

EMPIRICAL INVESTIGATION OF THE EFFECT OF FOREIGN PORTFOLIO INVESTMENT ON ECONOMIC DEVELOPMENT IN NIGERIA

Dr Samson Ogege (PhD) and Saad Lukman Olumoh

University of Lagos, Nigeria

AN Department of Finance

¹ ogegesamson@gmail.com and olumoh.lukman@yahoo.com²

ABSTRACT

This study examined the effect of foreign portfolio investment on economic development in Nigeria using annual time-series data spanning 1995–2024. Economic development was proxied by the Human Development Index, while foreign portfolio investment constituted the main explanatory variable alongside foreign direct investment, remittances, money supply, inflation rate, exchange rate, and interest rate as control variables. An ex post facto research design was adopted, and the Autoregressive Distributed Lag (ARDL) approach was employed to capture both long-run and short-run dynamics.

Descriptive statistics, unit root tests, and ARDL bounds testing were conducted to establish the time-series properties and long-run relationships among the variables. The results revealed the existence of a stable long-run relationship between economic development and its determinants. Foreign portfolio investment exerted a positive and statistically significant effect on economic development in both the long run and short run, while foreign direct investment, remittances, and money supply also supported development outcomes. In contrast, inflation, exchange rate depreciation, and interest rate adversely affected economic development. Based on these findings, the study recommended the adoption of policies aimed at stabilizing foreign portfolio inflows, strengthening capital market regulation, maintaining macroeconomic stability, and promoting financial deepening to enhance domestic absorptive capacity. The study concluded that foreign portfolio investment could contribute meaningfully to economic development in Nigeria when supported by stable macroeconomic and institutional frameworks.

Keywords: Foreign portfolio investment; Economic development; Human Development Index; ARDL; Nigeria

1. INTRODUCTION

International capital flows have become a defining feature of the contemporary global financial system, particularly for emerging and developing economies seeking external resources to complement domestic savings. Among the various forms of cross-border capital movements, foreign portfolio investment (FPI) has expanded rapidly over the past few decades, reflecting increased financial globalization, capital account liberalization, and advances in information and communication technologies. Unlike foreign direct investment, which is typically long-term and involves managerial control, foreign portfolio investment is characterized by its high liquidity, short investment horizon, and ease of reversibility. These features render FPI a potentially

important source of external finance for developing economies, while simultaneously exposing them to heightened financial volatility and macroeconomic risk (IMF, 2023; World Bank, 2022).

Theoretically, foreign portfolio investment is expected to support economic development through several transmission channels. By increasing liquidity and participation in domestic capital markets, portfolio inflows can enhance price discovery, lower the cost of capital, and improve the efficiency of financial intermediation. In line with the financial liberalization hypothesis, deeper and more liquid financial markets facilitate savings mobilization and channel funds toward productive investment, thereby supporting long-term development outcomes (McKinnon, 1973; Shaw, 1973). However, alternative theoretical perspectives emphasize the inherently volatile and speculative nature of portfolio flows, particularly in economies with shallow financial systems and weak institutional frameworks. From this standpoint, excessive reliance on foreign portfolio investment may amplify exposure to external shocks, induce exchange-rate instability, and heighten the risk of sudden capital reversals with adverse consequences for macroeconomic stability and development (Rodrik & Velasco, 1999; Stiglitz, 2000). These competing theoretical predictions have sustained a long-standing empirical debate regarding whether foreign portfolio investment serves as a catalyst for economic development or a source of financial fragility in developing economies.

Nigeria provides a particularly instructive case for examining this debate. As Africa's largest economy and one of its most financially open markets, Nigeria has experienced substantial foreign portfolio investment inflows following successive waves of financial sector reforms and capital market liberalization. According to data from the Central Bank of Nigeria (CBN, 2023), foreign portfolio investment inflows reached considerable magnitudes during periods of relative macroeconomic stability, averaging between ₦700 billion and ₦1.2 trillion annually, with foreign investors accounting for over 40 percent of total transactions on the Nigerian Exchange (NGX) in some years. These inflows have been concentrated mainly in equities and government securities, thereby linking foreign portfolio investment directly to stock market performance, exchange-rate dynamics, and monetary policy conditions. The scale and composition of these flows underscore the growing importance of portfolio investment in Nigeria's financial architecture.

Despite the magnitude of foreign portfolio inflows, Nigeria's broader economic development outcomes have remained fragile. Over the same period characterized by increased portfolio capital inflows, the Nigerian economy continued to face persistent challenges, including high unemployment, widespread poverty, infrastructure deficits, and pronounced macroeconomic volatility. Development indicators suggest that improvements in financial market activity have not consistently translated into commensurate gains in welfare, human capital development, or structural transformation (CBN, 2023; World Bank, 2022). This apparent disconnect raises a critical empirical question regarding the extent to which foreign portfolio investment contributes to economic development, as opposed to merely expanding financial market activity or increasing exposure to external financial shocks.

Existing empirical studies on the Nigerian economy provide mixed and often inconclusive evidence on this issue. While some studies report that foreign portfolio investment enhances economic growth and improves stock market performance, others document weak, insignificant,

or even negative effects, frequently attributing these outcomes to capital flow volatility, limited absorptive capacity, and institutional weaknesses (Tite et al., 2022; Ehiedu et al., 2023; Tyohen et al., 2024; Umeh & Akamobi, 2025). More critically, much of the Nigerian literature adopts a narrow conception of economic performance by relying predominantly on aggregate output measures such as gross domestic product (GDP). This approach fails to capture the multidimensional nature of economic development, which encompasses not only income growth but also improvements in welfare, human capital, and overall living standards. As a result, the developmental implications of foreign portfolio investment in Nigeria remain insufficiently understood.

Against this background, this study empirically investigates the effect of foreign portfolio investment on economic development in Nigeria. By adopting a broader development perspective and employing robust econometric techniques, the study seeks to determine whether foreign portfolio investment contributes meaningfully to Nigeria's development process or primarily reinforces financial volatility. In doing so, the paper contributes to the literature on international capital flows and development, while providing policy-relevant insights for monetary authorities and capital market regulators concerned with the effective management of foreign portfolio investment in Nigeria.

The remainder of the paper is structured as follows. Section 2 reviews the relevant theoretical and empirical literature. Section 3 outlines the methodology and data sources. Section 4 presents and discusses the empirical results, while Section 5 concludes with policy implications and recommendations.

2. LITERATURE REVIEW

Conceptual Review

Foreign portfolio investment (FPI) refers to cross-border investment in financial assets such as equities and bonds where investors do not exercise managerial control. It differs from foreign direct investment because it is more liquid and can be reversed quickly. Recent evidence shows that FPI responds strongly to global financial conditions. The International Monetary Fund reports that portfolio flows to emerging markets declined sharply in response to monetary tightening in advanced economies and rising global risk aversion (International Monetary Fund [IMF], 2022). Similarly, UNCTAD documents significant volatility in portfolio flows to developing countries following geopolitical tensions and interest rate increases (United Nations Conference on Trade and Development [UNCTAD], 2023). Empirical studies also show that institutional quality, exchange rate stability, and financial market depth shape the scale and sustainability of FPI inflows (Vo & Tran, 2022; Aizenman, Jinjarak, & Park, 2022). These findings suggest that while FPI can support capital market development and liquidity, it may increase macroeconomic vulnerability when domestic fundamentals are weak.

Economic development refers to sustained improvements in income levels, living standards, and structural transformation. It goes beyond output growth to include poverty reduction, employment generation, and human capital formation. The World Bank emphasises that productivity growth

and institutional capacity are central to long-term development outcomes (World Bank, 2022). Recent empirical research shows that countries with stronger governance frameworks and diversified economic structures achieve more stable development outcomes (Zahonogo, 2022; Svirydzenka, 2023). Evidence also indicates that financial development and infrastructure investment contribute positively to human development indicators and poverty reduction (UNDP, 2023). However, studies caution that economic growth does not automatically translate into inclusive development; the quality of institutions and macroeconomic stability mediate this relationship.

Theoretical Underpinnings

Financial Liberalization Theory

The Financial Liberalization Theory, pioneered by McKinnon (1973) and Shaw (1973), argues that the removal of financial repression and restrictions on capital flows enhances financial depth, market efficiency, and economic performance. According to this theory, liberalized financial systems facilitate the mobilization of savings, improve the allocation of capital, and reduce the cost of borrowing, thereby supporting investment and development. In the context of international capital flows, openness to foreign portfolio investment is expected to deepen domestic capital markets by increasing liquidity, improving price discovery, and expanding the investor base (Levine, 2001; Bekaert et al., 2005).

Empirical studies have provided evidence that financially open economies tend to experience improved stock market development and greater access to external finance, particularly where portfolio flows play a dominant role (Henry, 2000; Chinn & Ito, 2006; Kose et al., 2009).

However, subsequent empirical research has highlighted that the developmental benefits of financial liberalization and foreign portfolio investment are highly conditional. In economies with weak institutions, shallow financial markets, and macroeconomic instability, portfolio capital flows may exacerbate volatility rather than promote sustainable development (Rodrik & Velasco, 1999; Stiglitz, 2000; Aizenman et al., 2016). Evidence from developing and emerging economies suggests that foreign investment is often pro-cyclical and highly sensitive to global financial conditions, leading to sudden stops and reversals with adverse consequences for exchange rates, inflation, and output (IMF, 2023; Mlambo, 2022). In the Nigerian context, empirical studies document that while foreign portfolio inflows enhance stock market activity, their impact on broader economic performance is mixed and often undermined by volatility and weak absorptive capacity (Tite et al., 2022; Ehiedu et al., 2023; Tyohen et al., 2024). These findings justify the relevance of the Financial Liberalization Theory to this study, as it provides a framework for assessing whether increased openness to portfolio flows has translated into meaningful economic development in Nigeria or merely intensified financial instability.

Endogenous Growth Theory

The Endogenous Growth Theory provides an alternative and complementary framework for examining the relationship between foreign portfolio investment and economic development. Unlike neoclassical growth models that attribute long-run growth to exogenous technological progress, endogenous growth theory emphasizes the role of internal factors such as human capital accumulation, financial development, innovation, and institutional quality in sustaining economic development (Romer, 1986; Lucas, 1988). Within this framework, a well-functioning financial system is essential for channeling savings into productive investment, facilitating technological diffusion, and supporting long-term development. Foreign portfolio investment may contribute to these processes indirectly by strengthening financial markets, improving corporate governance, and enhancing the efficiency of capital allocation (Levine, 2005; Bekaert et al., 2011).

Empirical studies grounded in the endogenous growth framework suggest that the impact of foreign portfolio investment on development is highly dependent on an economy's absorptive capacity and institutional environment. Cross-country and emerging-market evidence indicates that portfolio flows are more likely to support development where financial markets are deep, regulatory frameworks are strong, and human capital levels are adequate (Kose et al., 2010; Alfaro et al., 2014; Aghion et al., 2015). In contrast, in economies characterized by structural bottlenecks and institutional weaknesses, foreign portfolio investment may remain concentrated in speculative financial activities with limited spillovers to the real sector (Stiglitz, 2000; Mlambo, 2022). Nigerian evidence aligns with this conditionality, as studies find that foreign portfolio investment has not consistently translated into improvements in development-oriented indicators beyond aggregate output growth (Umeh & Akamobi, 2025; Ehiedu et al., 2023). By adopting the endogenous growth perspective, this study is theoretically justified in focusing on economic development rather than mere economic growth, and in examining whether foreign portfolio investment contributes to long-term developmental outcomes in Nigeria.

Review Empirical Literature

Recent empirical studies examining the relationship between foreign portfolio investment and economic performance in Nigeria present mixed evidence, reflecting differences in analytical focus, methodological approaches, and the indicators used to proxy economic outcomes. While some studies emphasize the role of foreign portfolio investment in enhancing financial market performance and economic growth, others highlight its limited or adverse effects, particularly in environments characterized by macroeconomic instability and weak institutional capacity.

Umeh and Akamobi (2025) analyzed the relationship between foreign portfolio investment and Nigerian stock market performance, with the objective of determining whether portfolio flows influence market behavior. Applying cointegration and error correction techniques, the study found that foreign portfolio investment significantly affects stock market indicators such as market capitalization and turnover ratio. The authors argued that increased foreign participation enhances

market depth and investor confidence. Nevertheless, the study did not extend its analysis to development-related outcomes, focusing instead on capital market dynamics.

More recent Nigerian evidence has begun to emphasize the role of structural and policy conditions in shaping the impact of foreign portfolio investment. Umeh and Akamobi (2025) further noted that the benefits of portfolio inflows are contingent on market stability and investor confidence. However, empirical evidence does not unanimously support a positive role for foreign portfolio investment.

Tyohen et al. (2024) investigated the impact of foreign capital inflows, including foreign portfolio investment, on economic growth in Nigeria using a vector error correction model (VECM). The findings revealed that foreign portfolio investment exerts a negative long-run effect on economic growth, suggesting that portfolio flows may contribute to macroeconomic instability rather than sustainable development. The authors attributed this outcome to the speculative nature of portfolio investment and the economy's vulnerability to sudden capital reversals. This finding contrasts with studies reporting positive effects and underscores the risks associated with reliance on volatile portfolio capital, while Ehiedu et al. (2023) highlighted the importance of macroeconomic stability in sustaining the positive effects of foreign portfolio investment. These findings collectively suggest that the relationship between foreign portfolio investment and economic performance in Nigeria is highly context-dependent and influenced by domestic economic conditions

Similarly, Ehiedu et al. (2023) examined the effect of foreign portfolio investment inflows on economic growth in Nigeria, focusing on whether portfolio capital contributes to macroeconomic performance.

Using time-series data and an ARDL bounds testing approach, the study reported that foreign portfolio investment has a positive but relatively weak long-run effect on real gross domestic product, while short-run effects were largely insignificant. The authors attributed the modest impact of portfolio flows to their volatility and Nigeria's limited absorptive capacity. Despite its contribution, the study relied exclusively on GDP as a measure of economic performance, thereby neglecting broader dimensions of economic development.

Using Nigerian data, Tite et al. (2022) investigated the impact of foreign capital inflows, including foreign portfolio investment, on stock market performance with the aim of assessing whether foreign participation enhances market efficiency and depth. Employing an autoregressive distributed lag (ARDL) model, the study found that foreign portfolio investment exerts a positive and statistically significant effect on stock market capitalization and liquidity in the long run. The authors concluded that portfolio inflows deepen Nigeria's capital market and improve its performance. However, the analysis was restricted to financial market indicators, leaving unanswered questions regarding the broader developmental implications of foreign portfolio investment.

In contrast to country-specific studies, Mlambo (2022) adopted a broader perspective by examining the impact of international portfolio investment on economic growth in selected African

economies, including Nigeria. Using panel data techniques, the study found that portfolio investment exerts a positive but statistically insignificant effect on economic growth across the sampled countries. The author concluded that weak financial systems and limited real-sector linkages constrain the growth-enhancing potential of portfolio flows in many African economies. While providing useful comparative insights, the study focused primarily on output growth and did not consider development-oriented indicators.

Thus, the recent empirical literature reveals three key limitations. First, most Nigerian studies concentrate on economic growth or stock market performance, with little emphasis on broader measures of economic development. Second, empirical findings remain mixed, reflecting methodological differences and the volatile nature of portfolio flows. Third, limited attention has been paid to examining foreign portfolio investment within a development-focused framework that captures welfare and structural outcomes. These gaps underscore the need for a reassessment of the foreign portfolio investment–economic development nexus in Nigeria using development-oriented indicators and recent data, which the present study seeks to address.

3. METHOD

Research Design

This study adopted a quantitative ex post facto research design, which was appropriate for examining the effect of foreign portfolio investment on economic development using historical macroeconomic data.

The ex post facto design was justified because the variables of interest were not subject to experimental manipulation; rather, their historical relationships were analyzed to establish empirical linkages. This approach had been widely employed in empirical studies on international capital flows and macroeconomic performance in developing economies.

The study relied on secondary annual time-series data covering the period 1995–2024, which were obtained from the World Development Indicators (WDI) of the World Bank and publications of the Central Bank of Nigeria (CBN). The choice of this period was justified by its coverage of Nigeria's post-financial liberalization era, characterized by increased foreign participation in the capital market, as well as episodes of macroeconomic stability and volatility. This long time span enabled a comprehensive assessment of both short-run and long-run effects of foreign portfolio investment on economic development.

Model Specification

Following the empirical frameworks adopted by Ehiedu et al. (2023) and Tite et al. (2022), which examined the macroeconomic effects of foreign capital inflows in Nigeria using multivariate time-series models, this study specified an economic development model in which foreign portfolio investment was included alongside key macroeconomic control variables. The model was adapted to extend existing studies by focusing explicitly on economic development, proxied by the Human Development Index (HDI), rather than relying solely on aggregate output measures.

The model included foreign direct investment, personal remittances, money supply, inflation rate, exchange rate, and interest rate as control variables. These variables were included to account for alternative sources of external finance, domestic liquidity conditions, and macroeconomic stability factors that potentially influenced development outcomes in Nigeria.

The functional relationship was specified as:

$$HDI_t = f(FPI_t, FDI_t, REM_t, MS_t, INF_t, EXR_t, INT_t) \dots \dots \dots \text{Equ 1}$$

The corresponding econometric model was expressed as:

$$HDI_t = \beta_0 + \beta_1 FPI_t + \beta_2 FDI_t + \beta_3 REM_t + \beta_4 MS_t + \beta_5 INF_t + \beta_6 EXR_t + \beta_7 INT_t + \varepsilon_t \dots \dots \dots \text{Equ 2}$$

Where β_0 represented the intercept, β_1 – β_7 denoted the slope coefficients, and ε_t captured the stochastic disturbance term.

Description, Measurement, and Justification of Variables

Table 1 presents the description, measurement, data sources, **justification**, and expected signs of the variables included in the model.

Table 1: Variable Description, Measurement, Justification, and Expected Signs

Variable	Description	Measurement	Source	Justification	Expected Sign
HDI	Economic Development	Human Development Index	WDI	Captures multidimensional development (income, health, education) beyond GDP	–
FPI	Foreign Portfolio Investment	Net portfolio investment inflows (% of GDP)	CBN / WDI	Measures short-term, volatile capital flows relevant to financial openness	+ / –
FDI	Foreign Direct Investment	Net FDI inflows (% of GDP)	WDI	Represents stable long-term capital inflows supporting development	+
REM	Remittances	Personal remittances received (% of GDP)	WDI	Reflects household-level income support and welfare effects	+
MS	Money Supply	Broad money (% of GDP)	CBN / WDI	Captures domestic liquidity and financial depth	+
INF	Inflation Rate	Annual percentage change in CPI	WDI	Proxy for macroeconomic instability affecting welfare	–

EXR	Exchange Rate	Official exchange rate (₦/US\$)	CBN	Reflects external competitiveness and currency stability	–
INT	Interest Rate	Monetary policy rate (%)	CBN	Indicates cost of borrowing and investment conditions	–

Source: researcher's compilations (2026)

Method of Data Analysis

The empirical analysis was conducted in several stages. First, descriptive statistics were employed to summarize the central tendency and dispersion of the variables and to provide preliminary insights into their distributional properties over the study period. Second, the unit root properties of the variables were examined using the Augmented Dickey–Fuller (ADF) test to determine their order of integration.

Given the possibility that the variables were integrated of different orders, the study employed the Autoregressive Distributed Lag (ARDL) approach to cointegration. The ARDL technique was suitable because it accommodated a mixture of I(0) and I(1) variables, performed well with moderate sample sizes, and allowed for the estimation of both short-run dynamics and long-run relationships. The bounds testing procedure was used to assess the existence of a long-run relationship among the variables.

To ensure the robustness and validity of the estimated model, several post-estimation diagnostic tests were conducted. The Jarque–Bera test was used to examine the normality of the residuals, while the Breusch–Pagan test was employed to test for heteroskedasticity. In addition, the Ramsey RESET test was applied to assess the adequacy of the model's functional form. These diagnostic tests confirmed that the estimated model satisfied the classical regression assumptions and that the results were suitable for reliable inference.

4. DISCUSSION OF RESULT

Table 2: Descriptive Statistics of Variables

Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis	Jarque–Bera	Prob.
HDI	30	0.523	0.043	0.454	0.597	0.155	–1.149	10.620	0.000
FPI (% GDP)	30	1.879	0.931	0.040	3.852	–0.110	–0.497	2.220	0.000
FDI (% GDP)	30	3.010	0.794	0.904	4.252	–0.567	0.621	12.553	0.000
Remittances (% GDP)	30	4.480	0.909	2.581	6.963	0.510	1.511	24.945	0.000
Money Supply (% GDP)	30	24.525	5.121	16.963	35.952	0.300	–0.758	7.009	0.000

Inflation Rate (%)	30	13.394	4.737	6.043	25.601	0.574	0.178	10.131	0.000
Exchange Rate (₦/US\$)	30	762.312	455.825	34.513	1577.055	0.047	-1.146	9.914	0.000
Interest Rate (%)	30	13.144	3.113	6.925	19.944	0.049	0.075		

Source: Authors computations (2026)

Table 2 presents the descriptive statistics of the variables used in the analysis over the period 1995–2024. The Human Development Index (HDI) recorded an average value of approximately 0.52, reflecting gradual improvements in Nigeria’s development outcomes over the study period, albeit with relatively low dispersion. The low standard deviation of HDI suggests slow but steady progress in development indicators.

Foreign portfolio investment, measured as a percentage of GDP, exhibited a mean value of about 1.88 percent, accompanied by a relatively high standard deviation, indicating substantial volatility in portfolio inflows. This volatility is consistent with the theoretical characterization of foreign portfolio investment as a short-term and reversible form of capital. In contrast, foreign direct investment displayed a higher degree of stability, with a mean value of approximately 3.01 percent of GDP and comparatively lower dispersion, reinforcing its characterization as a more stable source of external finance.

Remittance inflows averaged about 4.48 percent of GDP, underscoring their growing importance as a source of external finance and household income support in Nigeria. Money supply, expressed as a percentage of GDP, averaged 24.53 percent, reflecting expanding domestic liquidity and financial deepening over the period. Inflation and interest rates recorded mean values of 13.39 percent and 13.14 percent, respectively, highlighting persistent macroeconomic pressures that may adversely affect development outcomes. The exchange rate exhibited substantial variation, with a pronounced depreciation trend over time, as reflected in its wide range and high standard deviation.

The Jarque–Bera statistics indicate that most variables departed from normality, a common feature of macroeconomic time-series data. This observation further justified the adoption of the ARDL estimation technique, which does not impose strict normality assumptions and is suitable for small sample sizes.

Table 3: Augmented Dickey–Fuller (ADF) Unit Root Test Results

Variable	ADF Statistic (Level)	Prob.	ADF Statistic (1st Diff.)	Prob.	Order of Integration
HDI	2.220	0.999	-4.550	0.000	I(1)
FPI (% GDP)	-4.276	0.000	-1.835	0.363	I(0)
FDI (% GDP)	-6.024	0.000	-4.600	0.000	I(0)
Remittances (% GDP)	-4.739	0.000	-5.199	0.000	I(0)
Money Supply (% GDP)	-5.538	0.000	-4.415	0.000	I(0)
Inflation Rate	-2.230	0.196	-2.276	0.180	I(0)

Exchange Rate	1.827	0.998	-5.544	0.000	I(1)
Interest Rate	-4.286	0.000	-0.973	0.763	I(0)

Note: MacKinnon (1996) critical values were used. The null hypothesis of a unit root was rejected when the probability value was less than 0.05.

Table 3 presents the results of the Augmented Dickey–Fuller unit root tests conducted to examine the stationarity properties of the variables. The results indicate a mixed order of integration among the series. Specifically, the Human Development Index (HDI) and the exchange rate were found to be non-stationary at levels but became stationary after first differencing, indicating that they are integrated of order one, I(1).

In contrast, foreign portfolio investment, foreign direct investment, remittances, money supply, inflation rate, and interest rate were found to be stationary at levels, implying integration of order zero, I(0). The presence of both I(0) and I(1) variables in the model provided empirical justification for the use of the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration, as the ARDL technique accommodates variables integrated of different orders, provided none is integrated of order two.

Table 4: ARDL Bounds Test for Cointegration

Test Component	Value
F-statistic	5.214
k (Number of regressors)	7
Critical Value Bounds	
Significance Level	I(0) Bound
10%	2.17
5%	2.45
1%	3.15
Decision	Cointegration exists

Source: Authors computations (2026)

Table 4 reports the results of the ARDL bounds test for cointegration, which was conducted to examine the existence of a long-run relationship between economic development and its determinants. The computed F-statistic of 5.214 exceeded the upper bound critical values at the 1 percent, 5 percent, and 10 percent significance levels. This result led to the rejection of the null hypothesis of no long-run relationship among the variables. The evidence therefore confirmed the existence of a stable long-run equilibrium relationship between the variables. This finding implied that movements in foreign portfolio investment and the selected macroeconomic variables were jointly associated with long-term changes in economic development. The confirmation of cointegration justified the estimation of both long-run coefficients and short-run dynamics using the ARDL error correction framework. Consequently, the study proceeded to estimate the long-run effects of the explanatory variables on economic development, as well as the short-run adjustments toward long-run equilibrium.

Table 5: Panel A: Long-Run Estimates Dependent Variable: HDI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
----------	-------------	------------	-------------	-------

FPI (% of GDP)	0.0042	0.0019	2.21	0.035
FDI (% of GDP)	0.0068	0.0025	2.72	0.012
Remittances (% of GDP)	0.0095	0.0031	3.06	0.005
Money Supply (% of GDP)	0.0027	0.0011	2.45	0.021
Inflation Rate	-0.0039	0.0016	-2.44	0.022
Exchange Rate	-0.0006	0.0002	-2.98	0.006
Interest Rate	-0.0041	0.0018	-2.28	0.030
Constant	0.4125	0.0679	6.07	0.000

Source: Authors computations (2026)

Discussion of Long-Run Results

The long-run results indicated that foreign portfolio investment (FPI) exerted a positive and statistically significant effect on economic development in Nigeria, as measured by the Human Development Index. This finding implied that sustained portfolio inflows contributed to long-term improvements in welfare-related outcomes. From a theoretical perspective, the result supported the financial liberalization theory, which posited that openness to foreign capital enhanced financial market depth, improved liquidity, and facilitated efficient capital allocation, thereby promoting development (McKinnon, 1973; Shaw, 1973).

In the same vein, the endogenous growth framework emphasized that financial development indirectly fostered long-term development through productivity-enhancing and welfare-improving channels (Romer, 1986; Lucas, 1988; Levine, 2005). Empirically, the finding aligned with recent Nigerian studies that documented positive long-run effects of foreign portfolio inflows on financial and macroeconomic performance when sustained over time (Tite et al., 2022; Ehiedu et al., 2023).

Similarly, foreign direct investment, remittances, and money supply exhibited positive and significant long-run effects on economic development, underscoring the importance of stable external finance and domestic liquidity in supporting welfare outcomes. In contrast, inflation, exchange rate depreciation, and interest rate exerted negative long-run effects, reflecting the detrimental impact of macroeconomic instability on development. Persistent inflation eroded real incomes, exchange rate depreciation increased import costs, and high interest rates constrained investment. These findings suggested that while foreign portfolio investment supported development in the long run, its effectiveness was conditional on macroeconomic stability.

Table 6: Panel B: Short-Run Error Correction Model (ECM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Δ FPI (% of GDP)	0.0021	0.0010	2.09	0.045
Δ FDI (% of GDP)	0.0034	0.0016	2.13	0.041
Δ Remittances (% of GDP)	0.0048	0.0022	2.18	0.038
Δ Money Supply (% of GDP)	0.0015	0.0007	2.14	0.040
Δ Inflation Rate	-0.0021	0.0010	-2.10	0.044
Δ Exchange Rate	-0.0003	0.0001	-2.67	0.013
Δ Interest Rate	-0.0024	0.0011	-2.18	0.037
ECT(-1)	-0.63	0.11	-5.73	0.000

Source: Authors computations (2026)

Discussion of Short-Run Results

The short-run error correction results showed that changes in foreign portfolio investment exerted a positive and statistically significant effect on economic development in Nigeria, indicating that portfolio inflows generated immediate welfare-related benefits. This short-run effect reflected the liquidity-enhancing role of portfolio capital, which improved financial conditions and supported economic activity in the near term. In the same vein, short-run changes in foreign direct investment, remittances, and money supply also had positive effects on development, suggesting that both external inflows and domestic liquidity provided short-term support to household welfare. Empirically, these findings were consistent with recent studies reporting short-run positive effects of foreign capital inflows and remittances on Nigeria's macroeconomic performance (Tite et al., 2022; Ehiedu et al., 2023).

However, in contrast, inflation, exchange rate depreciation, and interest rate changes exerted negative short-run effects on economic development, highlighting the immediate welfare costs associated with macroeconomic instability. Rising inflation reduced purchasing power, exchange rate depreciation increased the cost of imported goods, and higher interest rates tightened credit conditions. These results emphasized Nigeria's vulnerability to short-run macroeconomic shocks.

The error correction term was negative and statistically significant, confirming a stable adjustment mechanism toward long-run equilibrium. The magnitude indicated a relatively rapid speed of adjustment, suggesting that deviations from long-run equilibrium were corrected within a short period.

Overall, the short-run results demonstrated that although foreign portfolio investment could deliver immediate development benefits, these gains were highly sensitive to macroeconomic stability.

Table 7: Diagnostic Tests Results

Diagnostic Test	Test Statistic	Probability	Decision
Jarque–Bera (Normality)	1.872	0.392	Residuals are normally distributed
Breusch–Pagan (Heteroskedasticity)	1.654	0.214	No heteroskedasticity
Ramsey RESET (Specification)	0.983	0.338	Model is correctly specified
Durbin–Watson Statistic	1.98	–	No serial correlation

Source: Authors computations (2026)

The diagnostic test results indicate that the estimated ARDL model satisfied the classical regression assumptions. The Jarque–Bera statistic confirmed that the residuals were normally distributed, while the Breusch–Pagan test showed the absence of heteroskedasticity. In addition, the Ramsey RESET test suggested correct model specification, and the Durbin–Watson statistic indicated no evidence of serial correlation, validating the reliability of the estimated results.

5. SUMMARY, RECOMMENDATIONS AND CONCLUSION

This study empirically examined the effect of foreign portfolio investment on economic development in Nigeria using annual time-series data spanning 1995–2024. Economic development was proxied by the Human Development Index, while foreign portfolio investment constituted the key explanatory variable alongside foreign direct investment, remittances, money supply, inflation rate, exchange rate, and interest rate as control variables. The study employed the Autoregressive Distributed Lag (ARDL) approach to capture both long-run and short-run dynamics, following evidence of mixed orders of integration among the variables.

The empirical results revealed the existence of a stable long-run relationship between economic development and its determinants. In the long run, foreign portfolio investment exerted a positive and statistically significant effect on economic development, suggesting that sustained portfolio inflows contributed to improvements in welfare-related outcomes in Nigeria. Foreign direct investment, remittances, and money supply also demonstrated positive and significant long-run effects, highlighting the importance of stable external finance and domestic liquidity expansion in supporting development. In contrast, inflation, exchange rate depreciation, and interest rate exerted negative effects, underscoring the adverse impact of macroeconomic instability on development outcomes.

In the short run, changes in foreign portfolio investment and other capital inflows positively influenced economic development, while macroeconomic instability variables exerted immediate negative effects. The error correction mechanism indicated a relatively fast adjustment toward long-run equilibrium following short-run shocks. Overall, the findings suggested that foreign portfolio investment could support economic development in Nigeria, but its effectiveness was highly conditional on macroeconomic stability and sound policy management.

Policy Recommendations

Based on the empirical findings, several policy recommendations are proposed. First, policymakers should adopt strategies aimed at stabilizing foreign portfolio inflows rather than merely increasing their volume. Strengthening capital market regulations, improving transparency, and enhancing investor confidence can help reduce the volatility associated with portfolio flows and maximize their long-run developmental benefits.

Second, given the negative effects of inflation, exchange rate depreciation, and high interest rates, there is a need for consistent macroeconomic stabilization policies. Monetary authorities should prioritize price stability and exchange rate management to create a conducive environment in which foreign portfolio investment can contribute meaningfully to development outcomes.

Third, policies should encourage complementarity between foreign portfolio investment, foreign direct investment, and remittances. While portfolio investment provides liquidity, FDI and remittances offer more stable financing channels. Coordinated policies that strengthen productive

investment and channel remittances into development-oriented sectors such as education, health, and small-scale enterprises would enhance welfare gains.

Further, financial deepening should be promoted through inclusive financial sector reforms that expand access to credit and improve domestic absorptive capacity. Strengthening institutional quality and regulatory oversight remains critical for translating foreign capital inflows into sustainable economic development.

Conclusion

This study provided empirical evidence on the relationship between foreign portfolio investment and economic development in Nigeria, contributing to the ongoing debate on the developmental implications of short-term capital flows in developing economies. The findings demonstrated that foreign portfolio investment exerted positive effects on economic development in both the long run and short run, but these effects were neither automatic nor unconditional. Macroeconomic instability significantly undermined development outcomes, emphasizing the importance of stable policy environments.

By adopting a development-focused approach and employing robust econometric techniques, the study extended existing literature that predominantly focused on economic growth. The evidence suggested that foreign portfolio investment could support development when complemented by macroeconomic stability, strong institutions, and supportive financial policies. Future research could explore nonlinear effects or institutional thresholds to further enrich understanding of the portfolio investment–development nexus in Nigeria and other emerging economies.

REFERENCES

- Aghion, P., Howitt, P., & Mayer-Foulkes, D. (2015). The effect of financial development on convergence: Theory and evidence. *Quarterly Journal of Economics*, 130(1), 45–94.
- Aizenman, J., Chinn, M. D., & Ito, H. (2016). Monetary policy spillovers and the trilemma in the new normal: Periphery country sensitivity to core country conditions. *Journal of International Money and Finance*, 68, 298–330.
- Aizenman, J., Jinjarak, Y., & Park, D. (2022). Capital flows and financial stability in emerging markets. *Emerging Markets Review*, 52, 100902. <https://>
- Alfaro, L., Kalemli-Ozcan, S., & Volosovych, V. (2014). Sovereigns, upstream capital flows, and global imbalances. *Journal of the European Economic Association*, 12(5), 1240–1284.
- Bekaert, G., Harvey, C. R., & Lundblad, C. (2005). Does financial liberalization spur growth? *Journal of Financial Economics*, 77(1), 3–55.
- Bekaert, G., Harvey, C. R., Lundblad, C., & Siegel, S. (2011). What segments equity markets? *Review of Financial Studies*, 24(12), 3841–3890.
- Central Bank of Nigeria. (2023). *Statistical bulletin*. Central Bank of Nigeria.
- Chinn, M. D., & Ito, H. (2006). What matters for financial development? Capital controls, institutions, and interactions. *Journal of Development Economics*, 81(1), 163–192.
- Ehiedu, V. C., Onuorah, A. C., & Owonye, B. (2023). Foreign portfolio investment inflows and Nigerian economic growth. *Research Journal of Finance and Accounting*, 14(5), 11–17.
- Fund.
- Henry, P. B. (2000). Stock market liberalization, economic reform, and emerging market equity prices. *Journal of Finance*, 55(2), 529–564.
- International Monetary Fund. (2022). Global financial stability report: Shockwaves from the war in Ukraine test the financial system’s resilience. International Monetary Fund.
- International Monetary Fund. (2023). *Global financial stability report*. International Monetary Fund.
- Kose, M. A., Prasad, E., & Taylor, A. D. (2010). Thresholds in the process of international financial integration. *Journal of International Money and Finance*, 29(1), 133–151.
- Kose, M. A., Prasad, E., Rogoff, K., & Wei, S. J. (2009). Financial globalization: A reappraisal. *IMF Staff Papers*, 56(1), 8–62.
- Levine, R. (2001). International financial liberalization and economic growth. *Review of International Economics*, 9(4), 688–702.
- Levine, R. (2005). Finance and growth: Theory and evidence. In P. Aghion & S. Durlauf (Eds.), *Handbook of Economic Growth* (Vol. 1, pp. 865–934). Elsevier.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3–42.
- McKinnon, R. I. (1973). *Money and capital in economic development*. Brookings Institution.
- Mlambo, C. (2022). The impact of international portfolio investment on economic growth: Evidence from selected African countries. *International Journal of Research in Business and Social Science*, 11(7), 151–159.
- Rodrik, D., & Velasco, A. (1999). Short-term capital flows. In *Annual World Bank Conference on Development Economics* (pp. 59–90). World Bank.
- Rodrik, D., & Velasco, A. (1999). Short-term capital flows. In *Annual World Bank Conference on Development Economics* (pp. 59–90). World Bank.

- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002–1037.
- Shaw, E. S. (1973). *Financial deepening in economic development*. Oxford University Press.
- Stiglitz, J. E. (2000). Capital market liberalization, economic growth, and instability. *World Development*, 28(6), 1075–1086.
- Svirydzenka, K. (2023). Introducing a new broad-based index of financial development. *Journal of Development Economics*, 161, 102998.
- Tite, O., Ogundipe, O. M., Ogundipe, A. A., & Akinde, M. A. (2022). Analysis of foreign capital inflows and stock market performance in Nigeria. *Investment Management and Financial Innovations*, 19(4), 51–64.
- Tyohen, I. B., Eggon, H. A., & Osekweiyi, J. O. (2024). Impact of foreign capital inflows on economic growth in Nigeria. *UMM Journal of Accounting and Financial Management*, 4(1).
- Umeh, M. C., & Akamobi, A. A. (2025). Foreign portfolio investment flow and Nigerian stock exchange market. *Journal of Policy and Development Studies*, 18(1).
- United Nations Conference on Trade and Development. (2023). World investment report 2023: Investing in sustainable energy for all. United Nations.
- United Nations Development Programme. (2023). Human development report 2023/2024. UNDP.
- Vo, X. V., & Tran, T. T. (2022). Institutional quality and foreign portfolio investment inflows: Evidence from emerging markets. *Emerging Markets Review*, 51, 100876.
- World Bank. (2022). *World development indicators*. World Bank.
- World Bank. (2022). World development report 2022: Finance for an equitable recovery. World Bank.
- Zahonogo, P. (2022). Trade and economic growth in developing countries: Evidence from sub-Saharan Africa. *World Development*, 151, 105753.