Impact of Foreign Capital Inflows and Institutional Quality on Inflation in Nigeria

Rukayat Abideen Yusuf, Michael S. Akpan (Ph.D.), Marvelous Aigbedion (Ph.D.)

Department Of Economics Bingham University, Karu. Nasarawa State, Nigeria

DOI: https://dx.doi.org/10.47772/IJRISS.2025.909000210

Received: 28 August 2025; Accepted: 03 September 2025; Published: 05 October 2025

ABSTRACT

For any developing country with an investment gap to achieve a desired rate of economic growth, foreign investment has to be given due consideration. Thus, foreign capital inflows are believed to be able to drive the Nigerian economy towards achieving her desired level of macroeconomic goals. The paper examined the impact of foreign capital inflows and institutional quality on inflation in Nigeria from 1990 to 2023. The paper used explanatory variables Foreign Direct Investment (FDI) Foreign Portfolio Investment (FPI) External Debt (EXD), institutional quality (IQ)and Inflation (INF) as the dependent variable. ARDL technique was used and the result revealed that foreign direct investment and institutional quality have significant impact on inflation. This result confirms the existence of a long-run relationship among foreign capital inflows, institutional quality, and inflation in Nigeria. While FPI and external exhibited significance only in the short run. These findings have critical implications for policy, particularly need to redirect capital inflows toward productive sectors, ensure fiscal responsibility, and strengthen institutions for sustainable development.

Keywords: Foreign Direct Investment, Foreign Portfolio Investment, External Debt, Inflation and Institutional Quality.

JEL CodeF21, F34, F43 D72

INTRODUCTION

Institutional quality has emerged as a fundamental determinant of macroeconomic outcomes, particularly in developing economies such as Nigeria. Institutions encompassing governance quality, regulatory effectiveness, political stability, and the rule of law are pivotal in shaping economic trajectories. In the context of inflation, institutional frameworks influence not only the formulation and implementation of monetary and fiscal policies but also the overall credibility and predictability of economic governance. Weak institutions are often associated with poor policy coordination, procyclical fiscal behaviour, and monetary instability, which collectively fuel inflationary pressures. Conversely, strong institutions can anchor expectations, enhance policy transmission mechanisms, and promote price stability (Rodrik, 2021; Dollar & Kraay, 2021).

In Nigeria, the institutional environment has long been characterized by bureaucratic inefficiencies, policy inconsistency, corruption, and weak enforcement of regulations. These institutional shortcomings have contributed to macroeconomic volatility, including persistent inflation, which undermines the purchasing power of households and distorts investment decisions. Empirical studies suggest that institutional weaknesses hinder the state's ability to respond effectively to inflationary shocks, thereby exacerbating their duration and intensity (Utile et al., 2021; Abubakar, 2020). In periods of economic crisis, such as the COVID-19 pandemic, Nigeria's institutional fragility has further exposed its vulnerability, resulting in diminished investor confidence and capital flight.

Simultaneously, foreign capital inflows comprising foreign direct investment (FDI), foreign portfolio investment (FPI), and external debt have been promoted as vital sources of finance for economic development in Nigeria. These inflows are expected to supplement domestic savings, introduce advanced technologies, and foster knowledge spillovers. However, the extent to which these benefits materialize depends significantly on the quality of the domestic institutional framework. In countries with strong institutions, foreign investments tend to be more productive, reinforcing macroeconomic stability and catalysing long-term growth. In contrast, in institutionally weak settings, such as Nigeria, foreign capital often fails to translate into meaningful development

outcomes and may instead fuel inflation through misallocation, corruption, or dependency on volatile short-term flows (Acemoglu & Robinson, 2020; World Bank, 2022).

Nigeria's policy history reflects substantial efforts to attract foreign investment through liberalization, incentives, and structural reforms. Despite these efforts, the macroeconomic impact of foreign capital inflows remains suboptimal. The economy's overdependence on oil exports further complicates the dynamics, as external shocks frequently disrupt investment flows and exacerbate inflationary cycles (UNCTAD, 2022). Empirical findings reveal that Nigeria's status as one of Africa's leading destinations for foreign capital has not been matched by significant progress in inflation control or inclusive economic development (Akinlo, 2004; Okodua, 2009; Umoh et al., 2012; Aga, 2014; Adofu et al., 2015; Mohammed & Mahfuzul, 2016).

The disconnect between capital inflows and macroeconomic performance highlights a crucial gap in the understanding of how institutional quality mediates the impact of foreign capital on inflation dynamics. Inflation the erosion of real income and a key indicator of economic instability warrants close examination in the context of foreign capital utilization and institutional strength. This study is motivated by the persistent challenge of inflation in Nigeria despite decades of substantial foreign capital inflows and policy interventions aimed at enhancing investment. Given the increasing recognition of institutions as critical channels through which economic variables operate, it becomes imperative to examine how institutional quality interacts with various forms of foreign capital to influence inflation outcomes.

The main objective of this paper is to examine the impact of foreign capital inflows and institutional quality on the inflation rate in Nigeria over the period 1990–2023. The specific objectives are to:

Determine how foreign direct investment (FDI) has impacted the inflation rate in Nigeria;

Investigate the effect of foreign portfolio investment (FPI) on the inflation rate in Nigeria;

Examine the impact of external debt on the inflation rate in Nigeria;

Determine the impact of institutional quality on the inflation rate in Nigeria

LITERATURE REVIEW

Conceptual Review

Foreign Capital Inflow

Foreign Capital Inflow (FCI) is defined as the investment made by foreign entities in a host country's economy, typically involving the acquisition of a substantial ownership stake in domestic enterprises (UNCTAD, 1998; OECD, 2002). Foreign capital inflow (FCI) is widely acknowledged for its capacity to stimulate economic growth by introducing capital, advanced technologies, and managerial expertise into the host economy (Borensztein et al., 1998; Lundan, 2008; Golitsis et al., 2018). Additionally, foreign capital inflows play a pivotal role in creating employment opportunities, thereby contributing to the overall socio-economic development of the host country (Kabashi, 2016).

Foreign Direct Investment

The World Bank (2022) stated that FDI occurs when capital flows into a company in an economy other than the investors to obtain a long-term managerial stake (10% or more of voting shares). Developing countries can leverage FDI as a source of external financing (Aust et al., 2020). According to the balance of payments, it is the total of equity capital, profits reinvestment, other long-term capital, and short-term capital (Bird & Choi, 2020).

Foreign Direct Investment (FDI) refers to an investment made by a firm or individual in one country into business interests located in another country, typically by acquiring ownership or controlling interest in foreign assets such as factories, subsidiaries, or production facilities (OECD, 2008). Unlike foreign portfolio investment, which involves passive holdings of financial assets, FDI is characterized by a long-term relationship reflecting a lasting interest and a significant degree of influence on the management of the enterprise (UNCTAD, 2021).

Foreign Portfolio Investment

FPI, according to Onuorah and Akujuobi (2013), is a category of foreign capital inflows that covers any transfer of financial resources and assets, including cash, tradable securities issued or backed by the government, bonds, equity shares, promissory notes, debentures, and money market instruments issued in a domestic stock market by residents of other countries with the intention of splitting profits. Foreign portfolio investment (FPI) is a type of foreign private capital, characterized by the international transfer of financial assets such as cash, stocks, and bonds to generate profit. This form of investment constitutes an important element of global capital flows (Kurt et al., 2013).

External Debt

Obadan (2004) defined external debt as an amalgam of claims against the government of a country held by public or private sector of a foreign economy, which may be interest or non-interest bearing. Public debt is made up in part of external or foreign debt and in part of domestic debt, which is not included in this analysis since it does not fall under the purview of international finance (Idowu, 2015).

External debt refers to the total public and private debt owed by a country to non-residents that must be repaid in foreign currency, goods, or services. It comprises obligations to foreign governments, multilateral institutions, commercial banks, and private bondholders, and it typically arises from the need to finance budget deficits, current account imbalances, or capital investment projects (World Bank, 2022). In developing countries, where domestic savings and revenues are often insufficient to support developmental needs, external borrowing becomes a crucial instrument for bridging the resource gap (Todaro & Smith, 2015).

Institutional Quality

Yildirim & Gokalp (2016), refer to Institutional Quality as the entire governance framework of societies that encompasses the rules, regulations, and organizations that structure human interactions and, consequently, dictate the results of all activities within a society. Differences in macroeconomic performance among countries cannot be separated from the formation, functioning and development of institutions which varies across societies (Yildirim & Gokalp, 2016). Institutional quality is one of the most important factors in enhancing the economic development of a country.

All over the world, the most crucial goal of any government to enhance economic growth is to endorse people's living standards (Ngo & Nguyen,2020). The differences in institutions worldwide produce significant variances in productivity growth, capital accumulation, education attainment, and so account for wealth disparities. Authors like Acemoglu et al. (2005), who consider institutions as crucial to economic development and divide them into extractive and inclusive categories, have specifically addressed the influence of institutions on the economy. In this study, Institutional Quality (IQ), plays a crucial role in shaping the relationship between independent variable (IV) and dependent variable (DV), which are foreign capital inflow and inflation.

Inflation

According to Colander (2006), inflation can be defined as a continual rise in the price level. Mankiw and Reis (1991) defined inflation as the percentage increase in the overall level of prices. For this study, inflation will be defined as the high and sustained increase in the general price level of an economy. The definitions above emphasize that the rise in price level must be prolonged. This implies that a one-time rise in the price level is not termed inflation. Inflation measures the change in absolute prices and is therefore given credence as its

occurrence tends to reduce the purchasing power (real value) of money and redistribute income away from those with fixed incomes to those with fixed expenditures (Boyes & Melvin, 2012). Lipsey (1964), regarding inflation identified two competing theories of causation: cost-push and demand-pull inflation.

According to him, cost-push inflation occurs when increases in the prices of factors of production cause increases in the price of final goods and that these changes can occur irrespective of the state of demand. The demand-pull hypothesis in reverse contends that it is the rise in demand for final goods that cause the rise in prices, these increases in prices leads to increases in the demand for factors of production which in turn causes a rise in factor prices. Inflation can be measured in a wide variety of ways of which the producer price index, GDP deflator and consumer price index are the most prominent (Colander, 2006). The GDP deflator is the most favoured measure, and it is measured as follows;

GDP deflator = Nominal GDP/Real GDP × 100 …….(2.1)

The effects of inflation are varied, but in general, they're both good and bad. Inflation can be a deterrent for saving or investing as there is uncertainty about what will happen, although it can also reduce the real burden of debt, keep prices from getting too high, and help to lower unemployment due to wage stability

Empirical Review

Asue et al., (2024) examined external debt pass-through to inflation in Nigeria using annual data from 1981 to 2020 based on the structural vector autoregressive (SVAR) model. The results revealed that an increase in external debt service leads to a significant depreciation of the exchange rate, which leads to a contemporaneous increase in inflation, while the direct response of inflation to external debt is statistically not significant.

Awogbemi et al. (2024) examined the effect of external debt on the inflation rate in Nigeria between 2008 to 2023. The dependent variable was the inflation rate, while the independent proxies were multilateral debt and bilateral debt. The Johansen cointegration test estimation was used based on the unit root test result with shows that external debt had no co-integration with the inflation rate in Nigeria. Based on regression analysis, it was found that the bilateral debt had a negative significant effect on the inflation rate in Nigeria while multilateral debt had a positive significant effect on the inflation rate in Nigeria.

Chete et al. (2024). Examined the effects of such macroeconomic variables as exchange rate, inflation rate, monetary policy rate (MPR), and gross domestic product (GDP) on the amount of foreign direct investment (FDI) flowing into Nigeria between 1981 and 2022. It looked at how regime change affected FDI inflows into Nigeria, which helped to better understand how the political system affects FDI. Using the autoregressive distributed lag (ARDL) model, the research discovered that the degree of openness and inflation rate are important in attracting FDI into Nigeria.

In a related study, Aimola et al. (2023) investigate the dynamic Granger-causality between public external debt, domestic debt, and inflation in Nigeria using annual data from 1986 to 2019. Employing the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration and the error correction model (ECM)-based Granger-causality test, the results indicate a unidirectional causal flow from inflation to external debt. The findings further reveal a feedback relationship between domestic debt and inflation in the short run, while causality runs from domestic debt to inflation in the long run.

Similarly, Kingsley Nwagu (2023) explores the impact of macroeconomic variables on foreign direct investment in Nigeria. Utilizing an ex post facto research design, the study examines how exchange rates, inflation rates, monetary policy rates (MPR), and gross domestic product (GDP) growth rates influence FDI inflows into Nigeria between 1986 and 2020. The ARDL bounds test is employed to assess the long-term relationship among the variables. The results indicate that GDP growth rate and monetary policy rate are the primary macroeconomic factors that positively influence FDI inflows, while inflation and exchange rates negatively affect FDI inflows. These findings highlight the complex interplay of macroeconomic variables in shaping FDI dynamics.

Opeyemi (2020) examined the impact of FDI and inflation on the economic growth of selected African countries between 1996 and 2018, using ordinary least squares (OLS) methods. The results indicate a strong and positive impact of FDI on economic growth in all five countries. Inflation exhibited a significant negative correlation with economic growth in four of the countries, with Egypt being the exception.

Idris and Suleiman (2019) looked at the impact of inflation on Nigeria's economic development between 1980 and 2017. The study used a vector error correction technique on the variables chosen, which include the country's exchange rate, GDP, inflation rate, and interest rate. The results show a long-term association between the variables and show that inflation and interest rates have a significant, long-term negative impact on Nigeria's economic development. The scope of the study is limited and cannot be used to explain the current situation of the economy and ARDL will be used instead of VECM.

Emenuga (2019). Look at the Impact of macroeconomic variables on foreign direct investment flow in Nigeria between 1986 and 2017. The factors under consideration are GDP, government size, exchange rate, inflation rate, and interest rate. The ARDL cointegration bound test and error correction model estimation was used. The findings of the ARDL test revealed that all of the factors under consideration had a substantial impact on Nigeria's foreign direct investment. The study also found out that there is a long-run relationship between macroeconomic variables and foreign direct investment in Nigeria.

Emmanuel et al. (2019). Examines the effect of exchange and interest rates on foreign direct investment in Nigeria from 2006 to 2018. They find that the exchange rate has a significant positive relationship with foreign direct investment, while the interest rate has a negative relationship, and inflation does not have a significant relationship with foreign direct investment. They used the Augmented Dickey Fuller test, the Johansen Co-integration test, and the error correction model to analyze the relationship between these variable

Anidiobu et al. (2018) used descriptive and ordinary least squares to analyze data for the years 1986–2015 to assess the impact of inflation on Nigeria's economic development. The outcome demonstrates that there is a negative negligible association between interest rates and the expansion of the Nigerian economy, whereas there is a large positive relationship between the inflation rate and the exchange rate. The scope of the study is limited and cannot be used to explain the current situation of the economy and ARDL will be used instead of ordinary least square.

Aimola and Odhiambo (2018) investigated how Nigerian state debt affected inflation. utilizing the 1983–2015 time period and the autoregressive distributed lag (ARDL) architecture. In the face of structural breakdowns, the cointegrating regression findings show evidence of a steady long-run link between inflation, total public debt, money supply, interest rate, economic growth, trade openness, and private investment. The influence of public debt on inflation is statistically negligible, according to empirical findings, regardless of whether the regression was in the short run or the long run. As a result, the study draws the conclusion that the public debt may not be the only factor contributing to inflation in Nigeria.

Young and Jong (2018). Examined the impact of foreign capital inflows on the domestic inflation rate, using data from the Korean economy over the period 2000-2016. They find that foreign capital inflows have a significant impact on the domestic inflation rate, with the direction of the impact depending on the type of capital inflow. They also find that the impact of foreign capital inflows on inflation has become more muted in recent years. They used an instrumental variable (IV) approach, utilizing the global financial cycle as an instrument to examine the impact of capital flows on foreign exchange (FX) resilience.

Anochiwa and Maduka (2015) examine if there is a correlation between the expansion of the economy and the rate of inflation in Nigeria over a 42-year period (1970–2012). While Granger causality suggests there is no causal link between the two economic variables, the findings of the Johansen co-integration test show a nonlinear negative effect between them. The scope of the study is limited and cannot be used to explain the current situation of the economy and ARDL will be used instead of Johansen co-integration.

Ogbonna, (2014) used estimation from the vector error correction model (VECM) to look at the dynamics of inflation in Nigeria between 1981 and 2013. Although there is no causal link between the two variables, the

results showed a long-term association between government size and the consumer price index. The consumer price index in Nigeria is influenced by both its lagged value and the current period's exchange rate of the local currency. The scope of the study is limited, vector error correction mechanism (VECM) was used while this study used ARDL and updated the data to more recent years.

Johansen co-integration and the Granger causality test are used by Inyiama (2013) to assess whether inflation has a negative impact on the growth of the Nigerian economy from 1979 to 2010. The outcome demonstrates that whereas exchange rates and interest rates exhibit a direct influence on the economy, the rate of inflation has an inverse relationship with economic growth. There are no causal links between the inflation rate and economic growth, according to the causality test. The scope of the study is limited and cannot be used to explain the current situation of the economy and ARDL is used instead of Johansen co-integration.

Theoretical Framework

This study adopted dual-gaps theory by Chenery and Strout (1966) which explains the usefulness of external debt in augmenting a country's domestic savings. External debt is significant, according to the dual-gap hypothesis, since it bridges funding gaps caused by poor savings and investments, as well as low foreign exchange profits due to trade imbalances, hence contributing to economic growth in borrowing jurisdictions and lowering unemployment. For decades, the aforementioned claim has been the overarching economic goal of external debt (Arhenful, 2013). This theory acknowledges investment as a growth stimulant, which is not readily apparent in developing economies due to their poor saving culture; hence, the initial necessity for imported capital resources.

The paper also utilizes Institutional Theory; The evolutionary approach to economic growth which draws attention to three aspects that were neglected in Classical, neo-classical, and endogenous growth theories. They don't consider the institutional framework that presumably contributes strongly to an explanation of cross–country differences in economic growth. North (1990) cited by Chomen (2022) described that the quality of institutions, such as property rights, rule of law, and government effectiveness, play a critical role in driving economic growth. Economies with strong institutions tend to have more efficient markets, higher levels of investment, and greater technological progress, all of which contribute to economic growth.

According to Acemoglu et al. (2005) institutions matter for economic growth because they shape the incentives of key economic actors in society, in particular they influence investments in physical and human capital and technology, and the organization of production. Although cultural and geographical factors may also matter for economic performance, differences in economic institutions are the major source of cross-country differences in economic growth and prosperity. For the authors institutions not only determine the aggregate economic growth potential of the economy, but also an array of economic outcomes, including the distribution of resources in the future (the distribution of wealth, of physical capital or human capital). In other words, the institutions influence not only the size of the aggregate pie, but how this pie is divided among different groups and individuals in society.

METHODOLOGY

The paper used ex-post facto research design, which implies a cause-and-effect study. According to Kerlinger and Rint (1986), an ex post facto investigation in the context and area of social and management sciences research seeks to reveal possible relationships by observing an existing situation or condition of issues and searching back in time for possible contributing and determining factors. The paper's goal is to use this research design to establish a cause-and-effect relationship between the variables, which is accomplished by obtaining secondary data from the Central Bank of Nigeria and World Bank Indicator (WDI) from 1990-2023.

Model Specification

The study examined the impact of foreign capital inflow on economic growth in Nigeria. The initial model is adapted from the work of Okafor, Ugwuegbe and Ezeaku (2016) with the following specification;

GDP= f (FDI, FPI, FA) (1)

Where;

FDI= Foreign Direct Investment, FPI= Foreign Portfolio Investment and FA= Foreign Aid

However, the model is modified as follows;

INF = F (FDI, FPI, EXD, IQ) (2)

Explicitly, the equation can be written as:

$INF_t = \alpha_0 + \alpha_1 FDI_t + \alpha_2 FPI_t + \alpha_3 EXD_t + \alpha_4 IQ_t + \alpha\mu_{3t}$

INF inflation Rate, FDI is Foreign Direct Investment; FPI is Foreign Portfolio Investment; EXTD is External Debt; IQ is Institutional Quality and α_0 is Intercept term and α_1-α_4, are parameters known as partial regression coefficient

PRESENTATION OF RESULTS AND DISCUSSION

Descriptive Analysis

To provide preliminary insights into the behaviour and distributional characteristics of the variables employed in the study, descriptive statistics for inflation (INF), foreign direct investment (FDI), foreign portfolio investment (FPI)), external debt (EXTD), and institutional quality (IQ) are presented in Table 1.

Table 1. Descriptive Statistics of Study Variables (1990–2023)

	INF	FDI	FPI	L_EXD	IQI
Mean	18.27804	-404.0541	-485.7557	7.703693	5.00E-07
Median	12.94180	-298.0000	-31.05000	7.575774	-0.689032
Maximum	72.83550	53.76000	1400.000	10.88290	4.082850
Minimum	5.388010	-1270.000	-4010.000	4.431888	-1.711570
Std. Dev.	15.90202	385.0529	1070.746	1.647029	1.811704
Skewness	2.180390	-0.531886	-1.696367	-0.106243	1.521229
Kurtosis	6.855098	2.055317	5.776302	2.109960	3.658769
Jarque-Bera	47.99409	2.867383	27.22621	1.186206	13.72824
Probability	0.000000	0.238427	0.000001	0.552610	0.001045
Sum	621.4534	-13737.84	-16515.69	261.9256	1.70E-05
Sum Sq. Dev.	8344.852	4892769.	37834374	89.51926	108.3150
Observations	34	34	34	34	34

Source: Author's computation, 2025

From table 1, Inflation (INF) had a mean value of 18.28, with a wide range between 5.39 and 72.84, and exhibited high variability, as indicated by its standard deviation of 15.90. Its positive skewness and leptokurtic distribution suggest the presence of outliers or extreme values. FDI and FPI both had negative means, indicating capital outflows during the sample period. FPI, in particular, had a very large standard deviation, suggesting high volatility. External debt (L_EXD) had a mean of 7.70, with a moderate range, while IQI had a near-zero mean, as it is a standardized index.

Unit Root Tests

Table 2: Summary of Unit Root Test Result

Variables	ADF Values	Critical Values	Order of Int.
INF	-2.107773	-1.951332	I(0)
FDI	-8.465790	-1.951687	I(1)
FPI	-3.625300	-1.952066	I(1)
L_EXD	-2.280181	-1.951687	I(1)
IQI	-4.702687	-1.953858	I(1)

Source: Author's Computation, using E- views 12, 2025

The results from table 2 revealed that INF is stationary at level, implying it is integrated of order zero, I (0). On the other hand, FDI, FPI, LEXD, and IQI became stationary only after first differencing, indicating they are integrated of order one, I (1). This mix of integration orders is suitable for ARDL modelling, which accommodates both I (0) and I (1) variables.

Lag Length Selection

Table 3: Summary of Lag Length Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-653.1662	NA	7.83e+12	43.87774	44.11128	43.95245
1	-552.1532	161.620*	5.06e+10	38.81021	40.21141*	39.25847
2	-530.313	27.66416	7.28e+10	39.02087	41.58973	39.84267
3	-499.366	28.88393	7.57e+10	38.62440	42.36092	39.81974
4	-440.0097	35.61373	2.21e+10*	36.33398*	41.23817	37.90288*

Source: Author's Computation, using E- views 12, 2025

To determine the appropriate lag structure for the ARDL model, various information criteria were considered, including the Akaike Information Criterion (AIC). From table 3, AIC indicated that a lag length of four is optimal, suggesting that up to four past values of the variables are informative for predicting current values. This lag structure enhances the reliability of the ARDL bounds test and estimation results.

ARDL Bounds Test Result

Table 4. Summary of Cointegration Result

F-Bounds Test		**Null Hypothesis: No levels relationship**		
Test Statistic	**Value**	**Signif.**	**I(0)**	**I(1)**
			Asymptotic: n=1000	
F-statistic	6.587575	10%	2.45	3.52
K	4	5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

Source: Author's Computation, using E- views 12, 2025

The ARDL bounds testing approach was employed to determine whether a long-run equilibrium relationship exists among the variables. Table 4 reveal that The calculated F-statistic was 6.59, which exceeds the 5% upper bound critical value of 4.01. This result leads to the rejection of the null hypothesis of no cointegration, implying the existence of a long-run relationship between inflation and the independent variables, FDI, FPI, l_EXD, and IQI.

ARDL Long-Run and Short-Run Estimates

Having established cointegration, the ARDL (1, 1, 2, 3, 0) model was estimated. The results are presented below in separate tables for short-run and long-run coefficients.

Table 5 ARDL Results

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(FDI)	-0.000809	0.003648	-0.22165	0.827
D(FPI)	-0.001458	0.001018	-1.43189	0.1684
D (FPI (-1))	-0.002554	0.001195	-2.13726	0.0458
D (LEXD)	-9.048555	7.091536	-1.27597	0.2173
D (LEXD (-1))	-16.3392	13.63968	-1.19792	0.2457
D (LEXD (-2))	27.308404	8.892298	3.071018	0.0063
D(IQI)	7.831003	1.011629	7.740986	0
Ecm (-1)	-0.867261	0.087182	-9.94771	0
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	0.011102	0.003608	3.077326	0.0062

FPI	0.002627	0.002168	1.211665	0.2405
LEXD	1.620127	1.259454	1.286373	0.2138
IQI	9.029576	1.040254	8.680167	0
C	8.084481	9.932095	0.813975	0.4257
R-squared	0.71321			
Adjusted R-squared	0.641513			
F-statistic	9.947498			
Prob(F-statistic)	0.000015			
Durbin-Watson stat	2.050274			

Source: Author's computation, 2025

Table 5 represent the short-run dynamic model, the error correction term (ECM) was negative and statistically significant, with a value of -0.867. This indicates a high speed of adjustment, as 86.7% of the disequilibrium from the previous period is corrected within the current period. Among the short-run coefficients, lagged values of FPI (specifically D (FPI (-1) and L_EXD (D (L_EXD (-2) were statistically significant, indicating that these variables influence inflation with a lag. IQI had a strong and highly significant positive effect in the short run as well.

In the long-run model, FDI was found to have a statistically significant positive relationship with inflation, with a coefficient of 0.0111. This suggests that increases in FDI inflows are associated with rising inflation, potentially due to increased demand or monetization of inflows. IQI also had a significant and positive impact on inflation, with a large coefficient of 9.03, indicating that improvements in institutional quality can exert upward pressure on prices, possibly due to enhanced policy transparency or structural changes. In contrast, FPI and LEXD were not statistically significant in the long run, though they may still play a role in the short-term dynamics.

Post-Estimation Results

For validation the robustness and reliability of the ARDL model estimates, several diagnostic tests were conducted. These include tests for serial correlation, heteroscedasticity, model specification, and (implicitly) residual normality. The results confirm that the model satisfies key econometric assumptions.

Table 6: Post-Estimation Diagnostic Tests

Test type	**F-Statistic**	**Prob**
Heteroskedasticity Test	0.336315	0.5666
Breusch-Godfrey Serial Correlation LM	1.607802	0.2293
Ramsey Regression	3.260956	0.0633

Source: Author's Computation Using EViews-12 (2025)

Table 6 show the Breusch-Godfrey serial correlation LM test was employed to assess the presence of autocorrelation in the model's residuals. In Appendix 4, the results showed that the F-statistic had a p-value of

0.2293, indicating no evidence of serial correlation. This implies that the model's residuals are independent over time, satisfying a key assumption of regression analysis.

To test for the presence of heteroskedasticity, the ARCH test was conducted. The F-statistic was not statistically significant, with a p-value of 0.5666 in Appendix 5. This suggests that the variance of the residuals is constant over time, implying homoscedasticity and confirming the reliability of the estimated standard errors. The Ramsey Regression Equation Specification Error Test (RESET) evaluates whether the model suffers from incorrect functional form or omitted variables. The test statistics, as shown in the appendix, indicate no evidence of model misspecification. The null hypothesis of correct functional form cannot be rejected, implying the model is well specified.

Residual normality

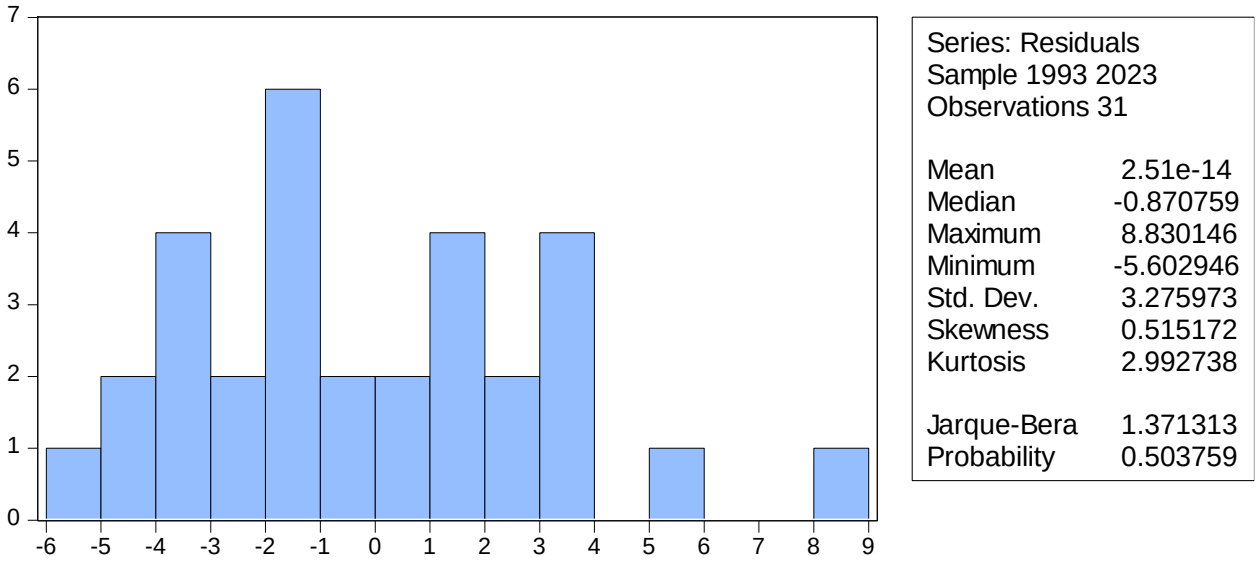

Fig. 1 Normality Test

The Jarque-Bera test applied to the residuals of the inflation equation indicated normality, which is well above the conventional 5% level. Thus, we fail to reject the null hypothesis of normality. This result supports the assumption that the residuals are normally distributed, validating the reliability of hypothesis testing within the ARDL framework.

DISCUSSION OF FINDINGS

The empirical results demonstrate that inflation in the study period is significantly influenced by both foreign direct investment and institutional quality in the long run. The positive effect of FDI on inflation may reflect the demand-side effects of investment inflows, which can raise consumption and investment, putting upward pressure on prices. Institutional quality, which also has a positive and significant impact, might reflect the effect of improved governance and regulatory frameworks that influence market behaviour and price levels. Although FPI and external debt did not show significant long-term effects, their short-term impacts, particularly through lagged variables, underscore their importance in short-run inflation dynamics. Diagnostic tests affirmed the robustness of the model, with no evidence of serial correlation or heteroskedasticity.

CONCLUSION AND RECOMMENDATIONS

This paper examined the impact of foreign capital inflows and institutional quality on inflation rate in Nigeria over the period 1990–2023, using an ARDL approach that accommodates variables integrated of different orders**.** The model confirmed the existence of a long-run equilibrium relationship between inflation and its determinants. FDI and institutional quality were found to significantly affect inflation in the long run, while FPI and external debt exhibited significance only in the short run. The error correction term showed a high speed of adjustment,

reinforcing the stability of the long-run relationship. The model passed key diagnostic checks, supporting the validity of the estimates.

This paper empirically investigates the long-run and short-run determinants of inflation in the context of foreign direct investment (FDI), foreign portfolio investment (FPI), external debt (L_EXD), and institutional quality (IQI). Using the ARDL bounds testing approach, the analysis confirmed the existence of a long-run cointegrating relationship among these variables. The findings reveal that both FDI and IQI have significant and positive effects on inflation in the long run, suggesting that foreign investment inflows and institutional changes can have important implications for domestic price levels. In contrast, FPI and L_EXD did not exert statistically significant long-run effects but showed meaningful short-term influences, highlighting their more immediate and transitory roles in inflation dynamics.

The error correction mechanism further demonstrated that inflation responds rapidly to deviations from its long-run equilibrium path, indicating strong dynamic stability in the model. The diagnostic tests confirmed that the model is well-specified, with no serious issues of serial correlation or heteroskedasticity, although non-normality in the residuals and slight model misspecification suggest the need for cautious interpretation and possible model refinement in future research. In summary, the paper contributes to the understanding of how macroeconomic policy and institutional structures shape inflationary trends over time. The results underscore the importance of coordinated policy efforts that balance investment attraction, debt sustainability, and institutional reform to maintain price stability.

Policy Recommendations

The government through the Federal Ministry of Trade and Investment, working with the Nigerian Investment Promotion Commission (NIPC**)** should manage foreign direct investment carefully to avoid overheating the economy. Attracting productivity-enhancing FDI that supports local capacity rather than merely increasing aggregate demand is essential.

Efforts should be intensified to improve institutional quality, as it has a strong and positive impact on inflation. Policymakers should aim to strengthen the rule of law, governance, and regulatory frameworks to ensure that the positive effects of institutional reforms on the economy do not lead to unanticipated inflationary pressures.

Given the short-term effects of foreign portfolio investment on inflation, macroprudential and monetary policies should be employed to mitigate the volatility associated with these variables.

The Central Bank of Nigeria (CBN) should therefore implement stronger safeguards, such as capital flow management tools and improved monitoring of speculative inflows

The Debt Management Office (DMO), working with the Federal Ministry of Finance and oversight from the National Assembly should work towards Sustainable debt management practices to ensure that short-term debt-induced inflationary pressures do not destabilize the broader economy.

REFERENCES

1. Abubakar, S. (2020). Institutional quality and economic growth: Evidence from Nigeria. African Journal of Economic Review, 8(1), 48-64.
2. Acemoglu, D., & Robinson, J. A. (2020). The narrow corridor: States, societies, and the fate of liberty. Penguin Books. Adegboye, A. C., Ogbebor, O. A., & Egharvba, M. I. (2014). External capital flows and economic growth in Nigeria. Jordin, 12(2), 21–42.
3. Adofu, I., Taiga, U. U., & Tijani, Y (2015). Manufacturing Sector and Economic Growth in Nigeria. Danish Journal of Economics and International Finance, 1(1), 1-6.
4. Aimola, A., & Odhiambo, N. (2023). External debt, domestic debt, and inflation in Nigeria: A multivariate Granger-causality test. Journal of Economic Studies, 50(3), 567–582.
5. Akinlo, A. E. (2004). Foreign direct investment and growth in Nigeria: An empirical investigation. Journal of Policy Modeling, 26(1), 627–639.

6. Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: The role of local financial markets. Journal of International Economics, 64(1), 89–112.
7. Anochiwa, L. I., & Maduka, A. (2015). Inflation and economic growth in Nigeria: Empirical evidence. Journal of Economics and Sustainable Development, 6(20), 113–121.
8. Arhenful, P. (2013). The effect of foreign aid on real exchange rate in Ghana. Advances in Management and Applied Economics, 3(5), 151.
9. Asue, E., & Ikyaator, J. (2024). External debt pass-through to inflation in Nigeria. Central Bank of Nigeria Journal of Applied Statistics, 5(5).
10. Aust, V., Morais, A. I., & Pinto, I. (2020). How does foreign direct investment contribute to Sustainable Development Goals? Evidence from African countries. Journal of Cleaner Production, 245, 118823.
11. Awogbemi, C. A., Gimba, J. T., & Eche, G. E. (2024). Effect of external debt on inflation rate in Nigeria. Journal of Advanced Research and Multidisciplinary Studies, 5(1).
12. Bird, G., & Choi, Y. (2020). The effects of remittances, foreign direct investment, and foreign aid on economic growth: An empirical analysis. Review of Development Economics, 24(1), 1–30.
13. Borensztein, E., De Gregorio, J., & Lee, J. W. (1998). How does foreign direct investment affect economic growth? Journal of International Economics, 45(1), 115–135.
14. Central Bank of Nigeria. (2023). Annual statistical bulletin.
15. Chenery, B., & Strout, A. M. (1966). Foreign assistance and economic development. The American Economic Review, 56(4), 679–733.
16. Chete, L. N., Olanrele, I., & Angahar, J. S. (2024). Foreign Direct Investment and Nigerian Macroeconomy. European Journal of Economics, 4(1), 26-36.
17. Chomen, M. T. (2022). Institutions–economic growth nexus in Sub-Saharan Africa. Heliyon, 8(12), 14–21.
18. Dollar, D., & Kraay, A. (2021). Institutions, trade, and growth. Journal of Monetary Economics, 66(1), 32–48.
19. Dunning, J. H., & Lundan, S. M. (2008). Multinational enterprises and the global economy. Edward Elgar Publishing.
20. Emenuga, P. E. (2019). Impact of macroeconomic variables on foreign direct investment flow in Nigeria: ARDL model. African Journal of Accounting and Financial Research, 2(1), 1–10.
21. Emmanuel, B., Ike, E. C., & Alhasan, Y. (2019). Effect of exchange and interest rates on foreign direct investment in Nigeria (2006–2018). International Journal ofContemporary Research and Review, 10(07), 21572–21585.
22. Ezeanyeji, C. I., & Maureen, I. (2019). Foreign portfolio investment on economic growth of Nigeria: An impact analysis. International Journal of Academic Management Science Research, 3(3), 24–36
23. Golitsis, P., Avdiu, K., & Szamosi, L. T. (2018). Remittances and FDI effects on economic growth: A VECM and GIRFs for the case of Albania. Journal of East-West Business, 24(3), 188–211.
24. Idowu, O. O. (2015). Foreign portfolio investment in Nigeria. International Journal of Social Relevance and Concern, 3(5), 3–19.
25. Idris, T. S., & Suleiman, S. (2019). Effect of inflation on economic growth in Nigeria: 1980 2017. MAJASS, 18, 33–48.
26. Kabashi, R. (2016). The cyclical character of fiscal policy in transition countries. Working Paper, 2016(03), 1–25.
27. Kerlinger, F. (1986). Foundations of behavioral research (3rd ed.). Holt, Rinehart, and Winston.
28. Kurt, H., Sorlien, C. C., Seeber, L., Steckler, M. S., Shillington, D. J., Cifci, G. Ü. N. A. Y., ... & Carton, H. (2013). Steady late quaternary slip rate on the Cinarcik section of the North Anatolian fault near Istanbul, Turkey. Geophysical Research Letters, 40(17), 4555-4559.
29. Kimberly, D. (2008). Fundamentals of national income. McGraw-Hill.
30. Mohammed, E. H., & Mahfuzul, H. (2016). Foreign Direct Investment, Trade and Economic Growth: An Empirical Analysis of Bangladesh
31. Ndulu, B. J., O'Connell, S. A., Bates, R. H., Collier, P., & Soludo, C. C. (2021). The political economy of economic growth in Africa, 1960–2000. Cambridge University Press.
32. Ngo, S. T., Quynh Anh Pham, N., Thi Le, L., Pham, D. H., & Vu, V. V. (2020). Computational determination of potential inhibitors of SARS-CoV-2 main protease. Journal of Chemical Information and Modeling, 60(12), 5771–5780.

33. Nnamocha, P. N. (2002). Basic macroeconomics. Millennium Publishers.
34. Nwagu, K. (2023). The impact of macroeconomic variables on foreign direct investment in Nigeria. Journal of Accounting, Business and Finance Research, 16(1), 30–35.
35. Obadan, M. I. (2004). Foreign capital flows and external debt: Perspectives on Nigeria and the LDCs group. University Printer.
36. Ogbonna, B. C. (2014). Inflation dynamics and government size in Nigeria. International Journal of Economics, Commerce and Management, 2(12), 1–22.
37. OECD (2011), Growing Unequal? Income Distribution and Poverty in OECD Countries, OECD Publishing, Paris.
38. Ogbonna, B. C. (2014). Inflation dynamics and government size in Nigeria. International Journal of Economics, Commerce and Management, 2(12), 1–22.
39. Onuorah, A. C., & Akujuobi, L. E. (2013). Impact of macroeconomic indicators on the performance of foreign portfolio investment in Nigeria. European Journal of Business and Management, 5(2), 81–90.
40. Okafor, I. G., Ugwuegbe, U. S., & Ezeaku, C. H. (2016). Foreign capital inflows and Nigerian economic growth nexus: A Toda Yamamoto approach. European Journal of Accounting, Auditing and Finance Research, 4(3), 16–26.
41. Okodua, H. (2009). Foreign direct investment and economic growth: Co-integration and causality analysis of Nigeria. African Finance Journal, 11(1), 54-73.
42. Opeyemi, A. F. (2020). Impact of foreign direct investment and inflation on economic growth of five randomly selected Countries in Africa. Journal of Economics and International Finance, 12(2), 65-73.
43. Rodrik, D. (2021). Institutions for high-quality growth: What they are and how to acquire them. Studies in Comparative International Development, 35(3), 3–31.
44. Ruffin, R. J. (1998). Principles of macroeconomics. University of Chicago Press.
45. Samuelson, N. (2005). Economics. McGraw-Hill.
46. Todaro, M. P., & Smith, S. C. (2015). Economic Development (12th ed.). Pearson Education.
47. UNCTAD (2021). World Investment Report 2021: Investing in Sustainable Recovery. United Nations Conference on Trade and Development.
48. UNCTAD. (2022). World Investment Report 2022: International tax reforms and sustainable investment. United Nations Conference on Trade and Development
49. Umoh, O. J., Jacob, A. O., & Chuku, C. A. (2012). Foreign Direct Investment and Economic Growth in Nigeria: An Analysis of the Endogenous Effects. Curriculum Research Journal of Economic Theory, 4(3), 53-66.
50. Urama, C. E., Ezema, D. C., Obodoechi, D. N., Ukwueze, E. R., Eze, A. A., Mba, I. C., ... & Ibrahim, H. V. (2022). The effect of foreign capital inflows on economic growth in Nigeria. Regional Economic Development Research, 253-266.
51. Utile, T. I., Ijirshar, V. U., & Sem, A. (2021). Impact of institutional quality on economic growth in Nigeria. Gusau International Journal of Management and Social Sciences, 4(3), 21-21.
52. World Bank (2022). International Debt Statistics 2022. Washington, DC: The World Bank.
53. Yıldırım, A., & Gökalp, M. F. (2016). Institutions and economic performance: A review on the developing countries. Procedia Economics and Finance, 38, 347-359.