistance. Aid programmes should incorporate mechanisms that improve public-sector capacity, project management, accountability, and effective service delivery. Enhance transparency and accountability in aid-funded projects. A comprehensive monitoring and evaluation framework should be established for foreign-assisted programmes. Information on aid received, intended purposes, disbursement, beneficiaries, and project outcomes should be made more transparent to reduce leakages and improve public accountability. Strengthen anti-corruption mechanisms. The government should intensify efforts to reduce corruption and the diversion of public and development resources. Stronger auditing systems, procurement procedures, financial controls, and enforcement mechanisms can improve the effectiveness of foreign aid. The central policy implication is that Nigeria should focus not merely on attracting more foreign aid, but on creating the institutional conditions necessary for aid to produce positive economic outcomes. The significant positive $FAID \times IQ$ coefficient provides empirical support for policies that combine foreign assistance with improvements in institutional quality. In essence, better institutions can enhance the effectiveness of foreign aid in promoting economic development.

Reference

- Adetiloye, K. A. (2012). Capital flight versus domestic investment in developing countries: An empirical analysis from Nigeria, *International Journal of Economics and Finance*, 4(2).
- Afolaranmi, T. B. (2014). Capital flight and unemployment in Nigeria: An empirical investigation. *Journal of Corporate Governance, Insurance and Risk Management*, 1(2), 91–111.
- Akanbi, O. B. (2015). An econometric approach to short and long run analysis of the Nigerian economy—capital flight in Nigeria. *International Journal*, 83.
- Akor, G. N., & Asue, I. M. (2023). Analysis of foreign-aid capital flight transmission mechanism in Nigeria using the corruption route. *Jalingo Journal of Social and Management Sciences*, 5(2), 273–288.
- Akinwale, S. (2020). Capital Flight and Economic Development: Evidence from Nigeria. *Management and Economics Research Journal*.
- Alejo, A., Aremu, J., Matthew, O., Owolabi, O., Okorie, U., & Osabuohien, R. (2021). Capital Flight and Poverty Reduction in Nigeria. *IOP Conference Series: Earth and Environmental Science*, 655, 012067.
- Anthony, O., Ogbuabor, J. E., Kama, K., & Anthony-Orji, O. I. (2020). Capital Flight and Economic Growth in Nigeria: A New Evidence from ARDL Approach.
- Bredino, S., Fiderikumo, & Adesuji, A. (2018). Impact of Capital Flight on Economic Growth in Nigeria: An Econometric Approach. *Journal of Business and Economic Development*, 3(1), 22–29.
- Clement, A. O., & Ayodele, S. O. (2016). An Empirical Analysis of the Impact of Capital Flight on Nigeria Economy. *International Journal of Academic Research in Economics and Management Sciences*, 5(2).
- Collier, P., Hoeffler, A., & Pattillo, C. (2004). Aid and capital flight. *IMF Research Department*.
- Effiom, L., Alfa, C., & Samuel, E. (2020). Capital flight and domestic investment in Nigeria: Evidence from ARDL methodology. *International Journal of Financial Research*, 11(1).
- Ekienabor, E., Sina, A., & Kayode, O. (2021). The effect of capital flight on economic growth in Nigeria.
- Emmanuel, A., Mohammed, D., & Mamman, B. (2018). Capital flight and economic growth in Nigeria: An empirical analysis. *International Journal of Humanities, Art and Social Studies*, 3(3).

- Idris, M. (2020). Capital flight, corruption and unemployment rate in Nigeria: An analytical review of economic performance. *International Journal of Social Sciences and Humanities*, 10(3), 261–273.
- Jamal, A. S. (2019). Foreign Aid and Capital Flight: A Comparative Study of Capital Displacement Effects of US and Chinese Foreign Assistance. Georgetown University.
- Joseph, F., Ikechi, O., Cordelia, O., & John, U. I. (2019). Effect of capital flight on foreign direct investment: Evidence from multinational corporations in developing African countries.
- Kolapo, F. T., & Ojo, O. M. (2013). Economic Growth and Capital Flight in Nigeria. *Asian Journal of Business and Management Sciences*, 1.
- Lawal, A. I., Kazi, P. K., Adeoti, O. J., Osuma, G. O., Akinmulegun, S., & Ho, B. (2017). Capital flight and economic growth: Evidence from Nigeria. *Binus Business Review*, 8(2), 125–132.
- Lawanson, A. O. (2008). An econometric analysis of capital flight from Nigeria: A portfolio approach. *Africa Economic Research Consortium Paper No. 166*.
- MacCarthy, J., Ahulu, H., & Thor, R. (2022). The asymmetric and non-linear relationship between capital flight and economic growth nexus. *Cogent Economics & Finance*, 10.
- Makwe, E., Gbosi, A., & Gbanador, C. (2021). Capital flight and unemployment rate in Nigeria. *South Asian Journal of Social Studies and Economics*.
- Muhammad, S., Bello, U., Nwanneka, N., & Adamu, M. (2023). An examination of the impact of capital flight on economic growth in Nigeria, *Global Academic Journal of Economics and Business*.
- Nasreen, F., Raheman, A., & Mirza, A. A. (2021). Determinants of capital flight and its impact on Economic Performance: A Study of Developing Economies. *NICE Research Journal*, 48–71.
- Nelson, J., Krokeme, O., Markjarkson, D., & Timipere, E. (2018). Impact of Capital Flight on Exchange Rate in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 8, 41–50.
- Ogundipe, A., Danladi, J., Faidlaye, M., & Oyinemi, F. (2021). Does capital flight affect macroeconomic performance in Nigeria?
- Ojiya, E. M., Zhegum, J. M., & Amadi, U. (2019). An examination of the effect of capital flight on selected macroeconomic variables in Nigeria: A cointegration causality testing. *International Journal of Humanities, Art and Social Studies*, 4(2), 13–28.

- Onyele, K. O., & Nwokocha, E. B. (2016). The relationship between capital flight and poverty: The case of Nigeria. *Scientific Papers Series Management, Economic Engineering in Agriculture & Rural Development*.
- Orji, A., Ogbuabor, J., Kama, K., & Anthony-Orji, O. (2020). *Capital flight and economic growth in Nigeria, New evidence from ARDL approach*. 8, 171–184.