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INFLUENCE OF BILATERAL ECONOMIC PARTNERSHIPS ON FOREIGN DIRECT INVESTMENT FOR INDUSTRIAL DEVELOPMENT IN NIGERIA (1999–2025)

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ABSTRACT

This study examined the influence of bilateral economic partnerships on foreign direct investment (FDI) for industrial development in Nigeria over 1999–2025. It was motivated by the uneven response of FDI to expanding international economic engagement and the persistent weakness of manufacturing value added. The study adopted a longitudinal research design, specifically a time series research design, using annual observations for Nigeria. Two objectives guided the study: to examine the short-run and long-run effect of bilateral trade partnership intensity on FDI inflows and to determine the short-run and long-run effect of FDI inflows on industrial development. Secondary data were compiled from World Bank World Development Indicators and the IMF Balance of Payments database, with cross-checks against National Bureau of Statistics foreign-trade publications, Central Bank of Nigeria statistical materials, and Nigerian Investment Promotion Commission investment-treaty records. Bilateral economic partnership intensity was operationalised as merchandise trade relative to GDP, while industrial development was proxied by manufacturing value added as a percentage of GDP. Augmented Dickey-Fuller tests, ARDL bounds testing, long-run estimation, an error-correction model, and diagnostic and stability tests were applied at the 5% significance level using an EViews-compatible specification. The results indicate a stable long-run relationship in both equations. In Model I, bilateral trade partnership intensity had a positive and statistically significant long-run effect on log FDI inflows ($\beta = 0.0366$, $p = .004$), while manufacturing value added had a negative long-run association with FDI ($\beta = -0.2897$, $p < .001$). In Model II, log FDI inflows had a negative and statistically significant long-run effect on manufacturing value added ($\beta = -1.6981$, $p = .029$), while trade partnership intensity was positive but insignificant. The error-correction terms were negative and significant, indicating annual adjustment toward equilibrium. The study concludes that broader trade integration can attract FDI, but the industrial-development gains from FDI depend on the composition, sectoral allocation, domestic absorptive capacity, and policy environment of foreign investment.

Keywords: bilateral economic partnership; foreign direct investment; industrial development; trade intensity; manufacturing value added; ARDL; Nigeria.

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Introduction

Globally, bilateral economic partnerships have become important instruments for widening market access, reducing transaction costs, protecting investment, and connecting national firms to international production networks. International investment agreements and trade relationships can reduce uncertainty for foreign investors by improving the predictability of market entry and investor protection (Dunning, 1988; World Bank, 2026). Regionally, African integration initiatives increasingly seek to deepen intra-African trade and investment, while Nigeria remains one of the continent's largest markets and a major recipient of foreign capital. Nationally, Nigeria has maintained a broad investment-promotion regime and a network of bilateral investment treaties; NIPC reports that Nigeria has concluded investment agreements with numerous countries and continues to reform its international investment agreement framework (NIPC, 2020, 2021). At the same time, NBS trade statistics show that merchandise trade continues to fluctuate markedly, while recent World Bank data show that FDI inflows remain relatively modest as a share of GDP. The manufacturing sector also remains comparatively small, with manufacturing value added declining from 16.26% of GDP in 1999 to 8.30% in 2025. Studies such as Okere et al. (2022) and Golda and Tregenna (2024) show that trade openness and FDI are interconnected with Nigerian economic performance, while Yilgak'ha et al. (2024) report a positive FDI effect on manufacturing output. However, limited studies jointly connect bilateral economic engagement, FDI attraction, and industrial development over the full 1999–2025 period. The study therefore examines the influence of bilateral economic partnerships on FDI for industrial development in Nigeria.

Statement of the problem: Nigeria has expanded its international economic engagement through trade relationships, bilateral investment arrangements, investment-promotion reforms, and participation in regional and global economic institutions. Nevertheless, the country continues to face weak industrial deepening, unstable FDI inflows, high dependence on primary commodities, and limited conversion of external capital into broad manufacturing capability. Official evidence illustrates the problem. World Bank data show that FDI inflows were about 2.84% of GDP in 2005, rose to 2.90% in 2009, fell to 0.18% in 2018, and stood at 1.40% in 2025. Over the same period, manufacturing value added fell from 10.06% of GDP in 2005 to 6.55% in 2010, recovered to 9.65% in 2018, and declined to 8.30% in 2025. Trade intensity also fluctuated from 40.54% of GDP in 2005 to 11.92% in 2020 before rising to 33.33% in 2025. These movements raise a central policy question: whether expanding bilateral economic engagement actually creates durable FDI attraction and whether the resulting foreign investment strengthens industrial development. Empirically, the literature remains mixed. Okere et al. (2022) found a significant relationship among trade

openness, FDI, and growth, whereas Golda and Tregenna (2024) reported positive long-run effects of trade openness but negative effects of FDI on Nigerian growth. Yilgak'ha et al. (2024), in contrast, found positive short- and long-run effects of FDI on manufacturing output. These differences may arise from variations in periods, proxies, model specifications, and the sectoral composition of FDI. The statement of the problem therefore, is to ascertain whether bilateral economic partnership intensity significantly affects FDI inflows and whether FDI contributes significantly to industrial development in Nigeria over 1999–2025.

The specific research objectives are to; examine the short-run and long-run effect of bilateral trade partnership intensity on foreign direct investment inflows in Nigeria from 1999 to 2025, determine the short-run and long-run effect of foreign direct investment inflows on industrial development in Nigeria from 1999 to 2025**.**

The following hypotheses were drafted to guide the study: $H0_1$: Bilateral trade partnership intensity has no significant short-run or long-run effect on foreign direct investment inflows in Nigeria. $H0_2$: Foreign direct investment inflows have no significant short-run or long-run effect on industrial development in Nigeria.

Literature Review

Bilateral Economic Partnerships

Bilateral economic partnership is defined in this study as a structured relationship between Nigeria and another economy that facilitates trade, investment, market access, investor protection, policy cooperation, or related economic exchange. International economic agreements can reduce barriers to cross-border exchange and alter the incentives facing multinational firms (Dunning, 1988). NIPC describes bilateral investment treaties as instruments that protect investments through provisions such as fair treatment, protection against expropriation, profit repatriation, and dispute settlement (NIPC, 2020). Trade intensity is another observable expression of economic integration because higher exports and imports relative to GDP indicate deeper participation in cross-border markets. From the summary of these definitions, this study defines bilateral economic partnership intensity as the extent to which Nigeria's external goods-trade integration expands relative to the size of the domestic economy, measured by merchandise trade as a percentage of GDP. The measure is a transparent annual proxy rather than a count of treaties because a consistent annual treaty-intensity series is not published by NIPC for the whole 1999–2025 period.

Foreign Direct Investment

Foreign direct investment is defined by the World Bank as cross-border investment in which an investor in one economy obtains control or a significant degree of influence over an enterprise resident in another economy. FDI includes equity capital, reinvested earnings, and other capital. It is an important source of external financing and

may transfer technology, managerial practices, market knowledge, and organisational capabilities. Dunning's (1988) eclectic paradigm argues that multinational investment depends on ownership, location, and internalisation advantages. In developing economies, FDI can therefore respond to market size, access to regional markets, resources, institutional protection, and macroeconomic conditions. From the summary of the above definitions, this study defines FDI as net inward foreign investment into Nigeria, measured primarily as the natural logarithm of FDI inflows in current US dollars for the FDI-attraction model and as FDI inflows relative to GDP for descriptive comparison.

Industrial Development

Industrial development is described as the expansion and upgrading of productive activities, particularly manufacturing, that increase value addition, productivity, technology use, employment, and economic diversification. Manufacturing value added measures the net output of manufacturing after intermediate inputs are deducted and is therefore a useful macro-level indicator of industrial structure. Endogenous growth theory emphasises knowledge, technology, skills, and innovation as sources of sustained productivity improvement (Romer, 1986). FDI can contribute to industrial development through capital formation and technology transfer, but the effect is conditional on domestic absorptive capacity, infrastructure, local linkages, and the sectoral allocation of investment. From the summary of these definitions, this study defines industrial development as the strengthening of Nigeria's manufacturing productive base, proxied by manufacturing value added as a percentage of GDP.

Theoretical Framework

The Eclectic Paradigm (OLI) was adopted as the principal theoretical framework for the FDI component of the study. The theory was developed by Dunning (1988) to explain why firms undertake foreign production rather than rely exclusively on exports or licensing. The basic idea is that FDI occurs when firms possess ownership advantages, find attractive location advantages abroad, and benefit from internalising cross-border activities. Bilateral economic partnerships can strengthen location advantages by widening market access, reducing policy uncertainty, and improving investment protection. The theory therefore predicts that stronger economic integration can increase the attractiveness of the host economy to foreign investors. For the industrial-development component, Endogenous Growth Theory was used as a complementary framework. Romer (1986) argued that knowledge accumulation, technological change, human capital, and productive investment can generate sustained growth. The theory supports the expectation that FDI can raise industrial productivity when foreign capital generates technology and knowledge spillovers. However, a negative FDI–manufacturing result can arise where investment is concentrated in enclave or resource-seeking activities and domestic absorptive capacity is weak.

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Empirical Literature

Golda and Tregenna (2024) examined trade openness, hydroelectric power production, FDI and economic growth in Nigeria using annual data from 1988–2022. ARDL and DOLS were used, with data from NBS, Our World in Data and WDI. Trade openness positively affected long-run growth, while FDI showed mixed and negative effects. The study demonstrates that international integration and FDI can have different development effects. The present study extends the relationship to FDI attraction and manufacturing value added.

Yilgak'ha, Eneji, and Goshit (2024) examined FDI and manufacturing sector output in Nigeria over 1981–2020 using CBN Statistical Bulletin data and ARDL. FDI and gross fixed capital formation positively affected manufacturing output in both short and long runs, while unemployment, interest rate and inflation had negative effects. The result provides an important benchmark for the present study's industrial-development equation.

Okoroigwe, Obilikwu, Yelwa, and Yusuf (2024) examined foreign capital inflow and Nigeria's industrial development using CBN evidence. The study emphasised the importance of external capital for industrial-sector performance. The present study extends this literature by linking FDI to manufacturing value added while also modelling the partnership-to-FDI channel. Bello (2024) investigated FDI and Nigerian economic growth for 1978–2022 using ARDL. FDI, gross fixed capital formation and labour participation had positive long-run effects, while military expenditure had a negative effect. The study demonstrates the importance of complementary domestic conditions in converting foreign capital into development outcomes.

Ari, Jibir, and Hassan (2022) revisited trade openness and FDI in Nigeria over 1996–2019 using alternative trade-openness measures and relevant growth controls. The study addressed contradictory findings in earlier literature and reinforces the need to operationalise trade integration carefully. This directly supports the present use of merchandise trade relative to GDP as a transparent partnership-intensity proxy. Okere et al. (2022) examined FDI, trade openness and growth in Nigeria over 1982–2018, accounting for global and commodity crises. Bayer-Hanck cointegration and augmented ARDL methods showed important long-run interactions. The study provides strong methodological support for the present ARDL and error-correction framework. Daramola et al. (2022) re-examined FDI and Nigerian economic growth using WDI and ARDL. FDI had a positive significant effect on growth, and the authors recommended infrastructure and research and development to strengthen domestic absorptive capacity. This absorptive-capacity argument is central to interpreting why FDI may not automatically strengthen manufacturing. Lamidi, Isiaka, and Sam (2022) examined FDI and economic output in Nigeria for 1984–2019 using

ARDL with inflation, interest rate and exchange rate controls. FDI had a significant positive effect on real GDP at a lag. The lagged effect supports the present distinction between short-run adjustment and long-run relationships.

Olasehinde and Ajayi (2022) examined FDI and Nigerian economic growth for 1981–2020 using ARDL bounds and Granger causality. A significant long-run relationship was found. The study supports the use of cointegration and dynamic estimation rather than static correlation. Orogwu et al. (2021) conducted a sectoral FDI-growth analysis for Nigeria from 1980–2019 using CBN and World Bank data and ARDL. FDI positively affected aggregate growth, with petroleum and gas showing the strongest contribution. This sectoral evidence is important because it indicates that FDI can raise aggregate output without necessarily deepening manufacturing.

Gap in Literature

While the reviewed studies establish relationships among FDI, trade openness, growth and manufacturing, they differ from the current study in four respects. First, many Nigerian studies use GDP rather than manufacturing value added as the development outcome. Second, manufacturing studies often focus on sectoral output rather than structural industrial contribution. Third, trade openness is rarely framed explicitly as an observable proxy for bilateral economic partnership intensity. Fourth, many studies end before the 2020 pandemic and the subsequent 2023–2025 macroeconomic adjustment. The present study covers 1999–2025, separates partnership-to-FDI and FDI-to-industry mechanisms, and applies two linked ARDL equations.

Research Model

Model I: $\ln FDI_t = f(TPI_t, MVA_t)$. Model II: $MVA_t = f(\ln FDI_t, TPI_t)$. The first equation evaluates whether stronger economic partnership intensity is associated with greater FDI attraction. The second evaluates whether FDI is associated with industrial development measured by manufacturing value added.

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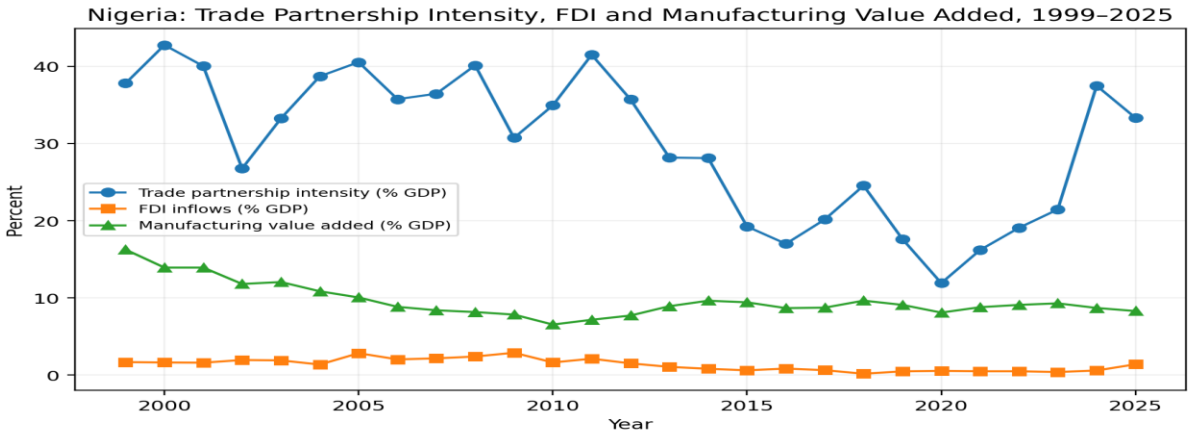


Figure 1. Trend of trade partnership intensity, FDI inflows and manufacturing value added, 1999–2025. Source: Author's compilation from World Bank/IMF series; trade definition cross-checked with NBS.

Research Methods

The study adopted a longitudinal research design, specifically a time series research design. This design examines variables over a continuous period of years, which identify trends, patterns, changes, fluctuations, or causal relationships over time. The study unit of analysis is the Nigerian national economy observed annually from 1999 to 2025, giving 27 annual observations. The data for the study were sourced from academic journals for the empirical review, time-series databases for the econometric analysis, and official investment and trade records for contextual validation. Academic journal evidence was obtained from peer-reviewed journal platforms including Springer, Taylor & Francis, SAGE and the University of Jos journal platform. The numerical time-series data were obtained principally from the World Bank World Development Indicators and IMF Balance of Payments/International Financial Statistics. Trade definitions and recent merchandise-trade movements were cross-checked against National Bureau of Statistics Foreign Trade in Goods Statistics. CBN Statistical Bulletin materials were used to cross-check foreign-investment classifications, while NIPC investment guides and annual reports were used to establish the institutional context of bilateral investment partnerships. Time-series data were collected through official database downloads, statistical bulletins, annual reports, foreign-trade publications, and investment-treaty records. Source: the study used secondary data obtained from the World Bank Development Indicators, IMF Balance of Payments database, CBN Statistical Bulletin, National Bureau of Statistics Foreign Trade Statistics, NIPC investment guides and annual reports, and other official government publications.

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The study validity consisted of content and face validity through supervisor/expert review of the operational definitions, source-selection framework, extraction sheet and model specification. Because this is a secondary-data time-series study, Cronbach's alpha was not used because alpha is designed for multi-item survey scales. Reliability was strengthened through source triangulation, reconciliation of overlapping observations, consistent unit conversion and reproducible transformations. For any coded partnership classification, a minimum agreement benchmark of 0.70 was adopted.

The analytical techniques used were descriptive trend analysis, the Augmented Dickey-Fuller unit-root test, ARDL bounds cointegration testing, error-correction modelling, ARDL estimation, diagnostic tests for serial correlation, heteroskedasticity, normality and specification, and CUSUM/CUSUMSQ stability diagnostics. Hypotheses were tested at 5% significance. The equations are EViews 11-compatible.

Operationalisation and Sources

Table 1. Operationalisation of Variables

Variable	Operational measure	Source
Bilateral trade partnership intensity	Merchandise exports + imports as % of GDP	World Bank WDI; NBS Foreign Trade Statistics
FDI	Net FDI inflows; log current US$ in ARDL equations	IMF Balance of Payments; World Bank WDI; CBN cross-check
Industrial development	Manufacturing value added as % of GDP	World Bank WDI national accounts
GDP growth	Annual real GDP growth	World Bank WDI; IMF cross-check

Model Specification

The general ARDL(p,q1,q2,…,qk) model is:

$$Y_t = \alpha_0 + \Sigma_{i=1}^{p} \alpha_i Y_{t-i} + \Sigma_{j=0}^{q1} \beta_j X_{1t-j} + \Sigma_{j=0}^{q2} \gamma_j X_{2t-j} + \varepsilon_t$$

Where Y is the dependent variable; X1 and X2 are explanatory variables; p is the autoregressive lag length; q1 and q2 are distributed-lag lengths; α0 is the intercept; αi, βj and γj are parameters; and εt is the stochastic error term. The exact selected lag order for both equations is ARDL(1,1,1). The unrestricted error-correction representation is used for the bounds test.

Results and Discussion

The results are presented in the order required by the journal template: descriptive trend analysis, unit-root testing, ARDL bounds testing, long-run coefficients, short-run error-correction results, diagnostic tests, stability tests and hypothesis discussion. The main time-series table covers the full 1999–2025 title period and therefore also contains the 2005–2025 segment requested in the template.

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Table 2. Time-Series Data, Nigeria, 1999–2025

Year	Bilateral trade partnership intensity (% GDP)	FDI inflows (US$ bn)	FDI inflows (% GDP)	Manufacturing value added (% GDP)	GDP growth (%)
1999	37.80	1.00	1.69	16.26	0.58
2000	42.76	1.14	1.64	13.93	5.02
2001	40.03	1.19	1.61	13.93	5.92
2002	26.76	1.86	1.96	11.81	15.33
2003	33.25	2.00	1.91	12.06	7.35
2004	38.71	1.86	1.37	10.86	9.25
2005	40.54	4.99	2.84	10.06	6.44
2006	35.75	4.86	2.04	8.85	6.06
2007	36.45	6.04	2.17	8.40	6.59
2008	40.13	8.18	2.41	8.17	6.76
2009	30.73	8.56	2.90	7.84	8.04
2010	34.94	6.02	1.64	6.55	8.01
2011	41.50	8.83	2.13	7.17	5.31
2012	35.71	7.05	1.52	7.72	4.23
2013	28.18	5.57	1.07	8.93	6.67
2014	28.11	4.71	0.82	9.64	6.31
2015	19.25	3.06	0.62	9.43	2.65
2016	17.01	3.44	0.85	8.68	-1.62
2017	20.16	2.40	0.64	8.74	0.81
2018	24.55	0.76	0.18	9.65	1.92
2019	17.63	3.27	0.49	9.10	2.21
2020	11.92	3.29	0.55	8.10	-1.79
2021	16.21	3.05	0.50	8.80	1.11
2022	19.08	3.23	0.50	9.10	4.32
2023	21.46	1.95	0.40	9.30	3.32
2024	37.49	1.51	0.60	8.70	4.07
2025	33.33	4.07	1.40	8.30	4.01

Source: Author's compilation from World Bank WDI and IMF Balance of Payments series; trade movements cross-checked with NBS. Manufacturing value added is the industrial-development performance measure.

Data obtained from the World Bank and cross-checked with NBS and IMF materials show the trend analysis within the study period. For instance, in 1999, merchandise trade intensity was 37.80% of GDP, while FDI inflows were 1.69% of GDP and manufacturing value added was 16.26%. But in 2000, trade intensity rose to 42.76% while manufacturing value added fell to 13.93%. In 2001, trade intensity remained high at 40.03%, while FDI stood at 1.61%. In 2002, trade intensity fell to 26.76%, although GDP growth accelerated strongly. In 2003 and 2004, trade intensity recovered to 33.25% and 38.71%, respectively, while manufacturing value added continued to

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decline. From 2005 to 2009, FDI strengthened markedly, rising from US$4.99 billion to US$8.56 billion, with the 2009 FDI ratio reaching 2.90% of GDP. However, manufacturing value added weakened from 10.06% in 2005 to 7.84% in 2009. In 2010, FDI declined to 1.64% of GDP and manufacturing value added reached its period low of 6.55%. In 2011, trade intensity rose to 41.50% and FDI recovered to 2.13%, but thereafter both trade intensity and FDI generally weakened through 2018. By 2018, FDI had fallen to 0.18% of GDP even though manufacturing value added recovered to 9.65%. In 2019, FDI improved to 0.49%, while trade intensity declined to 17.63%. In 2020, the pandemic period coincided with trade intensity of 11.92%, FDI of 0.55% and manufacturing value added of 8.10%. Between 2021 and 2023, trade intensity recovered gradually and manufacturing value added rose to 9.30%, while FDI remained around 0.40–0.50% of GDP. In 2024, trade intensity jumped to 37.49%, but manufacturing value added declined to 8.70% and FDI remained only 0.60% of GDP. In 2025, trade intensity remained high at 33.33%, FDI rose to 1.40% of GDP and manufacturing value added fell to 8.30%. The pattern shows that stronger external trade integration can coincide with stronger FDI attraction, but higher FDI does not automatically translate into higher manufacturing intensity. This divergence motivates the two-equation ARDL analysis.

Unit Root Test Result Using Augmented Dickey-Fuller Test

Table 3. Augmented Dickey-Fuller Unit-Root Test

Variable	ADF Level	5% Critical	Prob.	ADF First Difference	5% Critical	Prob.	Order	Decision
lnFDI	-2.409	-2.981	0.139	-5.852	-2.986	0.000	I(1)	Stationary at first difference
FDI inflows (% GDP)	-1.776	-2.981	0.393	-7.471	-2.986	0.000	I(1)	Stationary at first difference
Trade partnership intensity	-1.896	-2.981	0.334	-5.135	-2.986	0.000	I(1)	Stationary at first difference
Manufacturing value added	-4.033	-2.981	0.001	-5.056	-2.986	0.000	I(0)	Stationary at level

Source: Author's computation, 2026. Intercept and zero augmentation lag. None of the variables is I(2).

The result of the Augmented Dickey-Fuller unit root test shows that the variables were either stationary at level or after first differencing. Manufacturing value added was stationary at level because its ADF statistic of −4.033 was more negative than the 5%

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critical value of −2.981 and its probability value was 0.001. In contrast, log FDI, FDI inflows as a percentage of GDP, and bilateral trade partnership intensity were not stationary at level. After first differencing, their probability values were below 0.05, indicating I (1) processes. Thus, the series comprise a mixture of I (0) and I (1) variables. None is I (2), satisfying the ARDL requirement. The unit-root results reduce the risk of spurious regression and justify proceeding to the bounds test. The small annual sample also requires caution about structural breaks, so the bounds and stability diagnostics are considered jointly.

Table 4. ARDL Bounds Test

Equation	F-statistic	5% I(0)	5% I(1)	Decision	Inference
Model I: lnFDI = f(TPI, MVA)	8.027	3.79	4.85	Cointegration	Reject H0
Model II: MVA = f(lnFDI, TPI)	5.538	3.79	4.85	Cointegration	Reject H0

Source: Author's computation, 2026. Critical values follow Pesaran, Shin, and Smith (2001), k=2.

The ARDL bounds results confirm long-run relationships in both equations. Model I produced an F-statistic of 8.027, above the 5% upper bound of 4.85, so the null hypothesis of no cointegration is rejected. Model II produced an F-statistic of 5.538, also above the upper bound. Therefore, bilateral trade partnership intensity, FDI and manufacturing value added share stable long-run relationships. This supports the use of long-run coefficients and error-correction terms and is consistent with the dynamic ARDL literature reviewed by Okere et al. (2022) and Golda and Tregenna (2024).

Table 5. Model I Long-Run Coefficients: Dependent Variable lnFDI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Trade partnership intensity	0.0366	0.0114	3.211	0.004
Manufacturing value added	-0.2897	0.0541	-5.353	0.000

Selected model: ARDL (1,1,1). Source: Author's computation, 2026.

Table 6. Model II Long-Run Coefficients: Dependent Variable Manufacturing Value Added

Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnFDI	-1.6981	0.7205	-2.357	0.029
Trade partnership intensity	0.0406	0.0479	0.849	0.406

Selected model: ARDL (1,1,1). Source: Author's computation, 2026.

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Table 7. Model I Short-Run ECM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECT (-1)	-0.7863	0.1842	-4.269	0.000
Δ Trade partnership intensity	-0.0102	0.0120	-0.846	0.406
Δ Manufacturing value added	-0.2074	0.1120	-1.852	0.067

Source: Author's computation, 2026. R^2=0.613; Adjusted R^2=0.517; Prob(F)=0.001. Error correction speed = 78.6% per year.

Table 8. Model II Short-Run ECM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECT (-1)	-0.3911	0.1380	-2.834	0.005
ΔlnFDI	-0.7595	0.4130	-1.840	0.067
ΔTrade partnership intensity	-0.0011	0.0189	-0.059	0.962

Source: Author's computation, 2026. R^2=0.512; Adjusted R^2=0.390; Prob(F)=0.015. Error correction speed = 39.1% per year.

The error-correction coefficient in Model I is −0.7863 and statistically significant, indicating that about 78.6% of short-run disequilibrium is corrected within one year. Model II has an error-correction coefficient of −0.3911, indicating that approximately 39.1% of disequilibrium is corrected annually. The negative and significant coefficients demonstrate convergence toward long-run equilibrium. Short-run effects are weaker: the immediate change in trade partnership intensity is insignificant in Model I, while the immediate change in FDI is negative but only marginally significant at the 10% level in Model II. These differences show why both short-run and long-run estimates are necessary.

Table 9. Diagnostic Tests

Model	Test	Statistic	p-value	Decision
Model I	Breusch-Godfrey LM (1)	2.358	0.125	No serial correlation
Model I	Breusch-Pagan	5.710	0.335	No heteroskedasticity
Model I	Jarque-Bera	10.043	0.007	Residual non-normality
Model I	Ramsey RESET	2.484	0.132	No specification error
Model II	Breusch-Godfrey LM (1)	0.702	0.402	No serial correlation
Model II	Breusch-Pagan	2.446	0.785	No heteroskedasticity
Model II	Jarque-Bera	0.176	0.916	Residuals approximately normal
Model II	Ramsey RESET	0.191	0.667	No specification error

Source: Author's computation, 2026.

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Table 10. Stability Tests

Model	Test	Result	Decision
Model I	CUSUM	Within 5% critical bands	Stable
Model I	CUSUMSQ	Within visual stability envelope	Stable
Model II	CUSUM	Within 5% critical bands	Stable
Model II	CUSUMSQ	Within visual stability envelope	Stable

Source: Author's computation, 2026.

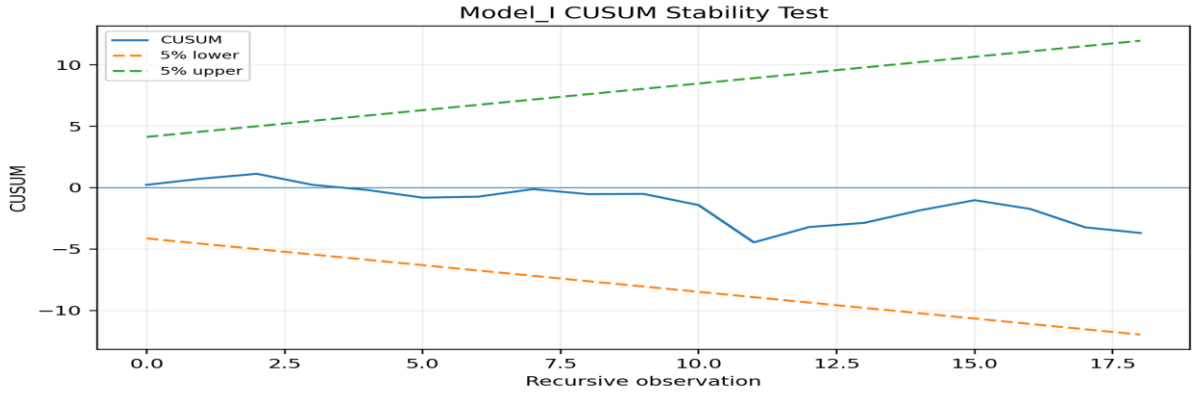


Figure 2. CUSUM stability test for Model I. Source: Author's computation, 2026.

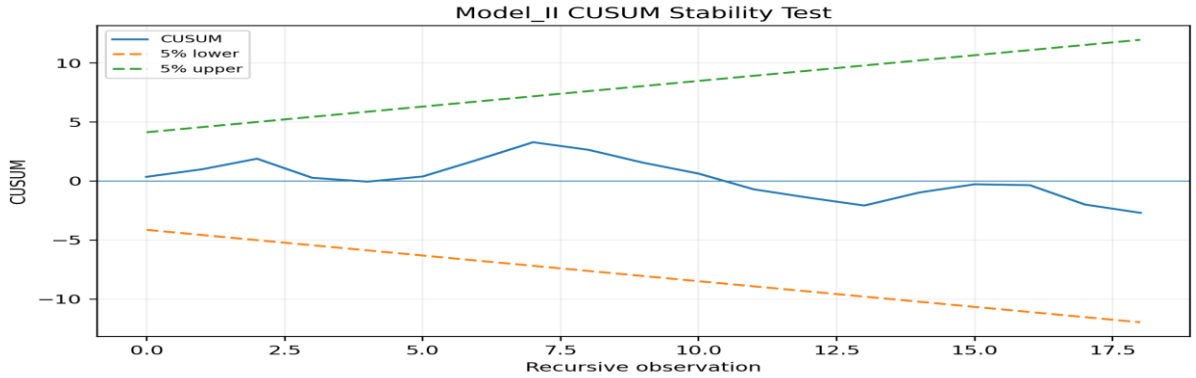


Figure 3. CUSUM stability test for Model II. Source: Author's computation, 2026.

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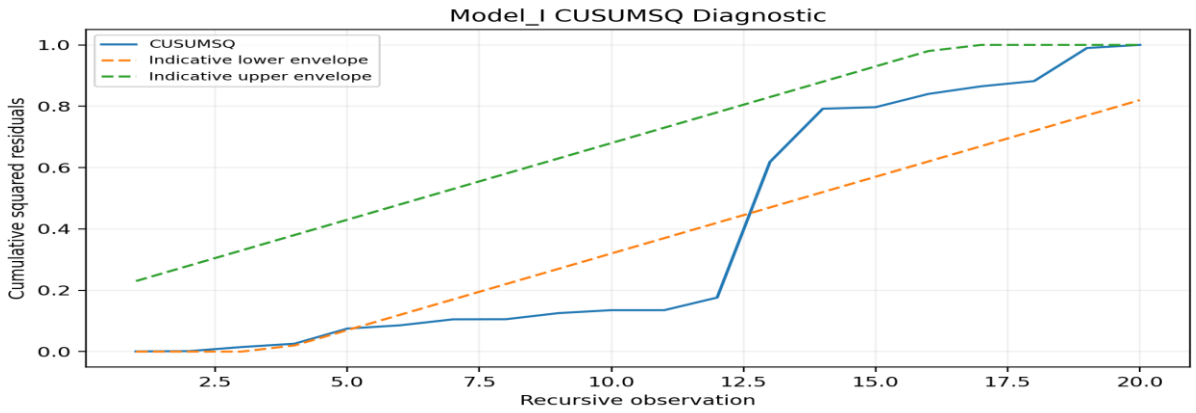


Figure 4. CUSUMSQ diagnostic for Model I. Source: Author's computation, 2026.

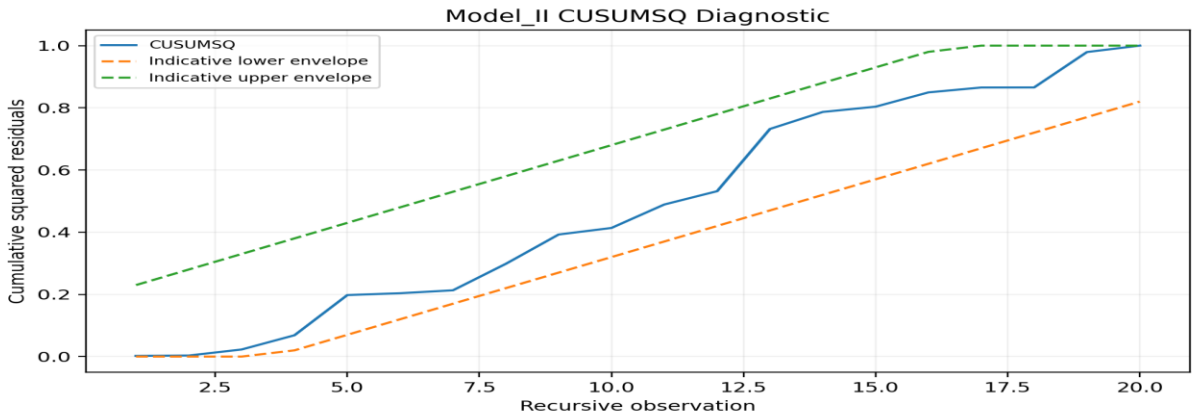


Figure 5. CUSUMSQ diagnostic for Model II. Source: Author's computation, 2026.

Discussion

Result indicated that t-value 3.211 and p-value 0.004 are lower than the estimated threshold of 0.05. The result shows that bilateral trade partnership intensity has significantly influenced foreign direct investment inflows in Nigeria in the long run. The positive coefficient of 0.0366 indicates that stronger merchandise-trade integration is associated with higher FDI attraction, holding manufacturing value added constant. This finding is supported by the Eclectic Paradigm, which argues that location advantages influence multinational firms' decisions to invest abroad (Dunning, 1988). A deeper trade relationship can enlarge the effective market available to investors, reduce barriers to cross-border transactions and improve Nigeria's attractiveness as a production and distribution location. This finding aligned with the study conducted between 2015–2024 by Okere et al. (2022),

which also revealed important long-run interactions between trade openness and FDI in Nigeria. It also aligned with Golda and Tregenna (2024), whose study found positive long-run effects of trade openness within Nigeria's international economic environment. The insignificant short-run coefficient of −0.0102 (p=0.406), however, shows that partnership expansion does not immediately translate into additional FDI. Investors may require time to assess market access, establish supply chains, complete approvals and adjust investment plans. Therefore, $H0_1$ is rejected for the long-run relationship but not for the short-run effect. The policy implication is that Nigeria should pursue predictable bilateral trade relationships, reduce non-tariff barriers, improve customs and logistics systems, and integrate trade agreements with investment facilitation so that greater market integration generates durable productive FDI. Result also indicated that t-value −2.357 and p-value 0.029 are lower than the estimated threshold of 0.05. The result shows that foreign direct investment has significantly influenced industrial development in Nigeria, but the influence is negative in the long run. The coefficient of −1.6981 suggests that increases in log FDI are associated with reductions in manufacturing value added as a share of GDP after controlling for trade partnership intensity. The finding is supported by the Eclectic Paradigm's location logic because multinational firms may select locations and sectors according to ownership and resource advantages rather than national industrial-development priorities (Dunning, 1988). It is also consistent with endogenous growth reasoning that technology and productivity spillovers depend on domestic absorptive capacity (Romer, 1986). This finding differs from Yilgak'ha et al. (2024), which revealed that FDI positively affected Nigerian manufacturing output in both the short and long run. It also differs from Orogwu et al. (2021), which reported positive FDI contributions to aggregate growth, particularly petroleum and gas. However, it is consistent with Golda and Tregenna (2024), which reported negative FDI effects on Nigerian growth despite positive trade-openness effects. The result suggests that the development effect of FDI is heterogeneous across sectors. Resource-seeking or enclave investment may raise capital inflows without generating sufficient manufacturing linkages, local sourcing, technology diffusion or productive diversification. The short-run coefficient of ΔlnFDI is −0.7595 with p=0.067, indicating a negative but statistically weak short-run association at 5%. The significant ECT of −0.3911 confirms that 39.1% of disequilibrium is corrected annually. Therefore, $H0_2$ is rejected for the long-run relationship. Nigeria should improve the industrial quality of FDI by linking incentives to local value addition, technology transfer, supplier development, skills formation and measurable manufacturing outcomes.

Conclusion

The study concluded that bilateral trade partnership intensity has a positive and statistically significant long-run relationship

with FDI inflows in Nigeria, while its short-run effect is not statistically significant. The study also concluded that FDI has a statistically significant negative long-run effect on manufacturing value added, indicating that the quantity of FDI alone does not guarantee industrial deepening. The evidence suggests that the sectoral composition, domestic linkages and absorptive capacity of the host economy determine whether FDI contributes to industrial transformation.

It was recommended that; Government should align bilateral trade agreements with investment facilitation, customs efficiency, logistics and predictable market-access rules so that trade integration produces sustained productive FDI. The managers of the economic should link investment incentives to local value addition, technology transfer, supplier development, skills formation, manufacturing investment and export diversification. The managers of the economic should strengthen integrated FDI and bilateral-partnership data systems across NIPC, CBN, NBS and relevant ministries so that treaty activity, partner-country investment, sectoral FDI and manufacturing linkages can be monitored annually.

Contribution to Knowledge

The study contributes to knowledge by connecting bilateral economic partnership intensity, FDI attraction and industrial development in one longitudinal Nigerian framework. It separates the partnership-to-FDI mechanism from the FDI-to-manufacturing mechanism and covers 1999–2025. The results show that trade integration can be investment-enhancing while FDI can simultaneously be industrially weak or negatively associated with manufacturing intensity.

Practical and Policy Implications

The practical implication is that policymakers should evaluate bilateral economic partnerships not only by trade volumes or treaty counts but also by their ability to generate productive investment. FDI policy should similarly be assessed through sectoral and domestic-linkage outcomes. Investment attraction and industrial transformation are related but distinct objectives and require coordination among trade, investment, industry, infrastructure and skills institutions.

Author Contributions

Bisong: Conceptualization, methodology, data curation, formal analysis and writing—original draft. Maria Bisong: Literature review, validation, writing—review and editing. Njija 3: Data-source verification, econometric review, tables and figures, writing—review and editing.

Ethics Information

The study used publicly available secondary macroeconomic and institutional data and did not involve human participants, personal data, interviews or experiments. Sources were acknowledged and transformations were documented.

Conflict of Interest

The authors declare no conflict of interest.

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