



RESEARCH ARTICLE

THE ECONOMIC COST OF INSECURITY ON NIGERIA'S SUSTAINABLE DEVELOPMENT PATHWAYS: AN ECONOMETRIC ANALYSIS OF GROWTH, INVESTMENT AND FISCAL IMPACTS

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ABSTRACT

The economic impact of insecurity on Nigeria's sustainable development pathway from 1996 to 2024 is examined in this paper. The study, which is based on Political Economy Theory, looks into the long-term connections between political stability and the lack of violence, government security spending, foreign direct investment, overall government revenue, and real gross domestic product. After verifying stationarity and co-integration among the variables, the Dynamic Ordinary Least Squares (DOLS) technique was used to estimate the long-run impacts from annual time-series data obtained from reliable national and international sources. The results show that economic growth is negatively and statistically significantly impacted by political instability, suggesting that insecurity compromises national output and productive activities. On the other hand, growth is positively and significantly impacted by government security spending, indicating that smart security investment can lessen the negative economic effects of instability. While total government revenue shows no discernible long-term growth effect, foreign direct investment exhibits a positive link with growth, but its impact is statistically negligible. The model's robustness, stability, and dependability are validated using diagnostic tests. The study comes to the conclusion that maintaining Nigeria's economic growth requires enhancing institutional quality and bolstering political stability. To achieve sustainable development results, policy emphasis should be placed on intelligence-driven security reforms, effective budgetary management, and changes to the investment climate.

Keywords: Insecurity, Political Stability, Economic Growth, Security Expenditure, Foreign

Direct Investment

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1.0. INTRODUCTION

Nigeria's development program is increasingly threatened by insecurity, which makes it more difficult for the country to maintain fiscal stability, draw in investment, and achieve sustained economic growth. Nigeria is one of the biggest economies in Africa and a major contributor to regional development, but ongoing security issues like terrorism, insurgency, banditry, abduction, and sectarian violence continue to undermine both state institutions and economic activity. According to research, instability worsens socioeconomic vulnerabilities in impacted areas, discourages investment decisions, and directly interrupts productive activity (Abiodun, Magaji & Ismail, 2025).

Yusuf & Mohd (2022) document that insecurity has a negative impact on important macroeconomic fundamentals and that there is a strong inverse relationship between insecurity and real GDP. This suggests that growing insecurity slows economic growth by lowering productivity and raising uncertainty for economic actors. In a similar vein, long-term time-series analysis reveal that insecurity has a negative impact on foreign direct investment and domestic capital formation, decreasing investment inflows that are essential for sustained development (Musa & Ismail, 2023).

Beyond economic expansion, insecurity affects investment choices and financial results. Research on foreign direct investment shows that decreased FDI inflows are correlated with increased insecurity, which puts additional pressure on Nigeria's capacity to finance development initiatives and diversify its economy away from reliance on oil (Ismail, Musa & Magaji, 2024; Ajibua, 2025). Concurrently, the wider socio-economic consequences show themselves as increased unemployment, firm closures, falling investor confidence, and inflationary pressures. These elements exacerbate budgetary constraints and jeopardize the long-term viability of public finances (Onunwa, 2025; Otto & Ukpere, 2012). The effectiveness of national security spending in lowering economic losses is still debatable, notwithstanding an increase in recent budgets.

Persistent insecurity has become a significant barrier to sustained economic growth, despite Nigeria's abundant natural resources and critical economic potential. The nation's political stability, investor confidence, fiscal resources, and growth prospects have all been negatively impacted by these security issues, which include terrorism, insurgency, banditry, and communal violence. Long-term econometric analyses reveal a strong inverse link between insecurity indices and economic output in Nigeria, providing evidence that insecurity has a detrimental impact on real GDP development. According to recent research employing time-series models, for instance, terrorism and other types of insecurity considerably impede real GDP growth, indicating that insecurity continues to be one of the biggest obstacles to Nigeria's economic performance (Abiodun, Magaji & Ismail, 2025; Agunbiade, 2024; Anikwudike & AGabi, 2024).

Political instability is a major way that insecurity affects the economy by discouraging both foreign and domestic investment. Nigeria routinely receives low ratings (such as –2.00 in 2024) on the World Bank's Political Stability and Absence of Violence/Terrorism Index, which reflects ongoing governance issues and insecurity threats that could impede long-term planning and economic decision-making. Secondary literature (Ajimobi, 2024) also emphasizes how political instability and insecurity discourage investors from making capital commitments, which lowers foreign direct investment (FDI) inflows, a vital source of employment, productive capacity, and technological transfer in developing economies.



Government reactions to insecurity, particularly higher security spending, have significant financial ramifications. Although the goal of security spending is to bring stability back, quick increases in this type of spending frequently take valuable public monies away from investments in infrastructure, health, and education, which may reduce long-term growth returns. According to studies, insecurity can increase fiscal deficits and debt loads by weakening the tax base and deterring economic activity that brings in money for the government (Yusuf & Mohd, 2022). Furthermore, the Federal Government's ability to finance development initiatives has been limited by declining overall government revenue from both oil and non-oil sources, making it challenging to maintain growth momentum and effectively address security risks (Jimoh & Oladipo, 2025).

Despite the fact that the negative effects of insecurity are becoming more widely recognized, there is a pressing need to understand how these factors interact to affect Nigeria's long-term sustainable development pathways. In order to quantify the economic cost of insecurity on Nigeria's growth, investment climate, and fiscal health, this study conducts a thorough and integrated econometric investigation that concurrently takes into account political stability, FDI, government security expenditures, and revenue, all within a unified time-series framework, security dynamics, macroeconomic stability, and sustainable growth trajectories in Nigeria covering the period 1996–2024.

2.0. CONCEPTUALIZATIONS, THEORY, AND EMPIRICAL REVIEW

2.1. Conceptualizations

The conceptual literature on insecurity and economic performance emphasizes how poor fiscal outcomes, political instability, and insecurity impede macroeconomic growth in developing nations such as Nigeria. The presence of violence, insurgency, terrorism, banditry, abduction, community conflicts, and political instability that impair economic activity and socio-political functioning is referred to in this context as insecurity.

Insecurity and Economic Growth

Insecurity is conceptually linked with economic growth primarily through its disruptive effects on production, investment, and the movement of goods and services. Empirical evidence from Nigeria underscores this negative influence. A recent study by Abiodun, et al., (2025) found a strong negative relationship between insecurity and real GDP, indicating that rising insecurity significantly constrains economic growth by increasing uncertainty and reducing productive capacity. Such insecurity includes terrorism, kidnapping, and ethnic conflicts that disrupt agricultural output, reduce business operations, and elevate production costs. This aligns with broader conceptualizations in development economics, which suggest that persistent insecurity increases the cost of doing business, erodes investor confidence, and diverts resources away from productive sectors into emergency and protective measures (Todaro & Smith, 2020). In addition to destroying infrastructure, terrorism and militant activity also displace workers and limit market access, which weakens growth drivers (Rotimi, Naphtali & Irefin, 2024).

Political Stability and Economic Outcomes

One important aspect of insecurity is political stability, which is frequently assessed using indices that represent dangers including violence, political instability, and poor governance (World Bank, 2024). From a conceptual standpoint, political stability creates a predictable climate that allows economic



agents to invest, plan, and function effectively. Growth prospects are weakened, risk premiums are increased, and investment is discouraged when political stability declines. Research on Nigeria's political instability reveals that violent elections, intercommunal conflicts, and insurgency cycles seriously erode public confidence in institutions and jeopardize long-term investment planning (Achumba, Ighomereho & Akpor-Robaro, 2013). Although there aren't many recent thorough quantitative studies on political stability indices in Nigeria, qualitative evaluations show that instability erodes GDP growth by causing capital flight and decreased consumption (Daodu, 2025; Peverga et al. 2025).

Insecurity and Foreign Direct Investment (FDI)

In developing economies, foreign direct investment is essential for capital accumulation, technological transfer, and job creation. However, it has been repeatedly demonstrated that political unrest and insecurity discourage foreign direct investment. According to Ajibua (2025), instability drastically lowers foreign direct investment (FDI) inflows into Nigeria because of the increased operational risks associated with terrorism and conflict.

The tendency is in line with economic theory: investors look for settings where returns are not jeopardized by instability, property rights are protected, and government is predictable. More comprehensive empirical assessments (Olasehinde, 2022) further demonstrate that security risks erode Nigeria's investment climate by raising risk premiums and uncertainty, which reduces investor confidence and drives up capital costs. Persistent insecurity can counteract potential gains by deterring long-term foreign commitments, even in cases when macroeconomic fundamentals seem positive.

Government Expenditure on Security and Fiscal Trade-offs

In order to improve defence and internal security capabilities, government spending on security is a direct policy response to insecurity. From a conceptual standpoint, if such expenditure is successful in stabilizing conflict areas and rebuilding investor confidence, it could boost growth. The research, however, frequently draws attention to budgetary trade-offs: higher security spending may displace investments in other industries that foster growth, such as infrastructure, healthcare, and education. Long-term insecurity, according to Abiodun et al. (2025) and Jimoh & Oladipo (2025), can lower taxable economic activity, reducing the revenue base and requiring governments to reallocate funds from capital expenditures to security budgets. By impeding the development of human capital and the construction of infrastructure, this crowding-out effect reduces the potential for long-term growth.

Total Government Revenue and Security Dynamics

A state's ability to finance public goods, services, and development initiatives is largely dependent on its government revenue (Gruber, 2016). Through disruptions to economic activity, such as decreased output in vital industries like oil and agriculture, which are essential to Nigeria's tax base, insecurity might diminish revenue (Nnamocha, 2024). From a conceptual standpoint, this results in a feedback loop whereby tax collection is weakened by insecurity, making it more difficult for the government to concurrently invest in sectors that promote growth and security. According to Onunwa (2025), decreasing revenue makes macroeconomic management more difficult. This results in higher borrowing, larger deficits, and limited public investment, all of which worsen growth prospects.

**Interconnected Mechanisms**

The conceptual and empirical literature taken as a whole supports an integrated framework that holds that political instability and insecurity have a detrimental impact on economic growth both directly (by interfering with labour supply and production) and indirectly (by having a negative impact on FDI, fiscal revenues, and government spending decisions). These mechanisms function through channels of risk, uncertainty, and resource allocation, suggesting that resolving insecurity is both a security necessity and an economic one for sustainable development.

The ongoing conflict between preserving stability and attaining significant economic and investment outcomes is highlighted by Nigeria's experience of growing insecurity over the past 20 years, which has taken the form of insurgencies, banditry, and inter-communal conflicts. The detrimental effects of insecurity on macroeconomic variables such as RGDP, FDI, government revenue, and security expenditures highlight the necessity of thorough, integrated econometric analysis over long time periods, such as 1996–2024, to guide efficient policymaking.

2.2. Theoretical Review**Endogenous Growth Theory**

Paul Romer (1986) and Robert Lucas Jr. (1988) popularized the Endogenous Growth Theory, which holds that internal variables including investment in productive sectors, institutional quality, technical advancement, and human capital development are what drive long-term economic growth. It highlights how institutional stability and policy decisions significantly influence economic results, in contrast to exogenous growth models. Persistent insecurity in Nigeria disrupts schooling, displaces skilled labor, discourages innovation, and lowers capital formation, all of which undercut key internal growth drivers.

Political unrest reduces institutional efficacy, which restricts the productivity-boosting spillovers of foreign direct investment and domestic investment (Udochukwu, 2024). The accumulation of human and physical capital required for long-term endogenous growth is hampered when insecurity diverts public funds into security spending at the expense of infrastructure and education (Modibbo, 2024). Therefore, according to this theoretical framework, while ongoing insecurity undermines Nigeria's capability for long-term growth, improvements in political stability and efficient fiscal management are anticipated to have a favourable impact on RGDP.

Political Economy Theory

Political Economy Theory looks at how power relations, governance frameworks, and political institutions affect economic performance. Academics like Daron Acemoglu and James A. Robinson (2012) contend that while weak institutions and instability impede growth, inclusive and stable political institutions foster economic prosperity. When applied to Nigeria, this theory clarifies how underlying governance and institutional flaws that skew resource allocation and economic incentives are reflected in insecurity, which manifests as insurgency, electoral violence, banditry, and communal conflicts.

FDI inflows and government income generation are impacted by political instability because it raises uncertainty, erodes investor trust, and erodes fiscal discipline (Osuma, Ayinde, Ntokozo & Ehikioya,



2024). Additionally, it forces governments to put immediate security measures ahead of long-term planning for development. According to this concept, the Political Stability Index is a stand-in for institutional quality and the efficacy of governance; a drop in political stability is predicted to lower RGDP by deterring investment and undermining fiscal sustainability (Omodero, 2023). Therefore, it is impossible to separate Nigeria's economic progress from the calibre of political institutions and the degree of security governance.

Investment Risk Theory (Political Risk and Capital Flow Theory)

According to Investment Risk Theory, investors distribute capital according to risk-adjusted returns; political unpredictability, insecurity, and macroeconomic uncertainty raise perceived risk and lower investment inflows (Bekaert & Harvey, 1997; Kobrin, 1979; Henry, 2007). This methodology is based on international capital flow models that highlight how increased political risk drives up capital costs and deters long-term investments. Persistent insecurity raises operating risks, raises transaction and insurance costs, and casts doubt on the preservation of property rights in Nigeria.

As a result, international investors may choose to postpone their investments or shift their funds to economies that are more stable. Reduced FDI inflows restrict capital accumulation, employment creation, and technology transfer—all of which are important RGDP growth drivers. Insecurity can also reduce the domestic income base, making it more difficult for the government to fund infrastructure that promotes growth. According to this theoretical viewpoint, increased political stability is anticipated to boost foreign direct investment (FDI) inflows and improve revenue performance, which would positively impact real GDP; on the other hand, persistent insecurity causes capital flight, revenue volatility, and slower economic growth.

2.3. EMPIRICAL REVIEW

Abiodun et al. (2025) looked at how Nigeria's economic growth was affected by insecurity between 1990 and 2023. The study used an Autoregressive Distributed Lag (ARDL) model to examine the long-term and short-term correlations between real GDP, a measure of economic growth, and important variables such as inflation, unemployment, poverty, and insecurity (National Terrorism Index). The results show a significant inverse relationship between economic growth and insecurity. Economic progress is eventually hampered by increased insecurity since it results in lower investment, lower productivity, and more economic uncertainty. The report suggests comprehensive security measures, efficient governance, and focused policies to address poverty, unemployment, and inequality in order to lessen the detrimental effects of insecurity and promote sustainable economic growth. Nigeria may build a more secure and prosperous future by tackling these issues.

Jimoh & Oladipo (2025) investigated the impact of government revenue, both oil and non-oil, on economic growth in Nigeria. The research employed the ARDL methodology which involves estimation of coefficients for short and long runs, stability and diagnostic tests, and interpretation of results utilizing data from World Bank Development Indicators data base and the Central Bank of Nigeria Statistical Bulletin. The study shows that oil and non-oil revenue have positive impact on economic growth in Nigeria in the long run. It was recommended that the government needs to fashion out sustainable strategies that could boost revenue collection with positive implication for the economy. Appropriate policy mix such as monetary and fiscal policies should be adopted to enhance



revenue generation and capital expenditure that would further facilitate economic activities and income generation.

Ajibua (2025) assessed the impact of insecurity on the level of foreign direct investment in Nigeria covering the data period 2002-2023. Besides the two underlying variables, gross domestic product was included in the model as a control variable. Employing the ARDL model, the study found that insecurity negatively affected FDI growth in Nigeria. Also, the study further found that gross domestic product, a proxy for economic growth, exerted a positive impact on foreign direct investment. The study recommended that the government may be proactive in dealing with security threats through training, modern methods of intelligence gathering, and sharing, logistics and the deployment of advanced technology in managing security challenges. Finally, the government may formulate policies and programmes capable of addressing the current level of low productivity in the country, thereby repositioning the economy for growth and development.

Rotimi et al. (2024) investigated the impact of terrorism on productivity in Nigeria, examining various aspects including economic growth, trade, foreign direct investment (FDI), manufacturing output, and other key indicators but with specific focus on economic growth. It emphasized how widespread terrorism is in Nigeria, where several organizations, including Boko Haram, ISIS, Fulani herdsmen, and militants from the Niger Delta, contribute to violence and instability. The study used Structural Vector Autoregression (SVAR) to examine how terrorism affected Nigeria's economic factors. Data covering 42 years from 1980 to 2021 were utilized, and they were sourced from the World Bank and World Development Indicators. In conclusion, the study underscored the detrimental impact of terrorism on productivity and economic growth in Nigeria, highlighting the need for effective counter-terrorism measures to mitigate these effects. It provides valuable insights for policymakers and researchers aiming to address the complex challenges posed by terrorism in the country.

Using annual time-series data from 1980 to 2019 and the ARDL methodology to analyse the fiscal and socio-economic consequences of insecurity on economic growth in Nigeria, findings by Yusuf & Mohammed (2023) demonstrated that high unemployment rate, domestic capital formation, foreign direct investment, government spending on education and security are negatively affected by the growing level of insecurity and consequently retarded growth in the long and short run. The findings suggest that good governance, provision of a safe and secure environment for human capital development and businesses, and improved access to social and economic services will curb violent tendencies, create jobs, reduce poverty, increase government revenue and engender long-term inclusive growth.

Olasehinde (2022) empirically examined the impact of defence and security on foreign direct investment (FDI) in Nigeria using quarterly historical data covering the period of 1994q1-2019q4, and ARDL and VAR econometric techniques were adopted as tools of data analysis. The results from both econometric approaches revealed that foreign direct investment responds negatively to the exogenous occurrence of security threats both in the short and long runs. Also, economic instability and uncertainty are shown to cause a drag in foreign direct investment inflow in Nigeria. The study recommendations drawn from the findings are that national security challenges should be addressed without delay by the government at all tiers to change the course of the downward trend of FDI in Nigeria.



There are substantial gaps in the literature about how these factors collectively affect Nigeria's long-term sustainable development pathways, despite increased awareness of the detrimental effects of insecurity. In contrast to an integrated econometric analysis that concurrently takes into account political stability, FDI, government security expenditures, and revenue—all within a single time-series framework—the majority of current studies, such as Yusuf & Mohammed (2023), Olasehinde (2022), and Abiodun et al. (2025), concentrate on individual relationships (e.g., insecurity and FDI, or insecurity and growth).

Policy makers' comprehension of the causal relationships between security dynamics, macroeconomic stability, and sustainable growth trajectories in Nigeria is hampered by this gap. Additionally, it limits evidence-based approaches to strike a balance between long-term financial and economic goals and security considerations. In order to measure the economic cost of insecurity on Nigeria's economy, investment climate, and fiscal health, a thorough econometric study spanning the years 1996–2024 is desperately needed.

3.0. METHODOLOGY

Using historical macroeconomic time-series data, the study employs an ex post facto research design. Since the factors being studied have already happened and the researcher cannot change them, this approach is suitable. The long-term relationship between insecurity and economic growth in Nigeria is examined using a quantitative econometric approach.

3.1. Foundational Framework

The foundation of this research is Political Economy Theory, which was developed by Douglass C. North in *Institutions, Institutional Change and Economic Performance* (1990) and further popularized by Daron Acemoglu and James A. Robinson in *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (2012). According to Political Economy Theory, economic results are determined by the composition and caliber of political institutions. Investment, property rights, policy legitimacy, and economic growth are all enhanced by stable political regimes. On the other hand, insecurity and weak institutions distort incentives, deter capital inflows, raise transaction costs, and lower productivity. In the Nigerian context, institutional fragility and governance issues are reflected in insecurity, which takes the form of terrorism, insurgency, kidnapping, banditry, and communal conflicts. Thus, the theory offers a solid analytical foundation for investigating how insecurity affects Nigeria's macroeconomic performance.

3.2. Sources of Data

Annual secondary data from 1996 to 2024 are used in the study (subject to availability). To guarantee dependability and consistency, data are gathered from respectable national and international sources. These include:

- ☐ World Bank – World Development Indicators (WDI)
- ☐ World Bank – Worldwide Governance Indicators (WGI)
- ☐ Central Bank of Nigeria – Statistical Bulletin

These sources provide data on real GDP, political stability and absence of terrorism index, government expenditure on security, foreign direct investment and total government revenue.



3.3. Model Specification

Following the Political Economy framework, economic growth is modeled as a function of insecurity proxied by political stability and absence of terrorism index and selected macroeconomic control variables.

The functional form of the model is expressed as:

$$RGDP_t = f(PSI_t, GEXSt, FDI_t, TGR_t) \quad (1)$$

The econometric model is specified as:

$$RGDP_t = \beta_0 + \beta_1 PSI_t + \beta_2 GEXS_t + \beta_3 FDI_t + \beta_4 TGR_t + \varepsilon_t \quad (2)$$

The econometric form of the model in its natural logarithmic transformation is expressed as:

$$LNRGDP_t = \beta_0 + \beta_1 PSI_t + \beta_2 LNGEXS_t + \beta_3 FDI_t + \beta_4 LNTGR_t + \varepsilon_t \quad (3)$$

Where: RGDP = Real Gross Domestic Product (proxy for economic growth);

PSI = Political stability and absence of violence/terrorism index (proxy for Insecurity index);

GEXS = Government expenditure on security;

FDI = Foreign Direct Investment;

TGR = Total government revenue;

ε_t = Error term;

β_0 = Intercept

$\beta_1 - \beta_4$ = Parameters to be estimated;

LN = Natural logarithm

3.4. Estimation Technique

The study employs Dynamic Ordinary Least Squares (DOLS) to estimate the long-run relationship among the variables. DOLS is particularly suitable because it:

- (i) Corrects for endogeneity bias .
- (ii) Accounts for serial correlation.
- (iii) Produces unbiased and efficient long-run estimates.
- (iv) Performs well in small sample sizes.
- (v) Controls for feedback effects between regressors and the dependent variable

The DOLS model augments the cointegration regression with leads and lags of first differences of the explanatory variables:

$$LNRGDP_t = \beta_0 + \beta_1 PSI_t + \beta_2 LNGEXS_t + \beta_3 FDI_t + \beta_4 LNTGR_t + \sum_{k=-q}^q \gamma_k \Delta X_{t-k} + \varepsilon_t \quad (4)$$

Where:

ΔX_{t-k} = Leads and lags of differenced regressors;

q = Optimal lag length



4.0. PRESENTATION OF RESULTS AND DISCUSSION

4.1. Presentation of Results

Descriptive Statistics

Table 4.1: Nigeria's RGDP, political stability index, government security spending, foreign direct investment, and total government revenue from 1996 to 2024

Models	RGDP	PSI	LNGEXS	FDI	LNTGR
Mean	51246.46	-1.760931	4.936704	3.30E+09	8.496836
Median	54612.26	-1.874	5.291846	2.39E+09	8.841087
Maximum	79292.23	-0.588	7.407208	8.84E+09	10.13453
Minimum	22568.87	-2.211	1.931811	-1.87E+08	6.139044
Std. Dev.	19530.21	0.379821	1.401986	2.65E+09	1.058512
Skewness	-0.181304	1.453534	-0.397735	0.712227	-0.910491
Kurtosis	1.506549	4.714351	2.371433	2.356587	2.958755
Jarque-Bera	2.853938	13.76298	1.242009	2.952018	4.008857
Probability	0.240035	0.001027	0.537404	0.228548	0.134737
Sum	1486147	-51.067	143.1644	9.56E+10	246.4082
Sum Sq. Dev.	1.07E+10	4.039402	55.03578	1.97E+20	31.37255
Observations	29	29	29	29	29

Source: Researchers' computation

Moderate variability across the research variables is indicated by the descriptive statistics for the 29 observations in Table 4.1. While the Political Stability Index (PSI) averaged -1.760931 , indicating ongoing political instability in Nigeria during the period under review, the Real Gross Domestic Product (RGDP) reported a mean of 51,246.46 with discernible changes over time.

Both total government revenue (LNTGR) and government spending on security (LNGEXS) in logged form displayed low dispersion, indicating gradual fiscal changes over time. The most volatile sector was foreign direct investment (FDI), which occasionally showed negative inflows that suggested capital reversals.

According to the Jarque-Bera statistics, all variables are normally distributed at the 5% significance level, with the exception of PSI, which exhibits non-normality, most likely as a result of instability shocks. Overall, the summary statistics point to data behaviour that is appropriate for further econometric analysis, such as unit root and cointegration tests.

Unit Root Test Result

Table 4.2 presents the results of the Augmented Dickey-Fuller (ADF) unit root test conducted to determine the order of integration of the variables. This test was carried out on each of the variables at a 5 percent critical value.



Table 4.2: Summary of the Unit Root Test Result

Variables	Level		first difference		Order Of Integrati on
	ADF Test Stat.	Critical Value. @ 5%	ADF Test Stat.	Critical Value @ 5%	
RGDP	-0.319684 (0.9098)	-2.971853	-3.098972 (0.0386)	-2.976263	I(1)
PSI	-1.990090 (0.2892)	-2.971853	-5.964944 (0.0000)	-2.976263	I(1)
LNGEXS	-1.890979 (0.3313)	-2.976263	-8.477176 (0.0000)	-2.976263	I(1)
FDI	-1.624856 (0.4571)	-2.971853	-6.766050 (0.0000)	-2.976263	I(1)
LNTGR	-1.543752 (0.4972)	-2.971853	-4.589724 (0.0011)	-2.976263	I(1)

Source: Researchers' computation

The Augmented Dickey–Fuller (ADF) unit root test results indicate that all the variables—RGDP, PSI, LNGEXS, FDI, and LNTGR—are non-stationary at level, as their ADF test statistics are less than the 5% critical values and their probability values exceed 0.05. However, upon first differencing, the ADF statistics for all variables become more negative than the corresponding 5% critical values, with probability values less than 0.05, indicating rejection of the null hypothesis of unit root at first difference. This confirms that all the variables are integrated of order one, I(1). The uniform order of integration justifies proceeding to co-integration analysis and supports the suitability of employing the Dynamic Ordinary Least Squares (DOLS) technique to estimate the long-run relationship among the variables.

Summary of the Johansen Co-integration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.** Critical Value	Max-Eigen Statistic	0.05 Critical Value	Prob.** Critical Value
None *	0.736832	87.90588	69.81889	0.0009	36.04403	33.87687	0.0271
At most 1 *	0.682792	51.86184	47.85613	0.0200	31.00135	27.58434	0.0175
At most 2	0.409502	20.86050	29.79707	0.3664	14.22329	21.13162	0.3470
At most 3	0.190918	6.637206	15.49471	0.6202	5.720100	14.26460	0.6494
At most 4	0.033397	0.917106	3.841465	0.3382	0.917106	3.841465	0.3382

Source: Researchers' computation

The findings of the Johansen cointegration test show that there are long-term correlations between the variables. Since the test statistics surpass their respective critical levels and the corresponding probabilities are less than 0.05, both the Trace and Maximum Eigenvalue statistics reject the null hypothesis of no cointegration at the 5% significance level for "None" and "At most 1." However, because their statistics are below the critical values with probability greater than 0.05, the null hypotheses for "At most 2," "At most 3," and "At most 4" cannot be rejected. This suggests that there are at least two cointegrating equations between RGDP, PSI, LNGEXS, FDI, and LNTGR. This validates a stable long-run equilibrium relationship between the variables and supports the use of Dynamic Ordinary Least Squares (DOLS) to estimate the long-run model.



Dynamic Ordinary Least Squares (DOLS) Long-Run Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PSI	-9258.109	11814.89	-2.783596	0.0534
LNGEXS	22646.66	7266.896	3.116415	0.0124
FDI	2.53E-06	1.61E-06	1.573150	0.1501
LNTGR	-10338.57	9881.619	-1.046242	0.3227
C	36900.78	47745.12	2.872870	0.0494

Source: Researchers' computation

The following is revealed by the Dynamic Ordinary Least Squares (DOLS) results:

PSI: $p\text{-value} = 0.0054 \rightarrow$ Since $0.0054 < 0.05$, it is statistically significant at 5%. With a negative coefficient (-9258.109), the Political Stability and Absence of Violence and Terrorism Index suggests that declining political stability considerably lowers real GDP.

LNGEXS: statistically significant at 5% ($p\text{-value} = 0.0124$). Government spending on security considerably boosts economic growth, according to its positive coefficient (22646.66).

FDI: $p\text{-value} = 0.1501 \rightarrow$ Since $0.1501 > 0.05$, it is not significant at 5%. Despite having a positive coefficient (2.53E-06), foreign direct investment is statistically negligible, suggesting a small long-term influence over the study period.

LNTGR: $p\text{-value} = 0.3227 \Rightarrow$ Not significant at 5%. The association between total government revenue and RGDP is negative and negligible (-10338.57), indicating that income generation by itself does not always result in growth.

The presence of additional growth-promoting variables not specifically included in the model is shown by the positive and statistically significant constant term ($p = 0.0494$).

Overall, the results are consistent with the Political Economy paradigm, especially when it comes to the growth consequences of political stability and security spending.

Post-Estimation Diagnostics

With an R-squared of 0.888336 and an adjusted R-squared of 0.867600, the post-estimation findings show that the model has excellent explanatory power, suggesting that the independent variables included account for around 87% of the fluctuations in real GDP. When compared to the dependent variable's mean (52,348.27), the standard error of regression (3270.766) is comparatively low, indicating a decent model fit. The White heteroskedasticity test verifies homoskedastic residuals ($p\text{-value} > 0.05$), whilst the Breusch–Godfrey LM test reveals no indication of serial correlation ($p\text{-value} > 0.05$).

According to the Ramsey RESET test, there is no functional form misspecification ($p = 0.7094$), indicating that the model is appropriately described. Furthermore, both the CUSUM and CUSUMSQ tests fall inside the 5% critical bounds, indicating parameter stability, and the residuals are normally distributed according to the Jarque–Bera statistic ($p = 0.797344$). Despite some evidence of multicollinearity among some explanatory variables, the diagnostic results generally indicate that the estimated model is econometrically sound and trustworthy for policy interpretation. Nigeria's RGDP



trend has been falling over time, according to the Hodrick-Prescott (HP) graph, which highlights structural issues like political instability and insecurity. Both short-term volatility and long-term growth degradation are highlighted by the cyclical fluctuations, which indicate brief shocks probably related to shifts in government security spending, FDI inflows, and revenue.

4.2. Discussion of Findings

The Economic Cost of Insecurity on Nigeria's Sustainable Development Pathways (1996–2024) was the subject of the study. This section connects the empirical findings to theory and current data by interpreting them in the context of pertinent literature.

According to the study, real GDP is negatively and statistically significantly impacted by political stability and lack of violence (PSI). The negative coefficient indicates that Nigeria's real economic output is considerably reduced when political stability diminishes. This outcome is consistent with the predictions of Political Economy Theory, which holds that political instability, poor institutions, and insecurity impede economic activity and slow growth. This conclusion empirically supports recent research demonstrating that insecurity erodes investor confidence, disrupts supply chains, and raises uncertainty, all of which cause Nigeria's economy to grow more slowly (Abiodun, et al., 2025).

In a perspective, Abiodun et al. (2025) show that violent conflict and terrorism severely limit GDP development by discouraging profitable investment and disrupting market processes in both urban and rural areas. The empirical consensus that political stability is a prerequisite for long-term economic success is reflected in this relationship. Political instability significantly slows economic growth by raising risk premiums and deterring capital accumulation, particularly in developing nations like Nigeria, according to a cross-country analysis of Alsharif et al. (2023). In the Nigerian context, instances of insurgency, abduction, and communal violence have been connected to declines in regional production and investor withdrawals, highlighting the growth cost of unstable political conditions.

Real GDP is positively and significantly correlated with government spending on security (LNGEXS). This result implies that during the study period, increased security spending has positively impacted economic growth. The outcome suggests that allocating resources to security people and infrastructure appropriately may assist lower insecurity, boost economic confidence, and allow economic activity to return in impacted areas. This result is consistent with research that suggests security spending can boost economic growth if it effectively reduces threats and stabilizes socioeconomic situations (Onunwa, 2025; Musa & Adeleke, 2022).

According to Onunwa (2025), prompt and focused security expenditure in Nigeria's conflict areas has boosted economic activity and corporate confidence, especially in previously unstable areas. It is crucial to remember that, even though security spending seems to be growth-supportive over the long term, excessive reallocation of public funds toward security at the expense of productive sectors (like infrastructure and education) may present fiscal trade-offs that could eventually weaken sustainable development.

FDI is not statistically significant at the 5% level, despite having a positive sign. This suggests that foreign direct investment had no statistically significant effect on Nigeria's real GDP during the time



under investigation. Although this result may seem unexpected, it is in line with recent research that indicates Nigeria's foreign direct investment (FDI) inflows have been erratic and focused in extractive industries with little impact on overall economic growth (Duru & Ujah, 2024; Akinlo, 2023). Although FDI inflows to Nigeria are still significant, Duru and Ujah (2024) point out that their growth impact is diminished by their extreme sensitivity to domestic regulatory instability, global commodity price cycles, and infrastructure constraints.

Real GDP and total government revenue (LNTGR) have a negative but statistically insignificant relationship. This implies that during the study period, changes in government revenue did not result in statistically significant effects on economic growth. One possible explanation is that while government revenue may have increased, ineffective public expenditure management, insufficient institutional capacities, or revenue instability related to fluctuations in oil prices limited the government's ability to stimulate growth. This outcome is consistent with research demonstrating that revenue by itself does not ensure growth unless it is effectively directed toward structural reforms and profitable investments (Ezeh & Iyoha, 2024).

Ezeh & Iyoha (2024) further discover that although Nigeria's government revenue rose over a number of years, its growth-promoting effect was diminished by widespread leakages and a lack of strategic spending planning. The result supports the Political Economy argument that in order to convert revenue into sustained growth, fiscal capability must be combined with sound governance and effective allocation.

The robustness of the estimates is reinforced by the high R-squared (0.8883) and adjusted R-squared (0.8676), which show that the model explains a significant percentage of the variation in real GDP. The results' dependability is further confirmed by the lack of serial correlation, homoskedastic residuals, valid functional form (RESET test), normal distribution of errors, and stable parameters (CUSUM and CUSUMSQ within 5% bounds).

Overall, the results corroborate the fundamental ideas of Political Economy Theory: targeted security investment can improve the operating environment and boost economic performance, whereas inadequate political stability seriously impedes growth. The non-significance of government revenue and foreign direct investment implies that their growth benefits depend on security conditions, policy coherence, and institutional quality. These findings offer significant policy insights for Nigeria's sustainable development approach, emphasizing the necessity of bolstering institutional capacity and political stability in order to optimize the financial gains from investment and fiscal policy.

4.3. Summary of Findings

This study used Dynamic Ordinary Least Squares (DOLS) to analyze the economic impact of insecurity on Nigeria's sustainable development pathway between 1996 and 2024. The findings showed the following:

- Political stability and absence of violence (PSI) had a negative and statistically significant impact on real GDP, indicating that worsening instability reduces economic performance.
- Government expenditure on security (LNGEXS) was found to have a positive and statistically significant effect on economic growth, suggesting that increased security spending contributes to improved economic outcomes.



- Foreign Direct Investment (FDI), although positively related to GDP, was not statistically significant, implying limited growth impact within the study period.
- Total government revenue (LNTGR) showed a negative and statistically insignificant relationship with economic growth.
- The diagnostic tests confirmed that the model is econometrically sound, stable, and reliable for policy interpretation.

5.0. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

According to the study's findings, Nigeria's economic expansion and sustainable development are seriously threatened by insecurity. Weak political stability hinders productive activity, deters investment, and limits output growth, all of which are consistent with Political Economy Theory. Strategic government spending on security, however, can lessen these negative consequences and promote economic recovery.

In order to convert fiscal and investment inflows into significant economic growth, institutional quality, effective resource management, and enhanced security circumstances are crucial, as indicated by the limited impact of FDI and government income. Thus, bolstering democratic institutions and improving security efficacy continue to be essential components of Nigeria's long-term development plan.

5.2. Recommendations

In accordance with the results of this study, the following suggestions are put forth:

- **Political Stability and Absence of Violence:** The government should improve dispute resolution procedures, build democratic institutions, and reinforce the rule of law. To lessen instability and rebuild investor confidence, policies targeting insurgency, banditry, abduction, and communal violence should place a high priority on intelligence-driven security measures and inclusive governance.
- **Government spending on security** should be open, goal-oriented, and purposeful. To guarantee effective use of finances, increased funding for contemporary surveillance systems, intelligence collection, border control, and community policing should be paired with accountability measures.
- **Foreign Direct Investment:** The government should strengthen the investment climate through infrastructure development, security assurance, and regulatory stability to increase the growth impact of FDI. To boost spillover effects, FDI should be encouraged to diversify into non-oil industries like manufacturing, agriculture, and technology.
- **Total Government Revenue:** Increased fiscal restraint and effective public spending management should go hand in hand with revenue collection initiatives. Revenue stability and its developmental impact will be improved by diversifying revenue sources away from reliance on oil and bolstering tax administration.



Conflict of Interest

The authors declare that no conflict of interest exist in this manuscript

Artificial Intelligent (AI) Statement

During the preparation of this manuscript, the authors used ChatGPT (open AI) solely for language refinement. No AI tools were used for data analysis, interpretations, or generation of scientific content. All outputs were critically retrieved and edited by the authors. The author/s take full responsibility for the integrity and accuracy of the work.

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**APPENDIX**

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags

F-statistic	1.374314	Prob. F(2,15)	0.2831
Obs*R-squared	4.181334	Prob. Chi-Square(2)	0.1236

Heteroskedasticity Test: White

Null hypothesis: Homoskedasticity

F-statistic	1.190747	Prob. F(14,14)	0.3742
Obs*R-squared	15.76251	Prob. Chi-Square(14)	0.3281
Scaled explained SS	7.576222	Prob. Chi-Square(14)	0.9102

Ramsey RESET Test

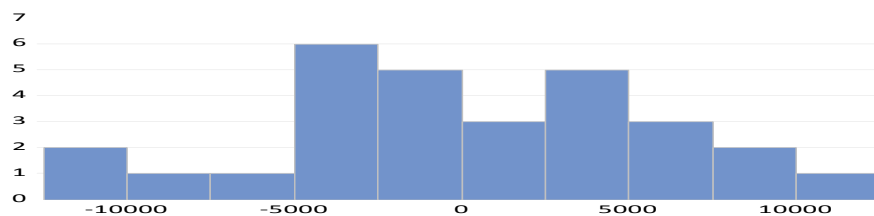
Equation: UNTITLED

Omitted Variables: Powers of fitted values from 2 to 3

Specification: RGDP RGDP(-1) PSI LNGEXS FDI FDI(-1) FDI(-2)

LNTGR LNTGR(-1) LNTGR(-2) C

	Value	df	Probability
F-statistic	0.351376	(2, 15)	0.7094
Likelihood ratio	1.236215	2	0.5390



Series: Residuals	
Sample 1996 2024	
Observations 29	
Mean	-2.35e-11
Median	-19.07792
Maximum	12322.50
Minimum	-10528.09
Std. Dev.	5903.025
Skewness	0.069111
Kurtosis	2.403560
Jarque-Bera	0.452939
Probability	0.797344

