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Nexus Between Security Expenditure and Foreign Direct Investment in Nigeria (1986 – 2021)

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Abstract

The study empirically examined the nexus between security expenditure and foreign direct investment in Nigeria spanning through 1986 to 2021. Specifically, the study examined the effect of security expenditure on foreign direct investments in Nigeria, the relationship between government security spending and foreign direct investments in Nigeria and the causal relationship between security expenditure and foreign direct investments in Nigeria. The data for this study were sourced from the Central Bank of Nigeria statistical bulletin and World Bank Development indicator and the independent variables are security expenditure, trade openness, military expenditure and exchange rate while the dependent variable is foreign direct investment. ARDL and Granger Causality analytical methods were employed. The study revealed that the contribution of security expenditure had a positive and a statistically significant impact on the growth of foreign direct investment both in the short run and long run. The study further revealed that there is existence of unidirectional causality from security expenditure to foreign direct investment. Therefore, the policy recommendation is that Government should promote foreign direct investment by ensuring security stability for protection of lives and properties in order to accomplish desired level of economic growth. This is due to the finding that if there is an increase in security expenditure, it will promote foreign direct investment.

Key Words: Foreign Direct Investment**,** Security Expenditure, Trade Openness, Military Expenditure, Exchange rate.

1.0 Introduction

Internal security spending and foreign direct investment has attracted attention over the years, due to the upward rise in insecurity in Nigeria which is a major contributor to fall in investment and particularly foreign direct investment. Over the past two decades, there has been a sharp rise in crime and instability in Nigeria. Terrorist attacks, pipeline vandalism, bombings, rape, kidnappings, communal confrontations, political violence, and other violent crimes have become commonplace and has continued to pose serious challenges and threat to the peace and stability of Nigeria macroeconomic environment (Oriakhi & Osemwengie, 2012; Adeyeye, Akinuli, & Ayodele, 2016). More than ever, the current explosion of insecurity poses serious

concern to Nigerian economy. This has led to diverting foreign direct investment (FDI) from target regions which has caused enough harm to the broader public in terms of human and material loss. Boko haram insurgency in the northern part of Nigeria has brought a serious terrorist component into the crime space of Nigeria by recklessly destroying people's lives and properties, bombings, and kidnappings (Adebayo, 2014).

According to Awortu (2015), the Boko Haram insurgency in Northern Nigeria has caused a number of problems, including the closure of banks and government institutions. This claim is reinforced by Aiyedogbon (2011), who asserted that the continual social unrest, bombings, kidnappings, political turmoil, and religious crises around the nation have damaged Nigeria's degree of security over the past 20 years. According to Khalil and Musa (2014), there can be no meaningful progress in any economy that is held captive by security. Insecurity is gradually spreading to other regions of the country apart from the northern and south southern parts. Concern over the level of insecurity in Nigeria's southeast has grown recently. A number of distinct but related security issues, such as kidnappings and radical insurgencies, have affected the area.

In addition to helping to create and grow firms, foreign direct investment has a role in the manufacturing of tangible goods. It also increases real output through increasing employment, rising salaries, and pushing out declining market segments. More precisely, it lessens the inclination of the host nation to import, efficiently distributes production resources, and helps the parent business assist its foreign affiliates by providing appropriate human and material resources (Bakare, 2010). Foreign direct investment is significant because it helps the receiving country expand and develop by bringing in more technology and skilled labour and by filling the gap between government revenue and locally available foreign exchange reserves (Todaro, 2003).

The ramifications of Nigeria's instability have deterred most Nigerians from making investments in their homeland, both at home and abroad, in addition to scaring off many foreign investors. Since 2011, when insurgence became a regular occurrence, foreign direct investment inflows into Nigeria have been declining.

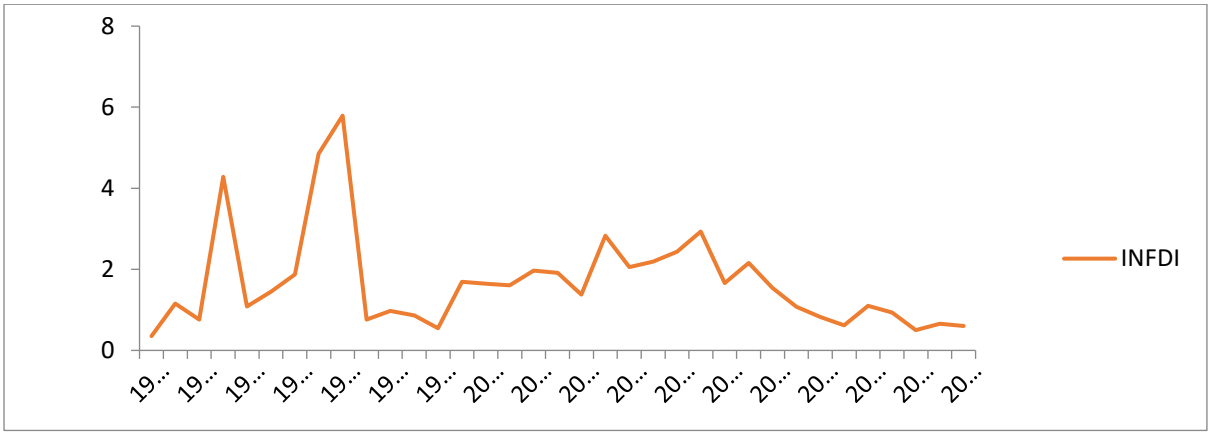

Figure 1. FDI Inflows in Nigeria (1986-2021).

Source: WDI (2021)

As demonstrated in various years, foreign direct investment (FDI) inflows into Nigeria have been steadily dropping from 2011 to 2019, with the exception of 2016, which may have been caused by the administration's abrupt shift in 2015, which was met with much anticipation. One type of cross-border investment linked to a citizen of another country is foreign direct investment (Macrotrends, 2022). With $3.45 billion in FDI, Nigeria had a 12.7% rise from 2015. Afterwards, it saw a 30.12% decrease in 2017 and a 197.34% gain in 2019. This clarifies how Nigeria's investment environment is persuading foreign investors to depart the nation. However, any good government should make the provision of security for lives and properties in its country their topmost priority. This explains why developed nations benchmarked a significant portion of their annual budgets for national security. For example, the United States of America has long served as the benchmark since it is widely recognized as the nation with the largest military budget worldwide. Every year, the greatest financial resources are dedicated to ensuring the safety of people and property in this nation (SIPRI, 2013). Given that investors want safety for their lives, properties, and assets, it makes sense that the nation is the most sought-after location for foreign direct investment (FDI) inflows worldwide (UNCTAD, 2018).

The geographical environment, the political environment, the government's regulatory framework, taxation and fiscal policy, production and transportation costs, the cultural environment, and research and development are the country-specific factors that determine the choice of FDI location, according to Dunning (1988). The problem of (BOKO HARAM) attacks in the northern part of Nigeria persisted despite significant government spending on security, leading to the Federal Government declaring a state of emergency in several states over time. Security has been a major focus of the government, particularly in the last ten years due to an increase in internal resistance and threat, which has alarmed many Nigerians and other stakeholders in the nation. The fact that the majority of foreign missions cautioned their nationals against conducting business in Nigeria due to security risks made matters more complicated. Nigeria was declared a danger zone by Britain in 2012, which advised its people not to visit there (The Guardian, 2012). The government is currently under pressure to raise defence spending due to internal instability and threats, especially from the increasingly lethal Boko Haram group.

Over time, there has been a gradual increase in government spending on security in absolute terms. Terrorist attacks, pipeline vandalism, bombings, rape, kidnappings, intercommunal conflicts, and political violence incidents in Northern Nigeria continued despite the enormous amount of money spent on security. The World Development Indicators state that Nigeria's government security spending as a percentage of GDP was 0.78 in 2008, 0.89 in 2009, and 1.00 in 2010. Nigeria's security expenditures represent 20% of the country's budget, up from 16% in 2010. As a result, funds required for infrastructure projects and efforts to reform the social and industrial sectors have been diverted. This was carried out to improve foreign direct investment in Nigeria and to safeguard lives and property more thoroughly. This is also clear from empirical research conducted by academics who examined closely how uncertainty negatively impacts both foreign direct investment and domestic investment in an economy. According to Okpaga, Chijioke, and Eme (2012) as well as Alfaro (2011), the government's efforts have not yet produced enough positive results due to obstacles, a persistent upsurge, and

the security apparatus's incapacity to ensure the socioeconomic well-being and draw in enough foreign direct investment (FDI) into the nation.

Research by Aigbedon, Idris, and Ouoha (2019) and Adeyeye, Ayodele, and Akinuli (2016) has demonstrated a negative correlation between government security spending and foreign direct investment, whereas a significant positive correlation has been observed between defense expenditure and domestic investment in a nation by Ebere, Sejoro, Adekunle, and Sodeinde (2019). It is imperative to investigate the relationship between Nigerian security spending and foreign direct investment, as many research have yielded inconsistent results. The purpose of the study is to examine the causal relationship between security expenditure and foreign direct investments in Nigeria as well as the effects of security spending on foreign direct investments.

Regarding techniques for examining the relationships between the variables, we employ the most up-to-date, suitable, and sophisticated method—the Autoregressive Distributed Lag (ARDL) approach—as described by Pesaran et al. (2001). Compared to other techniques like OLS, Engle and Granger, and Johansen Cointegration, this technique has a number of advantages. Only when all variables are I(0) is OLS appropriate. For two variables, Engle and Granger's (1987) work is appropriate. When there is a big sample size and the same order of integration, or I (1), Johansen co-integration (1988) can occur. Although ARDL has a number of other benefits, it cannot resolve the sample size and order of integration problems.

This paper divided into five sections. The first section specifies the research gap and the purpose of the study. While the second section discusses the theoretical and empirical literature of the study, the third section focuses on the methodological framework of the study. The fourth section discusses the results and major findings of the paper, and lastly, the fifth section which deals with the conclusion and policy implication of the study

2.0 Literature review

2.1 Conceptual Review

According to the World Bank (2019), foreign direct investment (FDI) is an investment made with the intention of obtaining a long-term management stake (often 10% of voting stock) in a company or corporation that operates in a different nation than the investors' own. Direct acquisition of a foreign company, either in full or in part through the purchase of its controlling stock, is another way that foreign direct investment can occur. It also entails the building of faculties or the involvement of a foreign company in a joint venture with a local company.

According to Adeleke, Olowe, and Fasesin (2014), foreign direct investment (FDI)refers to the direct investment made by a person or organization from another nation into production or business in a target country, either through the acquisition of an existing company there or the expansion of already-existing corporate operations. When a company from one nation invests in another nation with a major or long-term stake in the direct investment enterprise (Organization for Economic Co-operation and Development, 2008). Flows and stocks are the

two main factors used to compare FDI between nations. The net value of investment transactions is annually recorded by FDI flows. FDI stocks contain the value of the capital share and reserves for the parent company, as well as the overall amount of direct investments at a specific moment in time (United Nations Conference on Trade and Development, 2021).

However, according to Yilidirim, Sezgin, and Ocal (2005), the budget value of security expenditures refers to money set aside for the upkeep and bolstering of a standing military. It includes the operating costs of the departments of defence and other government organizations working on defence-related issues. In order to enable members of the armed services to meet their fundamental needs, security spending can also be seen as covering their salaries and benefits (Beijer, 2010). In addition, it includes research and development, medical services, and the instruction and training of foreign and local security professionals. The majority of money spent on security is used to buy supplies and tools, like various types of ammunition. On the other hand, national security and defence can be defined as being ready for military action, defending vital resources for the smooth operation of a state, and defending a state against subversion or attack (Otto and Ukpere, 2012).

2.2 Empirical Review

The link between foreign direct investment and insecurity has been an important area of research both theoretically and empirically.

In a recent study, the effects of government expenditure, corruption, economic growth, and salaries on foreign direct investment in Indonesia were studied by Syukri, Hasanuddin, Paddu, and Suhab in 2022. For the research period of 2000–2020, the study used multiple linear regression analysis using Ordinary Least Square (OLS). The findings showed that while salary has a negative and significant impact on foreign direct investment, government spending, corruption, and economic growth all have positive and significant effects on foreign direct investment. Using Autoregressive distributed lag (ARDL) Model) estimating technique, Stella, Osmond and Chijioke (2021) examined Internal Security Expenditure Impact on Economic Growth in Nigeria. This study employed quarterly time series data spanning from the first quarter of 1999 to the fourth quarter of 2019. The result revealed internal security to be positively and significantly related to economic growth in the short run but exhibits a negative and significant relationship with economic growth in the long-run. The result also revealed a negative and significant relationship between foreign direct investment and economic growth. Finally, the test for structural breaks found evidence for five breakpoints which interestingly corresponded with the periods of some structural and government policy changes in Nigeria.

Aigbedion, Idris, and Osuoha (2019) examined Nigeria's economic growth, foreign direct investment, and government security spending. Error correction models and ordinary least squares were used in the study. The results demonstrated that foreign direct investment and government security spending had both short- and long-term effects on Nigeria's economic growth. In Nigeria, some measures of government security spending and foreign direct investment had a negative correlation with real GDP, while other indicators had a positive correlation. Spending by the government on internal security has a significant and favourable

influence on Nigeria's economic expansion. According to the study, foreign direct investment has little effect on Nigeria's real gross domestic product. This could be because the subsector has been dealing with socioeconomic problems like corruption and other issues that have raised the cost of doing business. As a result, foreign investors would prefer to invest in nations with lower rates of corruption because they think they will make the most money from their ventures there. In a similar vein, Ebere, Sejoro, Adekunle, and Sodeinde (2019) examined foreign direct investment inflows and security expenditures in Nigeria from 1994 to 2017. The ARDL method and the Bounds Test were used in the investigation. The study's conclusion demonstrates that prior FDI inflows have a sizable beneficial influence on present FDI inflows into Nigeria. FDI inflows and defence spending are significantly positively correlated. In the meanwhile, there is a negligible positive correlation between domestic security spending and foreign direct investment inflows. Additionally, there is a slight but positive correlation between FDI inflows and the inflation rate.

Using qualitative and descriptive methods, Ayoola (2018) explored insecurity and major determinants of foreign direct investment in Nigeria using annual time series data from 1999 to 2014 about the high rate of insecurity in the country within the period. The findings showed that the country's unique characteristics, which strengthen the allure of profits to investors over the risk of attacks, meant that insecurity has not significantly affected the inflow of FDI. However, the prevalence of insecurity gave foreign investors more room to engage in unscrupulous practices at the expense of the Nigerian government and its citizens.\

Using secondary data covering the years 1985 to 2012, Adeyeye, Ayodele, and Akinuli (2016) investigated the effect of security expenditure on foreign direct investment in Nigeria. The relationship between Foreign Direct Investment and Security Expenditure was investigated using co-integration and the Error Correction Mechanism (ECM). The investigation's findings demonstrate that, whereas defense spending showed a long-term positive association with the dependent variable, domestic security and inflation expenditures maintained a negative long-run relationship with the index of foreign direct investment. According to the report, the federal government should prioritize creating an environment that is conducive to business and can draw in foreign direct investment.

In an earlier study, Essien, Tordee, Abuba, and Igbara (2015) examined the effect of national security on foreign direct investment (FDI) in Nigeria from 1999 to 2013 in a previous study. The eclectic paradigm, which combines globalization and location-specific models, was employed to gauge the volume and trends of foreign direct investment in Nigeria. Descriptive statistics were used in the data analysis, using data from the Central Bank of Nigeria statistical bulletin for the period under consideration. Among other things, it was discovered that during the time under review, national security continued to be a prevalent and significant factor impeding the expansion of FDI in Nigeria.

Owolabi (2015) looked into how foreign direct investment (FDI) was affected by insecurity from 2003 to 2012. For the analysis, the study used the least squares technique (OLS). Insecurity was proxied by the vote on security and defence (VSD). According to the study, there is a negative correlation between insecurity and foreign direct investment (FDI).

According to the studies, in order to draw in more foreign direct investment—which is necessary for economic growth and development—a firm policy stance on addressing Nigeria's level of insecurity must be adopted.

2.3 Theoretical Framework

The foundation of this research is Wagner's law of public expenditure, which bears the name of the German economist Adolph Wagner (1835–1917) as well as Dunning's International Production theory (Eclectic Paradigm) (1977).By examining patterns in the expansion of public spending and the size of the public sector, Wagner developed his law of rising public expenditures. According to Wagner, the increase in economic activity can be attributed to the government expenditure on security and other items, which will increase in proportion to the real income increases. Wagner's law makes the following assumptions: the growth of modern industrial society would lead to increased political pressure for social progress and call for increased allowance for social consideration in the conduct of industry; the rise in public expenditure will be more than proportionate to the increase in national income and will thus result in a relative expansion of the public sector; and the extension of state functions will lead to an increase in public expenditure on administration and regulation of the economy.

Finally, if there is a general increase in insecurity issues in a particular country or nation, empirical studies will result in a corresponding decrease in foreign direct investment, and as a result, foreign investors will decide to leave the country for a more safe and secure environment where they can do business and it will flourish. These theories also explain why foreign investors choose to invest in host countries or economies other than their own home countries.

3.0 Data and Methodology

3.1 Data

The variables, measurements, and data sources for this study are covered in this section. The analysis used annual time series data from the Central Bank of Nigeria's Annual Statistical Bulletin for the years 1986 to 2021 includes: Military expenditure (Military expenditure (% of GDP), Trade Openness (Trade Openness, (%), foreign direct investment (foreign direct investment inflow), Security expenditure (Defence exp + internal security exp. N'billion). and Exchange Rate (%) were sourced from World Development Indicators.

3.2 Econometric Model

In order to model the relationship between security spending and foreign direct investment in Nigeria from 1986 to 2021, this study used annual time series data and a quantitative technique. According to the theoretical framework and the examined empirical literature, this model bears some alterations to the study conducted by Adeyeye, Ayodele, and Akinuli (2016). We include security spending as the primary independent variable, foreign direct investment as the dependent variable, and trade openness, exchange rate, and military spending as the explanatory variables. Since it produces more accurate and reliable results, data transformation is done in logarithm form (Ehrlich, 1997; Ehrlich, 1996).

The functional form of the model is given as;

$$FDI = f\left(SEXP, EXM, TOP, EXR\right) \quad (1)$$

The Econometric form of the model is given below;

$$\mathrm{FDI}_t = \beta o + \beta_1 \mathrm{SEXP}_t + \beta_2 \mathrm{EXM}_t + \beta_3 \mathrm{TOP}_t + \beta_4 \mathrm{EXR}_t + \mu_t \quad (2)$$

Where t is the time trend and μ is the white noise error term. Foreign direct investment inflow (FDI) is the dependent variable while Security expenditure (SEX) Military expenditure (% of GDP). EXM, Trade Openness (%) (TOP), and exchange rate ((%) (EXR) are the explanatory variables while β_0, β_1, β_2, β_3, β_4 are Regression Coefficients.

Furthermore, if the parameter estimate conforms to economic theories on the basis of a priori criterion, the result is expected to be; $\beta_0 > 0$, $\beta_1 > 0$, $\beta 2 > 0$, and $\beta 3 > 0$ while $\beta 4$ is expected to be < 0. This implies that the signs of the coefficient of the independent variables (security expenditure, military expenditure and trade openness) should be positive, which means that, increase in security expenditure, military expenditure and trade openness has an increasing effect on foreign direct investment in Nigeria, increased exchange rate will invariably decrease foreign direct investment which will discourage investment in the economy.

3.3 Estimation Technique

The first stage in the analytical technique is to check for series stationarity or integration order whether the variables are stationary or not and the order of stationarity of the variables, before employing the main estimation technique, the formal tests of Augmented Dickey-Fuller and Phillips-Perron unit root tests were employed to determine the amount of stationarity of the time series data. The second stage was to check for a long-run relationship between all of the variables in the equation. When using the Bounds test to estimate level relationships, the ARDL model must be utilized because the model proposes that once the ARDL order has been detected; the relationship can be estimated using ARDL. In order to estimate the short run and the long run parameters of the model, the study employed the Auto Regressive Distributed Lag (ARDL) which offers a full examination of the many aspects of the variables under consideration. The autoregressive distribution lag (ARDL) technique, which was developed by Pesaran, et al., (2001). ARDL model uses a combination of endogenous and exogenous variables and it contains the lagged values of the dependent variable, the current and lagged values of the regressors as explanatory variables. When the variables are stationary at level 1(0) or integrated of order 1(1), the ARDL model is considered to be the best econometric technique (1). It is a better model than others for capturing the short- and long-run influence of independent factors, based on the objectives. With ARDL, there is flexibility in the sequence in which the variables are integrated. The ARDL structural form allows for the expression of the model's above definitional form. The following error correction models are estimated and their mathematical representation as follows, in order to use ARDL following Ahmad and Du, (2017).

$$\Delta FDI_t = \beta_o + \sum_{i=1}^{n1} \beta_{1i} \Delta FDI_{t-i} + \sum_{1=0}^{n2} \beta_{2i} \Delta SEXP_{t-i} + \sum_{i=0}^{n3} \beta_{3i} \Delta TOP_{t-i} + \sum_{i=0}^{n4} \beta_{4i} \Delta EXM_{t-i} + \sum_{i=0}^{n5} \beta_{5i} \Delta EXR_{t-i} + \delta_0 FDI_{t-1} + \delta_1 SEXP_{t-1} + \delta_2 TOP_{t-1} + \delta_3 EXM_{t-1} + \delta_4 EXM_{t-1} + \mu_t \quad (3)$$

In equation (3), Δ is the first difference operator, β_0 is constant, μ_t is white noise error term, β_1-β_5 are error correction dynamics, the second parts of the equation from δ_1 to δ_4 represents the long run relationship among the variables in the model. ARDL approach based on Wald F-Statistic is applied to check the long run cointegration among the variables of the concern with the null of no co-integration as H_0: $\delta_0=\delta_2=\delta_2=\delta_3=\delta_{4=0}$ and alternative as H_1: $\delta_0\neq\delta_2\neq\delta_2\neq\delta_3\neq\delta_4\neq0$. The next step is to estimate for short run coefficients after having the long run association among variables and finding the long run coefficients of the variables. Thus, short run models for the variables will be as:

$$\Delta FDI_t = \beta_o + \sum_{i=1}^{n1} \beta_{1i} \Delta FDI_{t-i} + \sum_{1=0}^{n2} \beta_{2i} \Delta SEXP_{t-i} + \sum_{i=0}^{n3} \beta_{3i} \Delta TOP_{t-i} + \sum_{i=0}^{n4} \beta_{4i} \Delta EXM_{t-i} + \sum_{i=0}^{n5} \beta_{5i} \Delta EXR_{t-i} + \eta_1 ECT_{T-1} + \mu_t \quad (4)$$

Here in equation (3), ECT indicates the error correction term, if there will be disturbance in the system, how much time it will take to reach to its equilibrium path in the long run. η_1 is the coefficient of error correction term.

4.0 Result and Discussions

4.1 Descriptive Statistics

This section discusses the summary/descriptive analysis of the variables under consideration which includes Military expenditure (Military expenditure, Trade Openness, foreign direct investment, Security expenditure and Exchange Rate.

Table 1. Descriptive Statistics

	FDI	SEXP	TOP	EXM	EXR
Mean	1.656082	330.9081	0.001088	0.600172	121.9621
Median	1.412202	143.0349	0.000917	0.541381	123.4
Maximum	5.790847	1484.822	0.002215	1.311554	359.375
Minimum	0.352544	0	0.000305	0.348375	2.02
Std. Dev.	1.225699	411.5548	0.000545	0.207972	106.4511
Skewness	1.766366	1.286245	0.309786	1.402027	0.762443
Kurtosis	6.024768	3.689379	1.850224	4.985002	2.72994
Jarque-Bera	32.44413	10.63942	2.558779	17.70443	3.597318
Probability	0	0.004894	0.278207	0.000143	0.165521
Sum	59.61896	11912.69	0.039157	21.60619	4390.635

Sum Sq. Dev.	52.58181	5928207	1.04E-05	1.513833	396614.4

Source: *author's calculations using Eview.*

Table 1 represents the descriptive statistics of the variables. The descriptive statistics i.e. Mean, Median, Max, Minimum, Standard deviation, Skewness are reported below. The highest mean is reported for security expenditure (330.9081) and lowest mean is for trade openness (0.001). Importantly the variables TOP and EXR exhibit platykurtic distribution given that their kurtosis values are less than three. However, FDI, SEXP and EXM exhibit leptokurtic distribution. Finally, Jarque-Bera statistic implying that the TOP and EXR has a normal distribution accepting the Null hypothesis of Jargue-Bera while the FDI, SEXP and EXM series are not normally distributed rejecting the null hypothesis given the validity of the significance values.

4.2 Stationarity Test Result

To prevent erroneous results, it is necessary to look at the time series properties of the variables that are employed in a time series analysis. The unit root test is advised for confirming the variables' stationarity. The levels and first difference equations contain the intercept and trend. This study employed the Augmented Dickey-fuller (ADF) test and Philip Perron (PP) test were employed and the Table 2 shows the result of the tests becoming stationary at level i.e 1(0) and at first difference i.e 1(1). The Augmented Dickey-fuller (ADF) test above shows that FDI, EXM, and TOP are stationary at level while SEXP and EXR are stationary at first difference. Also the Philip Perron (PP) test shows that FDI, EXM and TOP are stationary at level while SEXP and EXR are stationary at first difference.

Table 2: Unit Root Tests

VARIABLES	**ADF TEST**		**PP TEST**		**Order Of Integration**
	T-Stat (5% Level).	**P-Value**	**T-Stat (5% Level).**	**P-Value**	
FDI	-4.028** (-2.948)	0.0036	-4.057** (-2.960)	0.0037	I(0)
SEXP	-4.867*** (2.951)	0.0004	-4.709*** (-2.964)	0.0003	I(1)
LNEXM	-4.821*** (-2.948)	0.0004	-4.426*** (-2.960)	0.0004	I(0)
TOP	-3.987** (-3.544)	0.0185	-3.785** (-3.562)	0.0175	I(1)
EXR	-4.641*** (-2.951)	0.0007	-3.139*** (-2.964)	0.0007	I(0)

Note: ***, ** and * are 1%, 5% and 10% of significant levels, respectively. Source: Author's Computation using eviews 10

4.3 Bounds Co-integration Test

Table 3. Bounds Co-integration Test

F-Bounds Test				
Test Statistic	**Value**	**Signif.**	**I(0)**	**I(1)**
F-statistic	8.131599	10%	3.03	4.06
K	4	5%	3.47	4.57
		2.5%	3.89	5.07
		1%	4.4	5.72

Source: *Author's computation using Eviews 10, 2022*

The explanatory variables are assumed to be integrated of order zero, or I(0) for values of the lower bound while the upper bound values assumed that are integrated of order one, or I(1). Therefore, the decision rule is that if computed F-statistic falls below the lower bound value, I(0), the null hypothesis (no cointegration) cannot be rejected. The explanatory variables are assumed to be integrated of order zero, or I(0) for values of the lower bound while the upper bound values assumed that are integrated of order one, or I(1). Therefore, the decision rule is that if computed F-statistic falls below the lower bound value, I(0), the null hypothesis (no cointegration) cannot be rejected. Contrarily, if the computed F-statistic exceeds the upper bound value, I(1) then it can be concluded that the variables are cointegrated. Therefore, since the F-statistics falls above the upper bound figure of 4.57 at 5% level of significance, one can conclude that the variables are cointegrated i.e there is a long run relationship

4.4 Estimated ARDL Long-run Coefficients using Foreign Direct Expenditure as Dependent Variable

Table 4. Estimated ARDL Long-run Coefficients using Foreign Direct Expenditure as Dependent Variable.

Variable	**Coefficient**	**Standard Error**	**P- Value**
SEXP	1.038795**		0.0352
EXM	-4.928052**		0.0251
EXR	2.941200**		0.0078
TOP	-0.882212		0.1925

Note: ***, ** and * are 1%, 5% and 10% of significant levels, respectively.

Source: *Author's computation using Eviews 10, 2022*

The coefficient of SEXP shows a positive effect and it is statistically significant on FDI given the value of t-statistic and probability value which is less than 0.05%. However, the result implies that any little change in SEXP will bring about 1.04unit increase in FDI. This finding conforms with the findings of Ebere, Sejoro, Adekunle and Sodeinde (2019) contradicting the findings of Adeyeye, Ayodele and Akinuli (2016) in Nigeria Also, the coefficient of EXM exhibit negative relationship and significant effect on FDI in the long run. This implies that, a unit change in the value of EXM will bring about approximately -4.93% changes in FDI.

Furthermore EXR exhibits a positive relationship and statistically significant on foreign direct investment, this signifies that a change in EXR will lead to 2.94 unit increase in FDI. Finally The LNTOP exerts negative effect and statistically insignificant on FDI, this means that a change in TOP will lead to -0.8822unit decrease in FDI. This result shows that the economy is not open enough to attract in flows of FDI and at such may be one of the reasons why the result has come out this way.

4.5 Estimated ARDL Short-run Coefficients

Table 5. Estimated ARDL Short-run Coefficients

Variable	Coefficient	Prob.
C	-0.6779	0.0001
D(LNFDI(-1))	0.24066	0.0103
D(LNSEXP)	0.41773	0.0641
D(LNSEXP(-1))	1.36732	0.0005
D(LNSEXP(-2))	0.54762	0.0087
D(LNEXM)	-0.0089	0.9722
D(LNEXM(-1))	0.68498	0.0165
D(LNEXM(-2))	-0.4934	0.0214
D(LNEXR)	0.90466	0.0026
D(LNEXR(-1))	-0.6317	0.0109
D(LNEXR(-2))	-0.4189	0.022
D(LNTOP)	-0.0835	0.581
D(LNTOP(-1))	-1.0789	0.0015
D(LNTOP(-2))	-0.4495	0.0327
ECT(-1)*	-0.1862	0.0006

Source: *Author's computation using Eviews 10.*

The ECT in the model accounts for the speed of adjustment of the short run dynamics to long run equilibrium of the variables employed. Hence, the speed of adjustment of the model to long run equilibrium is measured by the coefficient of the first lag of the ECT (-1). The ECT (-0.186) has the right a priori sign and it is statistically significant. Hence, the result of the ECT

(-1) showed that 19% of the deviation of the variables in the short run will be restored in the long run within one year.

The coefficient of D(EXP(-1)) shows positive effect and statistically significant on LNFDI. This signifies that a unit change in D(SEXP(-1)) will lead to 1.36 unit change in LNFDI. The coefficient of D(EXM(-2)) reveals negative effect and statistically significant on LNFDI. This means that a unit change in D(EXM(-2)) will bring about -0.49 unit decrease in FDI. Also the coefficient of D(EXR) shows a positive and statistically significant effect on foreign direct investment. This means that a unit change in D(EXR) will amount to 0.904662 unit increase in FDI. Furthermore the value of D(TOP(-1)) exerts negative effect and significant relationship on FDI. This implies that a unit change in D(TOP(-1)) will bring -1.07unit decrease in foreign direct investment.

Table 6. Diagnostics tests.

Diagnostic Tests	Statistics
R-squared	0.95
Adjusted R-squared	0.88
Heteroskedasticity Test	0.10
Durbin-Watson stat	2.44
F-statistic	14.44
Prob(F-statistic)	0.000042

Source: *Author's computation using Eviews 10, 2022*.

The coefficient of determination (R^2) is 0.948384. The result shows that about 95% of the variation in foreign direct investment is caused by variations in the explanatory variables. The White heteroscedasticity test suggests that the disturbance term in the equation is homoskedastic. Since calculated p-value 0.10 is greater than critical $F_{0.05}$, we do not reject the null hypothesis of homoscedasticity and conclude that the error terms have constant variance at 5% level of significance. Based on the value of the DW (Durbin Watson), the model tells us that there's no presence of Autocorrelation. The F-statistic test the overall model at 5% significant level,

4.7 Causality Test

This section shows whether there is a causal relationship between security expenditure and FDI in Nigeria.

Table 7 Granger Causality Test

Dependent variable	Decision rule	Prob

LNFDI	LNSEXP has a causal effect on LNFDI	0.0438
LNSEXP	LNFDI does not have a causal effect on LNSEXP	0.6191

Source: *Author's computation using Eviews 10.*

From the causality test results presented in table 7, the rule of thumb states that the probability of the f-statistic must be less than 0.05 to show the existence of causal relationship, otherwise it does not exist. The result shows the existence of unidirectional causality from LNSEXP to LNFDI. Meaning, the direction of causality flows from security expenditure to foreign direct investment without a feedback.

5.0 Conclusion and Recommendations

This paper investigates the relationship between foreign direct investment inflow and security expenditure in Nigeria with explanatory variables such as security expenditure, military expenditure, trade openness and exchange rate for the period of 1986 to 2021. FDI has remained extremely low over the years, particularly from 2011 to the present. We were inspired to work on this research by these fascinating facts. To examine the relationships between the variables, we used the most sophisticated method, ARDL, which has several advantages over other approaches.

Based on the results, the study came to the conclusion that foreign direct investment in Nigeria was positively impacted by security expenditure. Therefore, more foreign direct investment in Nigeria will result from higher security expenditures. One of the main responsibilities of every government is to protect the lives and property of its residents, and insecurity is a major obstacle to Nigeria's attempts at development. In addition, violent acts have persisted in endangering Nigeria's security. Nigeria must boost budgetary resources for security in order to address its security issues. This would guarantee the protection of people and property, which will attract foreign investment to the nation since this study revealed that there is a positive relationship between Foreign Direct Investment and Government security expenditure.

Based on the findings and careful investigation of the nexus between security expenditure and foreign direct investment in Nigeria, it is recommended that:

To attain the intended level of economic growth, the government should promote foreign direct investment by guaranteeing security stability for the protection of people and property. This is because it has been discovered that more security spending will encourage foreign direct investment.

The government should also focus on maintaining political stability, which is essential for the sustained growth and development of the Nigerian economy, and implement policies that will promote the long-term growth of foreign direct investment and the overall economy. The Nigerian government should coordinate and strengthen all incentives, institutional and

regulatory frameworks, and take an objective stance when addressing security concerns in order to promote foreign direct investment for sustained economic growth.

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