RECURRENT EXPENDITURE ON INTERNAL SECURITY AND ECONOMIC GROWTH IN NIGERIA

**George-Anokwuru, Chioma Chidinma[1],
Inimino, Edet Etim[2i]**

[1]Department of Economics,
Faculty of Social Sciences,
University of Port Harcourt,
Nigeria
[2]Department of Economics,
Faculty of Social Sciences,
University of Uyo,
Nigeria

Abstract:

It is the responsibility of the government to ensure the internal safety of those living in the country. This is because it (the government) has the resources needed to deploy and ensure that the country is safe. To achieve internal safety, the federal government of Nigeria has continued to increase expenditure on internal security with a view of securing all those living in the country for investment and innovation. Thus, this paper investigated the relationship between government recurrent expenditure on internal security and economic growth in Nigeria from 1980 to 2022. The data for the study were sourced from Central Bank of Nigeria statistical bulletin. The Autoregressive Distributed Lag (ARDL) model was employed as the main analytical tool. The results of the analyses revealed the presence of a long-run association among the variables. The results also showed that in the long run, government recurrent expenditure on internal security has a positive and insignificant relationship with economic growth in Nigeria. At the same time, exchange rate has a positive and significant relationship with economic growth in Nigeria. Also, interest rate has a negative and significant relationship with economic growth in Nigeria. In the short run, government recurrent expenditure on internal security has a negative and significant relationship with economic growth in Nigeria. The exchange rate and interest rate have a positive and significant relationship with economic growth in Nigeria. The study concluded that the relationship between government recurrent expenditure on internal security and economic growth in Nigeria varies, as it could be positive (in the long run) or negative (in the short run). Therefore, the study recommended that recurrent expenditure on internal security which includes pay to officers, salaries to specialists within internal security forces or connected to internal

---

[i] Correspondence: email clergyedet1@yahoo.com

security organizations, pensions of internal security personnel; and social services for personnel and their families; maintenance and operations; internal security research and development, medical services, etc. should be increased because in the long run it will provide a spin-off effect on the national economy and increase economic growth.

Keywords: internal security, recurrent expenditure, economic growth and ARDL

1. Introduction

The security of citizens (inhabitants) to live in peace with access to the basic necessities of life while fully contributing freely to the affairs of their society and enjoying all fundamental human rights is essential for achieving sustainable economic growth and development. This is because an economy tends to grow more when people and investors are free to live and invest in any part of the country of their choice and also ensure their lives and investments are guaranteed in such places (Nteegah, 2020). Evidence of insecurity has the effect of not only discouraging investment flows but also foreign investors to migrate to safer zones or countries. The ultimate impact of this is to shrink growth, increase unemployment, and incidence of poverty. In recent times, insecurity has taken a turn for the worse globally, Nigeria inclusive. For instance, there have been rising cases of insecurity in Nigeria. These cases include activities of Boko Haram, kidnapping, banditry, armed robbery, assassinations, piracy, human trafficking, religious crises, ritual killings, cultism and etcetera (Ejo-Orusa, 2020).

It is the responsibility of the government to ensure the internal safety of those living in the country. This is because it (the government) has the resources needed to deploy and ensure that the country is safe. Supporting the above, Umo (2012) argued that the government must ensure effective intelligence gathering as a main strategy for averting insecurity in a country. The government also must request development partners to assist in ensuring that the nation and its citizens are well protected. Therefore, there is a need for government expenditure to curb insecurity in the country. The key network through which expenditure on internal security affects economic growth is the encouragement of aggregate demand, spin-off, creation of new savings, and moving resources from potential civilian investment. Benoit (1973, 1978) argued that internal security spending can influence economic growth positively. That is, an increase in internal security expenses might lead to increases in total demand thus exercising a Keynesian influence on economic growth by inducing an increase in capacity utilization. This is because an increase in demand which leads to resourceful utilization of capacity leads to an increase in the rate of income, and investment and ultimately promotes economic growth (Inimino, Otubu, Alex, and Abuo, 2020).

In addition, provisions of educational training, technical skills, medical care, and the creation of infrastructure for security officers are beneficial to economic growth. This is because the training of security officers contributes to improving the educational level, discipline, and productivity of the labour force. However, Deger (1986) argued that spending by the government to ensure internal safety might be detrimental to the

economy because government spending on internal security will reduce resources available for productive civilian investment. Also, it might have an indirect influence on the savings rate or saving-income ratio and hence investment in developing countries.

Furthermore, in the process of ensuring internal (national) security great number of resources had been spent by the government. Nigeria's, internal security budget has reduced the budget for other governmental activities including education, health, and agriculture. These activities would have stimulated economic growth and in turn, improved the welfare of a greater number of Nigerians. However, the managers of the Nigerian economy think that internal security expenditure adds to societal welfare. Through internal security expenditure, the government protects the economy against internal insecurity and enhances the environment within which growth and development flourish. Therefore, internal security expenditure to provide security and maintain public order is a very important condition for a healthy investment environment (Inimino, *et al.*, 2020).

An observation of the federal government expenditure in Nigeria revealed that spending on internal security has continued to rise. For instance, recurrent expenditure in 1980, 1986, 1988, 1990, 1995, 2000, 2003, 2005 and 2006 on internal security shows continuous increase in trend of ₦269.3 million, ₦396.8 million, ₦545.0 million, ₦1129.9 million, ₦2031.1 million, ₦19195.0 million, ₦68352.0 million, ₦91545.9 million and ₦99522.3 million respectively (CBN, 2007). In 2018 and 2019, recurrent expenditure on internal security stood at ₦489.65 billion and ₦668.63 billion respectively (CBN, 2019). Yet, Nigeria has not achieved adequate economic growth at the rate needed to make a feasible impact in the reduction of poverty. Available data reveals that the economy has not recorded adequate economic growth. For instance, in 2016, the economy was under pressure. Consequently, the economy contracted, as provisional data indicated that Real Gross Domestic Product (RGDP), measured at 2010 constant basic prices, declined by 1.5%, in contrast to 2.8% growth in 2015. Oil and non-oil sector output declined by 13.7 and 0.2%, respectively. In 2017, the economy witnessed a mild recovery from the recession. The Real Gross Domestic Product (RGDP), measured at 2010 constant basic prices, grew by 0.83%, in contrast to the contraction of 1.58% in 2016. In 2018, the real Gross Domestic Product (GDP), measured at 2010 constant basic prices, grew by 1.9%, compared with a growth of 0.8% in 2017. In 2019, the economy maintained a modest growth. The Real Gross Domestic Product (RGDP) measured at 2010 constant basic prices grew by 2.3% (CBN, 2016, 2017, 2018 & 2019).

Benoit's empirical research (1973, 1978), Obi (2015); Amana, Aigbedion, and Zubair (2020); Mbah, Agu, and Aneke (2021); as well as Dim, Okafor, Eneh, and Amahalu, (2022) revealed that military and internal security expenditure positively correlated with economic growth. Contrary to Benoit's argument, there are also studies including the work of Nwaoha, Onwuka, Madubuike, Chukwu, and Perpetua in 2020; which revealed a negative correlation between spending on internal security and economic growth. Therefore, there is a strong controversy among economists over the association between expenditure on security and economic growth. However, there is no agreement on the sign of the effect of internal security expenditure on economic growth.

Previous studies on the effect of internal security expenditure on Nigeria's economic growth are not widely available and only very few. Moreover, several researches on the impact of internal security expenditure on economic growth put together capital and recurrent spending on internal security without disaggregating them. Thus, this study disaggregated internal security into its various components and examined only the recurrent aspect of internal security expenditure. Importantly, the purpose of this paper is to look at the relationship between recurrent expenditure on internal security and economic growth in Nigeria from 1980 - 2022. The remaining parts of this paper were structured into the review of related literature, methodology, results and discussion, conclusion, and recommendations.

2. Review of Related Literature

2.1 Theoretical Literature
The efforts to investigate the association between spending on security and economic growth have resulted in a variety of approaches and general statements, some of which include the Neo-classical Approach and the Keynesian Approach. The neoclassical approach argues that government expenditure on internal security has a detrimental influence on economic growth. According to the neoclassical theory, government expenditure on internal security takes away scarce capital (resources) from more productive uses; this, in effect, would reduce civilian consumption and decrease society's well-being due to the reduction in civilian savings and investments (Tekeoglu, 2008). In general, neo-classical methods lead to the assumption that spending on internal security will take away funds that would have been used to invest in education, healthcare, agriculture, etc. which in turn will influence the economy meaningfully. That is, the government's responsibility to invest in internal security will lead to a shortage of funds for public human capital formation - education and health which are relevant economic growth and development indicators. Therefore, the neoclassical approach predicted the existence of a negative relationship between government expenditure on internal security and economic growth. Supporting the above, Mbah, Agu, and Aneke (2021) argued that huge internal security expenditure crowds out investment, leading to high operational costs and in turn impacts negatively economic growth.

However, the Keynesian Approach argues that spending on internal security has a positive influence on economic growth. Strictly speaking, Keynesians see expenditure on internal security as one of the components of total demand. They believe that there are idle capital and labour in the economy. Therefore, in a situation where an economy is experiencing a high rate of unemployment, higher internal security expenditure would increase aggregate demand which will lead to increased national output and the rate of employment. In addition, if the economy is already at full employment, higher spending on internal security may well be inflationary. However, due to inadequate aggregate demand, Nigeria is suffering from a high unemployment rate and low consumption. Internal security spending therefore needs to increase. Increasing internal security spending would allow the security agencies concerned to provide companies with an

encouraging safe environment for their prosperity. If a country is safe, it will attract both domestic and foreign investment, thereby increasing economic growth (Benoit, 1973; Değer, 1986). This means that an increase in government expenditure on internal security will boost aggregate demand, resulting in a higher level of national income. Therefore, the government must increase expenditure on internal security. Strictly speaking, the Keynesians posit that government spending (GS) on internal security principally influences income and output growth. That is, Y = f(GS); where Y is economic growth and GS represents government spending on internal security. Thus, the theory helps to establish a link on how government spending on internal security can actually affect economic growth in Nigeria.

The endogenous growth theory argues that economic growth comes from technological progress, which is fundamentally the ability of economic agents to utilize their productive resources more effectively over time through the process of learning. The economic spin-off of internal security expenditure is that internal security expenditure through research and development may promote technological progress which affects the civilian economy indirectly. Furthermore, provisions of educational training, technical skills, medical care, and the creation of infrastructure for the security officers are beneficial to economic growth and development. This is because the training of security officers will contribute to improving the educational level, discipline, and productivity of the labour force. To achieve adequate economic growth, public spending in human capital development – security research & development, operations and maintenance, and procurement, among others must be increased and this will enhance the country's growth and development (Inimino, *et al.*, 2020).

2.2 Empirical Review

Empirical findings on the relationship between expenditure on internal security and economic growth have been uneven; Oriavwote and Eshenake (2013) employed an error correction model to examine the impact of security expenditure on economic growth in Nigeria spanning 1980 and 2010. The result revealed that government expenditure on internal security has a positive and significant relationship with economic growth. That is, expenditure on internal security played an important role in generating the desired level of economic growth in Nigeria. However, government expenditure on defence has a negative and significant relationship with economic growth in Nigeria.

Similarly, Obi (2015) carried out an empirical investigation on the challenges of insecurity and terrorism on national development in Nigeria using the Ordinary Least Squares (OLS) method and data set from 1990 to 2012. The result showed that terrorism and insecurity have an indirect effect on economic growth and development by making the government incur the cost of diverting the scarce resources that were hitherto aimed at attaining rapid economic growth and development to be committed to attaining security instead. The researcher argued that expenditure on security matters, significantly and positively impacted on economic development.

Onime (2018) used a descriptive technique to investigate the effect of insecurity on economic growth in Nigeria. The analysis revealed that insecurity affects economic

growth by drying out investments, increasing unemployment, and dwindling government revenue, among others.

In another study on how government security expenditure has impacted economic growth in Nigeria from 1986-2018 by Amana, Aigbedion and Zubair (2020) an Error Correction Model (ECM) technique revealed that government recurrent expenditure on internal security has a positive and insignificant relationship with economic growth in Nigeria. At the same time, government recurrent defence expenditure has a negative and significant relationship with economic growth in Nigeria. Government security capital expenditure has a positive and significant relationship with economic growth in Nigeria.

Using the Error Correction Model (ECM) and Granger causality techniques, Nwaoha, Onwuka, Madubuike, Chukwu and Perpetua (2020) examined the effect of defense and internal security expenditure on economic growth in Nigeria spanning 1981 – 2018. The results of the finding revealed that defence expenditure exerts a positive and significant effect on economic growth while internal security expenditure has a negative and insignificant effect on economic growth. The results further revealed the existence of unidirectional causality running from economic growth to defence expenditure as well as internal security expenditure to economic growth.

Nteegah (2020) employed an Autoregressive Distributed Lag (ARDL) Bounds testing technique to investigate how funds expended on security have affected economic growth in Nigeria from 1995 to 2019. The results revealed that security expenditure (external and internal) stimulated real economic growth significantly in the long run and the short run at lag levels. However, at the level in the short run, security expenditure retarded economic growth significantly. The result further revealed that expenditure on education spurred real economic growth both in the long and short runs. This implies that educational spending drives productivity and growth. At the same time, careful observation revealed that healthcare spending was found to have retarded real economic growth both in the long and short run.

Mbah, Agu, and Aneke (2021) examined the impacts of internal security expenditure on economic growth in Nigeria using the Autoregressive Distributed Lag (ARDL) estimating technique and quarterly time series data from the first quarter of 1999 to the fourth quarter of 2019. The estimated result found 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.

Okeke, Chukwu, and Ogbonnaya-Udo (2021) studied the effect of government expenditure on defence and internal security on economic growth and development in Nigeria from 1994-2020 using Vector Autoregressive Estimates (VAR) technique. The findings revealed that recurrent expenditure on defence and internal security are insignificant in explaining economic growth and the human development index during the period of study.

Yusuf and Mohd (2022) adopted an Autoregressive Distributed Lag Bounds method to examine the fiscal and socioeconomic consequences of insecurity on economic

growth in Nigeria. The findings demonstrated that the high unemployment rate, domestic capital formation, foreign direct investment, and 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. Conversely, improvement in health services, equitable distribution of income, and productive use of public debts were positively correlated with security and, therefore, stimulated growth in the long and short run. Inflation rate and government revenue accelerated growth in the long run whereas their short-run effect was deleterious. The results suggested 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.

Dim, Okafor, Eneh, and Amahalu (2022) employed an Error Correction Model (ECM) to investigate the effect of public expenditure on economic development in Nigeria spanning 1999-2020. Specifically, this study ascertained the effect of education expenditure, healthcare expenditure and security expenditure on per capita income The specific findings revealed that expenditure on education has a positive and insignificant effect on per capita income; expenditure on healthcare has a significant effect on per capita income; and expenditure on security has a positive and insignificant effect on per capita income of Nigeria.

Aminu, Hayewa, and Mamman (2023) investigated the effect of insecurity on economic development in Nigeria from 1996 to 2021 using the structural vector autoregressive (SVAR) model. The results of the impulse response functions from the SVAR model and variance decomposition revealed that the response of insecurity to a one-unit standard deviation shock to economic development is negative and hence, insignificant; the results from variance decomposition revealed that insecurity accounts for more than 50% variations of economic development in Nigeria.

As much as the above studies are commendable, this paper deviates from previous studies as it concentrates only on the recurrent aspect of the government's internal security expenditure. In addition, other relevant independent variables (i.e., exchange rate and interest rate) were considered in this study to showcase the influence of recurrent aspects of internal security expenditure on economic growth in Nigeria. Importantly, none of the previous scholars examined how recurrent expenditure on internal security has impacted on economic growth spanning 1980 to 2022. Therefore, this study is unique as it systematically looked at how government recurrent expenditure on internal security has impacted on economic growth in Nigeria from 1980 to 2022 using the econometrics method of Autoregressive Distributed Lag (ARDL) Bounds testing.

3. Expenditure on Internal Security and Economic Growth in Nigeria: Stylized Facts

Internal security expenditure is all capital and recurrent expenditure on internal security. The potential items of internal security expenditure in Nigeria include remuneration to officers of various units offering internal security services, pensions, medical facilities,

training colleges, existing weapons procurement (including weapons imports), infrastructure development, accommodation, operation and maintenance expenditure, and research and development. Available statistics reveals that in 1980, 1985, 1990, 1995, 2000, 2005, 2010, 2015 and 2019 recurrent expenditure on internal security stood at ₦269.3 million, ₦398.3 million, ₦1129.9 million, ₦2031.1 million, ₦19195.9 million, ₦91545.9 million, ₦224.20 billion, ₦410.20 billion and ₦668.63 billion respectively (CBN, 2007 and 2019).

Even with the above expenditure on internal security in Nigeria. The country is still facing a myriad of security challenges. Nigerians expect the expenditure on internal security to help reduce insecurity in the country. They also expect the planning of the internal security budget to be in line with a sectoral strategy involving defining the needs and key objectives of the entire internal security sector and the particular tasks (missions) that the internal security would be required to perform. Therefore, there is a need for the government to employ diplomacy to improve stability and; at the same time, employ economic and political instruments to mitigate economic and social disparities and tensions; mediation to resolve disputes; and, of course, stability for the nation asset productivity. There is no gain in saying that a safe environment is needed for a country to achieve adequate economic growth and reduce poverty. Over the years, the growth of the Nigerian economy has not been satisfactory. For instance, in 2016, provisional data indicated that Real Gross Domestic Product (RGDP), measured at 2010 constant basic prices, declined by 1.5%, in contrast to 2.8% growth in 2015. Oil and non-oil sector output declined by 13.7 and 0.2%, respectively.

In 2017, it grew at a snail speed by 0.83%, in contrast to the contraction of 1.58% in 2016. The development was attributed largely to increased agricultural output enabled by CBN interventions, improved crude oil receipts, fiscal stimulus, as well as, improving business environment. Oil and non-oil sectors' output grew by 4.79 and 0.47%, respectively. The economy witnessed sustained growth in 2018. The RGDP, measured at 2010 constant basic prices, grew by 1.9%, compared with a growth of 0.8% in 2017. The development was attributed, largely to fiscal stimulus due to the increase in the international price of crude oil, which led to increased infrastructural spending following sustained implementation of the Economic Recovery and Growth Plan (ERGP); sustained implementation of the Anchor Borrowers' Programme; increased capital inflow arising from improved investor confidence in the economy, improved access to foreign exchange; as well as, ameliorating inflationary pressures. In 2019, the Nigerian economy grew modestly by 2.3%, compared with 1.9% in 2018. The development was attributed, largely, to a surge in confidence, following the peaceful conduct of the 2019 general elections, the effective implementation of the 2019 budget, increased capital inflows, which helped to stabilize the foreign exchange market, as well as increased lending to the real sector (CBN, 2016, 2017, 2018 and 2019).

3. Material and Methods

This section captured the methods used to collect relevant information on the relationship between government recurrent expenditure on internal security and Nigerian economic growth. In this study, secondary data from 1980 - 2022 were sourced from the various issues of the Central Bank of Nigeria statistical bulletin.

3.1 Framework Specification

The research model for this study is based on Keynesian military theory which explains that internal security expenditure makes a spill-over influence on economic growth. Oriavwote and Eshenake (2013) used a similar model to investigate the effect of security expenditure on Nigeria's economic growth from 1980 to 2010. They expressed their model as RGDP = f(EXINTSEC, EXDEF). Where; RGDP = real gross domestic product, EXINTSEC = spending on internal security, and EXDEF = spending on defense. Therefore, this study adapted the empirical model of Oriavwote and Eshenake (2013) but with modifications. However, this study disaggregated spending on internal security into capital and recurrent spending. Then replaced expenditure on defence with other relevant independent variables (i.e., interest rate and exchange rate) not captured in the study of Oriavwote and Eshenake (2013) to actually showcase the influence of internal security expenditure among other vibrant variables on the economic growth of Nigeria. Strictly speaking, the current model states that Nigeria's economic growth depends on recurrent expenditure on internal security, interest rate, and exchange rate.

The practical connection and the resultant model for this study are as stated in the equations below:

$$RGDP = f\ (GRIS, MPR, EXR) \tag{1}$$

The linear form of equation (1) produced;

$$RGDP_t = \varphi_0 + \varphi_1 GRISt + \varphi_2 MPRt + \varphi_3 EXR + \varepsilon t \tag{2}$$

The log form of equation (2) produced;

$$LnRGDP_t = \varphi_0 + \varphi_1 LnGRISt + \varphi_2 MPRt + \varphi_3 LnEXR + \varepsilon t \tag{3}$$

Where,
RGDP = real gross domestic product (a proxy for economic growth),
GRIS = government recurrent expenditure on internal security,
MPR = interest rate (monetary policy rate),
EXR = exchange rate. ε *is* error term that denotes other variables not included in this model, Ln is the natural log, t is the period of time and φ_0 is the intercept. The parameter estimates are expected to behave in line with φ_1 *and $\varphi_3 > 0$; while $\varphi_2 < 0$.*

3.2 Model Estimation Procedures

This study employed unit root test via Augmented Dickey-Fuller test (ADF) and Autoregressive Distributed Lag (ARDL) Bounds testing techniques to analyze research data sourced from the statistical bulletin of the Central Bank of Nigeria. The ADF unit root test helped to ascertain the stationarity of the variables, and the general form of the ADF is presented thus:

$$\Delta\, y_t = \alpha_0 + \alpha_1\, y_{t-1} + \Sigma\alpha_1\Delta y_i + \delta_t + u_t \tag{4}$$

Where: y is a time series, t is a linear time trend, Δ is the first difference operator, α_0 is a constant, n is the optimum number of lags in the independent variables and u is random error term. In order to examine the short-and long-term relations between recurrent expenditure on internal security and economic growth, Autoregressive Distributed Lag (ARDL) was used. The reason is that estimates provided by ARDL method avoid problems such as autocorrelation and endogeneity, they are unbiased and efficient. The ARDL model for this study is presented thus:

$$\Delta LnRGDP_{t,j} = C_0 + C_1 LnRGDP_{t-1,j} + C_2 LnGRIS_{t-1,j} + C_3 MPR_{t-1,j} + C_4 LnEXR_{t-1,j} + \sum_{i=1}^{n1} a_{1i,j}\Delta LnRGDP_{t-1,j} + \sum_{i=0}^{n2} a_{2i,j}\Delta LnGRIS_{t-1,j} + \sum_{i=0}^{n3} a_{3i,j}\Delta MPR_{t-1,j} + \sum_{i=0}^{n4} a_{4i,j}\Delta LnEXR_{t-1,j} + \lambda ECM t - 1 + \mu_t \tag{5}$$

Where Δ is the difference operator while μt is white noise or error term, n is the optimal lag length, $\alpha_1, \alpha_2, \alpha_3, \alpha_4$ represent the short run dynamics of the model and c_1, c_2, c_3, c_4 are the long run elasticities and μ_t is the error term. ECM_{t-1} is the error correction term obtained from the co-integration model. The error coefficients (λ_1) show the rate at which the co-integration model corrects its previous period's disequilibrium or speed of adjustment to restore the long run equilibrium relationship. The coefficient of ECM is expected to be negative and statistically significant. A negative and significant ECM_{t-1} coefficient implies that any movement in short run between the explained and independent variables will converge back to the long run relationship.

4. Results and Discussion

4.1 Descriptive Statistics for Underlying Series

This study used descriptive statistics to describe the basic features of the data in the study. Specifically, the essence of the descriptive statistics is to ascertain stability of the time series.

Table 1: Descriptive Statistics

Statistics	RGDP	GRIS	MPR	EXR
Mean	519210.7	16455.36	12.87372	91.26688
Median	356994.3	559.0100	13.50000	112.9400
Maximum	990690.7	147164.3	26.00000	253.4900
Minimum	31546.08	196.9000	6.000000	0.540000
Std. Dev.	318081.8	33988.78	3.878595	78.75646
Skewness	0.406356	2.316899	0.644885	0.170121
Kurtosis	1.569298	7.549935	4.702534	1.639431
Jarque-Bera	4.850775	75.56174	8.173812	3.524051
Probability	0.088444	0.000000	0.016791	0.171697
Sum	22326062	707580.4	553.5700	3924.476
Sum Sq. Dev.	4.25E+12	4.85E+10	631.8268	260508.4
Observations	43	43	43	43

Note: RGDP, GRIS, MPR and EXR as earlier defined
Source: Authors' Computed Result from (E-views 10)

The descriptive statistics reported in Table 1, indicate that real gross domestic product (RGDP), government recurrent expenditure on internal security (GRIS), interest rate (MPR), and exchange rate (EXR) averaged ₦519210.7 million, ₦16455.36 million, 12.87372% and ₦91.26688 respectively during the period of study. The standard deviation showed that real domestic product and interest rate converged around their mean. Meanwhile, government recurrent expenditure on internal security and exchange rate did not converge around their mean. The Skewness test result showed positive values for all the variables, suggesting that they have high tails. Real gross domestic product and exchange rate are platykurtic relative to normal since their values for kurtosis 1.569298 and 1.639431 are less than 3. This suggests that the variables have short and thin tails, and their central peaks are lower and broader. Moreover, government recurrent expenditure on internal security and interest rate has leptokurtic distribution relative to normal, since their values for kurtosis 7.549935 and 4.702534 are more than 3. This indicates a flatter than normal distribution and the variables have large tails. That is, they have longer and fatter tails, and their central peaks are higher and sharper.

At the same time, the probability of Jarque-Bera statistics suggests that the hypotheses of normal distribution for real gross domestic product and exchange rate were accepted at 5% level while the hypotheses of normal distribution for government recurrent expenditure on internal security and interest rate were rejected at 5% level. Thus, the researcher concludes from the revealed statistical properties of the time series that some of the variables are not normally distributed, which may have resulted from the problem of unit root. This necessitated the unit root test for stationarity as shown in Table 2.

Table 2: Augmented Dickey-Fuller (ADF) Unit Root Test

Variables	Level form		First difference		Order of integration
	ADF Statistics	5% Critical Value	ADF Statistics	5% Critical Value	
RGDP	0.737656	-2.935001	-7.020455	2.935001	1(1)
GRIS	-2.535781	-2.933158	-7.937876	-2.935001	1(1)
MPR	-3.200054	-2.933158	-	-	1(0)
EXR	-0.245176	-2.933158	-7.528156	-2.935001	1(1)

Note: RGDP, GRIS, MPR, and EXR as earlier defined
Source: Authors' Computed Result from (E-views 10)

The result of the ADF test for each of the series presented in Table 2 reveals that at a five percent level of significance, MPR was stationary at level 1(0) as its ADF statistics is greater than 5 percent critical value, while RGDP, GRIS, and EXR were stationary at first difference 1(1). Given that the variables were integrated of order 1(0) and 1(1). The requirement to fit in an ARDL model to test for long run relationship is satisfied.

Table 3: ARDL Bounds Test for Co-integration

Model		F-Statistic = 9.910272	
RGDP = F(GRIS, MPR, EXR)		K = 3	
Critical Values	**Lower Bound**	**Upper Bound**	
5%	2.79	3.67	

Source: Authors' Computed Result from (E-views 10)

The result of the ARDL bounds test for co-integration reveals that there is a long-run relationship amongst the variables (RGDP, GRIS, MPR and EXR). This is because the computed F-statistic of about 9.9 is greater than the upper critical bounds at 5% critical value. This provided evidence to discard the null hypothesis of no cointegration at 5% significance level for the RGDP model. Based on this finding, the study obtained the long-run and short-run dynamic parameters for the variables.

Table 4: Estimated ARDL Long Run Coefficients

Regressors	Coefficient	t-Statistic	P-Value
LOG(GRIS)	0.125524	1.445983	0.1637
LOG(EXR)	0.264866	6.947120	0.0000
MPR	-0.125753	-2.863076	0.0096

Dependent Variable: RGDP ARDL (4, 3, 4, 4)
Source: Authors' Computed Result from (E-views 10)

The estimated ARDL long run coefficients in Table 4 reveal that in the long run, government recurrent expenditure on internal security and exchange rate has positive relationship with RGDP (economic growth) in Nigeria. However, interest rate has a negative relationship with economic growth in Nigeria. Importantly, exchange rate and interest rate are statistically significant in explaining economic growth in the long run.

Table 5: Error Correction Representation for the Selected ARDL Model ARDL (4, 3, 4, 4)

Regressors	Coefficients	t-Statistic	P-Value
LOG(GRIS)	-0.008188	-2.872052	0.0094
LOG(EXR)	0.057822	5.054050	0.0001
MPR	0.004243	3.055647	0.0062
ECM (-1)	-0.085434	-7.711137	0.0000
R^2 = 0.893000 **D-W stat. =** 2.525443			
Akaike info criterion = -4.867111; Schwarz criterion = -4.227280;			
F-statistic =1860.286; Prob(F-statistic) = 0.000000			

Source: Authors' Computed Result from (E-views 10).

Table 5 shows the result of the short-run dynamic coefficients associated with the long-run relationships obtained from the ECM equation. The Error Correction Term in the model has the right sign (i.e., negative) and is statistically significant. This indicates an adjustment to long-term equilibrium in the dynamic model. Put differently, it indicates adjustment from short-run equilibrium to long-run equilibrium in the dynamic model. This implies that deviations from the short-term economic growth adjust to long-run equilibrium. The Durbin Watson (DW) value of 2.525443, suggests that autocorrelation is not a problem to the model. Moreover, the dynamic relationship between the variables as captured by the parsimonious ECM reveals that the descriptive power of the model - R^2 is approximately 0.89, which means the model is a good fit. It indicates that over the sampled period, about 89 percent variation in economic growth is explained by systematic changes in the adopted variables as initially defined while the remaining 11% is explained by factors not included in the model but captured as the error term in the model.

Furthermore, government recurrent expenditure on internal security (GRIS) has a negative and significant relationship with economic growth. It was evident from the results that a percentage increase in government recurrent expenditure on internal security will decrease economic growth by 0.008188%. This finding corroborates the neoclassical approach to internal security expenditure which argued that security expenditure will influence economic growth negatively. It also endorses the empirical findings of earlier scholars including Nwaoha, Onwuka, Madubuike, Chukwu, and Perpetua (2020), who affirmed a negative association between expenditure on internal security and economic growth. This means that recurrent expenditure on internal security in Nigeria which includes pay to officers, salaries to specialists within internal security forces or connected to internal security organizations, pensions of internal security personnel; and social services for personnel and their families; maintenance and operations; internal security research and development, medical services, etc. impacted on the growth of the Nigerian economy negatively during the period of study. This also means that recurrent expenditure on internal security has detrimental impact on Nigeria's economic growth during the period of study. However, the coefficient of government recurrent expenditure on internal security is statistically significant. Thus, it was concluded that there is a significant relationship between government recurrent expenditure on internal security and economic growth in Nigeria. At the same time,

exchange rate and interest rate have a positive and significant relationship with economic growth during the period of study.

4.2 Post Estimation Diagnostic Tests Results

Diagnostic tests were conducted in this study to verify whether or not the estimated model is reliable for policy prediction or recommendation purpose. This study specifically employed the Wald test for coefficient of restriction, Autoregressive Conditional Heteroskedasticity test (Breusch-Pagan-Godfrey) and normality test for the diagnostics or post-estimation analyses. The various test results are hereby reported in Table 6, 7 and Figure 1.

4.3 Wald Test

The Wald test is applied to confirm if the coefficients of the causal variables in the ECM model are jointly significant. The F-statistic in Tables 6 was utilized to ascertain this.

Table 6: Wald Test Result

Wald Test			
Equation: Untitled			
Test Statistic	**Value**	**Df**	**Probability**
F-statistic	18060.95	(4, 20)	0.0000
Chi-square	72243.79	4	0.0000

Source: Authors' Computed Result from (E-views 10).

The result in Table 6 shows that the F-statistic is approximately 1806 and the probability value of 0.0000 is less than 0.05 at the conventional 5 per cent level. Therefore, all the independent variables used in the model are jointly important in explaining economic growth in Nigeria during the period of study.

4.4 Heteroskedasticity Test Results

Autoregressive Conditional Heteroskedasticity test (Breusch-Pagan-Godfrey) was utilized to check whether or not the variance of the residuals in the ECM is homoscedastic.

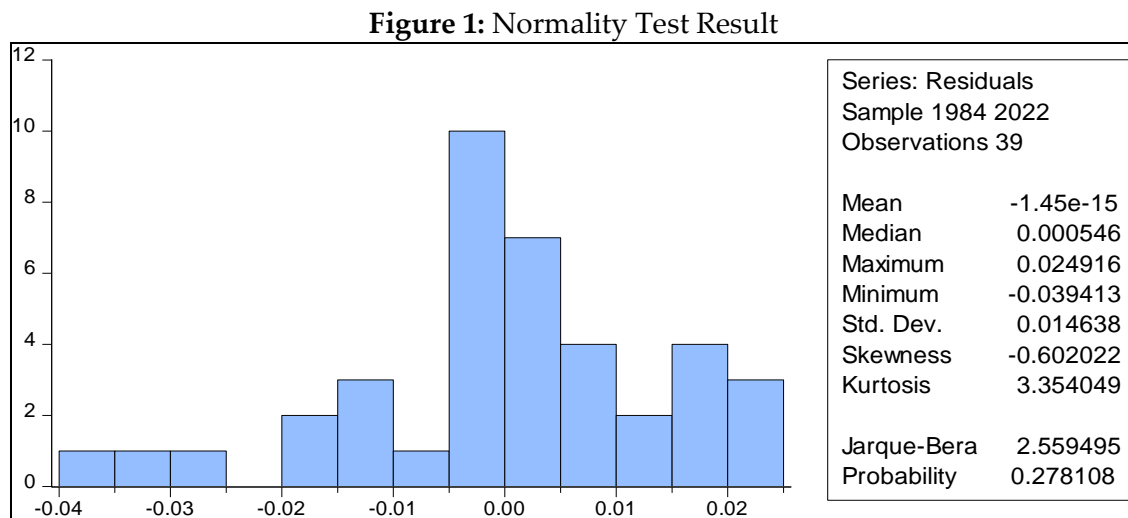**Table 7:** Autoregressive Conditional Heteroskedasticity Test Result

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.757636	Prob. F(18,20)	0.7210
Obs*R-squared	15.81156	Prob. Chi-Square(18)	0.6057
Scaled explained SS	4.894305	Prob. Chi-Square(18)	0.9990

Source: Computed by the researcher using E-views 10.

The Breusch-Pagan-Godfrey test result in Table 7 confirms that the error correction model is free from heteroskedasticity, which suggests that the variance of the residual in the economic growth model is homoscedastic over the period covered in this study.

4.5 Normality Test Result

The Jarque-Bera statistic was applied to examine whether the error term in the economic growth model is normally distributed at 5 per cent significance level.

Figure 1: Normality Test Result

Series: Residuals	
Sample 1984 2022	
Observations 39	
Mean	-1.45e-15
Median	0.000546
Maximum	0.024916
Minimum	-0.039413
Std. Dev.	0.014638
Skewness	-0.602022
Kurtosis	3.354049
Jarque-Bera	2.559495
Probability	0.278108

Source: Computed by the researcher using E-Views 10

The result shown in Figure 1 depicts that the error term is normally distributed at the conventional level (i.e., 5%). This is because the probability value of the Jarque-Bera statistic of approximately 0.278 is greater than the 0.05% conventional level. This implies that the Jarque-Bera statistic hypothesis of normally distributed residuals in the ECM model is accepted.

5. Conclusion and Recommendations

This study has provided an empirical analysis of the association between government recurrent expenditure on internal security and Nigeria's economic growth from 1980 to 2022. Specifically, it has systematically analysed the association flanked by recurrent expenditure on internal security and economic growth. Secondary data were collected from Nigeria's apex bank - CBN on government recurrent expenditure on internal security, real gross domestic product, exchange rate, and interest rate. The study employed an Autoregressive Distributed Lag (ARDL) Bounds testing technique as the main analytical tool. The results of the analyses revealed the presence of a long run association amongst the variables. The results also showed that in the long run, government recurrent expenditure on internal security has a positive and insignificant relationship with economic growth in Nigeria. At the same time, exchange rate has positive and significant relationship with economic growth in Nigeria. Also, interest rate has a negative and significant relationship with economic growth in Nigeria. In the short run, government recurrent expenditure on internal security has a negative and significant relationship with economic growth in Nigeria. Exchange rate and interest rate have positive and significant relationship with economic growth in Nigeria. The study therefore, concluded that the relationship between government recurrent expenditure on

internal security and economic growth in Nigeria varies, as it could be positive (in the long run) or negative (in the short run). This means that there is no clear-cut prediction on the relationship between government recurrent expenditure and economic growth in Nigeria. However, the opportunity cost of recurrent expenditure on internal security creates a burden on Nigeria's economy. The study therefore recommended that recurrent expenditure on internal security which includes pay to officers, salaries to specialists within internal security forces or connected to internal security organizations, pensions of internal security personnel; and social services for personnel and their families; maintenance and operations; internal security research and development, medical services, etc. should be increased because in the long run it will provide a spin-off effect on the national economy and increase economic growth.

Conflict of Interest Statement
The authors declare no conflicts of interest.

About the Authors
George-Anokwuru, Chioma Chidinma (PhD) is a senior lecturer in the department of economics, University of Port Harcourt, Port Harcourt, Rivers State, Nigeria. Her teaching-research interests are in the areas of monetary and international economics. She has more than fifty publications to her credit in these broad areas. In addition, she is an economic-management consultant to various private organizations. She actively participates in local and international conferences.
Inimino, Edet Etim (PhD) earned a Bachelor of Science (BSc.) degree in Economics with a Second Class Honours (Upper Division) and a Master of Science (MSc.) degree in Monetary Economics from the University of Port Harcourt, Rivers State, Nigeria. In addition, he earned a Doctor of Philosophy (PhD) degree in Economics, specializing in Development Economics from the University of Uyo, Akwa Ibom State, Nigeria. His research interests are in the areas of monetary, public sector and development economics. He has more than twenty publications to his credit in these broad areas. He is an economic-management consultant to various private organizations. He actively participates in local conferences.

References

Amana, S. A., Aigbedion, I. M. & Zubair, A. Z. (2020). Impact of Government Security Expenditure on Economic Growth in Nigeria. *International Journal of Innovative Research in Social Sciences and Strategic Management Techniques*, 7(1), 211-225.

Aminu, A. W., Hayewa, S. & Mamman, T. (2023). Insecurity and Economic Development in Nigeria. *Journal of Economics and Allied Research*, 8(1), 283-295.

Benoit Emile (1973). *Defence and economic growth in developing countries*. (Boston: D.C. Health & Co).

Benoit, E. (1978). Growth and defence in developing Countries. *Economic Development and Cultural Change 26(2)*:271-280.

Central Bank of Nigeria (2007), *Statistical Bulletin, Abuja: Central Bank of Nigeria*, Vol. 18, December 2007.

Central Bank of Nigeria (2016). *Annual Economic Report, 31ˢᵗ December, 2016.*

Central Bank of Nigeria (2017). *Annual Economic Report, 31ˢᵗ December, 2017.*

Central Bank of Nigeria (2018). *Annual Economic Report, 31ˢᵗ December, 2018.*

Central Bank of Nigeria (2019). *Annual Economic Report, 31ˢᵗ December, 2019.*

Central Bank of Nigeria (2019). *Statistical Bulletin, Volume 30, December, 2019.*

Deger, S. (1986). Economic Development and Defence Expenditures. *Economic Development and Cultural Change*, 35 (1), 179-196.

Dim, K. C., Okafor, T. G., Eneh, O. & Amahalu, N. N. (2022). Effect of Public Expenditure on Economic Development of Nigeria. *International Journal of Management Studies and Social Science Research*, 4(1), 113-130.

Ejo-Orusa, D. (2020). Unemployment and Insecurity in Rivers State. *International Journal of Innovative Legal & Political Studies*, 8(3), 74-87.

Inimino, E. E., Otubu, O. P., Alex, I. O. & Abuo, M. A. (2020). Defence Expenditure and Economic Growth in Nigeria. *African Research Journal of Economics, Business and Management*, 1(1), 25-43.

Mbah, S. A., Agu, O. C. & Aneke, C. E. (2021). Does Internal Security Expenditure Impact on Economic Growth in Nigeria? *Acta Universitatis Danubius ŒCONOMICA)*, 17(2), 159-176.

Nteegah, A. (2020). Security Expenditure: Implications on Economic Growth in Nigeria. *International Journal of Economics, Business and Management Studies*, 7(2), 234-246.

Nwaoha, W. C., Onwuka, O. O., Madubuike, K. O., Chukwu, M. K. & Perpetua, C. C. (2020). Security Spending and Economic Growth: The Nigeria Experience. *Academic Journal of Current Research*, 7(11), 48-58.

Obi, C. (2015). Challenges of insecurity and terrorism in Nigeria: Implication for national development. *OIDA International Journal of Sustainable Development*, 8(2), 11-18.

Okeke, J. C., Chukwu, K. O. & Ogbonnaya-Udo, N. (2021). Government Expenditure on Defence and Internal Security: A Prerequisite for Achieving Sustainable Economic Growth and Development. 1994-2020. *International Journal of Trend in Scientific Research and Development*, 5(6), 1093-1101.

Onime, B. E. (2018). Insecurity and Economic Growth in Nigeria: A Diagnostic Review. *European Scientific Journal*, 14(4), 377-391.

Oriavwote, V. E. & Eshenake, S. J. (2013). A Vector Error Correction Modeling of Security Spending and Economic Growth in Nigeria. *Accounting and Finance Research*, 2(2), 59-68.

Tekeoglu, E. (2008). Defence Expenditure and Economic Growth: Empirical Study on Case of Turkey. *Naval Postgraduate School Monterey, California, MBA Professional Report.*

Umo, J. U. (2012). *Escaping poverty in Africa. A Perspective on Strategic Agenda for Nigeria.* Millennium Text Publishers Limited 14 Science Road, Unilag Estate, Magodo, Isheri, Lagos, Nigeria.

Yusuf, A. & Mohd, S. (2022). Growth and Fiscal Effects of Insecurity on the Nigerian Economy. *The European Journal of Development Research* https://doi.org/10.1057/s41287-022-00531-3.