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Does Military Spending Crowd-Out Domestic Investment? Evidence from Nigeria

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Abstract
The growing level of social unrests in Nigeria has compelled the Nigerian government to increase its military spending in recent decades. This has several implications for macroeconomic stability in Nigeria. However, the effect of this expansionary fiscal policy on domestic investment in Nigeria has not been established empirically. Thus, this study answers the question of whether or not military spending crowd-out domestic investment in Nigeria. Annual time series data spanning 1981-2021 and the autoregressive distributed lag (ARDL) estimator were used to provide answer to this research question. The results of the short-run and long-run analysis answers the question in the affirmative as military expenditure was found to negatively impact domestic investment in Nigeria. Therefore, the Nigerian government and policymakers are urged to devise pragmatic and cost-effective ways to tackle social unrests and reduce military spending, which have been a clog in the wheel of investment expenditure in the country.
Keywords: Military Spending, Investment, Crowding-out effect, ARDL, Nigeria.
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1. Introduction

Traditional and contemporary growth theorists have made numerous efforts at demystifying the drivers of sustained economic growth. There appears to be a consensus among the growth theorists that investment in capital stock is a major growth driver (Solow, 1956, Romer, 1990, Aghion and Howitt, 1998). However, the growing level of social unrests, particularly in developing economies, has been a major bane to capital formation and domestic investment. Social unrests are notorious for not only destroying the current level of capital stock but also dissuading investment in new capital. This serves as a major disincentive to investors as their investments could be subjected to being wiped out in an instant. It, therefore, suffices to say that social unrest could dampen investment and, in turn, stifle economic growth. This explains the low growth trajectory of countries that has experienced or are experiencing various forms of social unrest (Oji and Afolabi, 2022; Raifu et al., 2022).

Nigeria, the largest country in Africa in terms of gross domestic product and population, has been faced with myriads of social unrest in the last two decades with almost all six geopolitical zones of the country under constant attack. The Boko Haram sect, Islamic State of West African Province (ISWAP), herdsmen, kidnappers, separationists and bandits are the most prominent group fueling social unrest in Nigeria. The activities of these groups have led to loss of several lives and properties and the displacement of several people. The Global Conflict Tracker (2021) specifically put the number of deaths and displacement instigated by the Boko Haram sect at more than 350,000 people and 3 million people, respectively. This has severe implications for investment too as it suggests that investors have been scared away from the social unrest-prone zones to safe havens (Aderemi et al., 2018). The responsibility of providing security of lives and properties as well as creating business friendly environment wherein investment can thrive lie with the government (Saba and Ngepah, 2019, Rooney et al., 2021).

Consequently, the Nigerian government has been spending massively in recent decades to empower the Nigerian defense sector through increased budgetary allocation to the sector. The increased military spending is used for the acquisition of modern military ammunitions, massive recruitment of new military personnel, and welfare improvement of military personnel (Apanisile and Okunlola, 2014; Raifu et al., 2022). The increase in military spending is tantamount to a decrease in spending on infrastructural development and critical sectors of the economy such as the health and education sectors. In other words, government's capacity to provide basic public goods and services is hampered by its increasing volume of military spending. The low investment in infrastructural development could increase the cost of doing business and lower domestic and foreign investment (Babatunde, 2017; Ogunjimi and Amune, 2019). This is partly responsible for the dominance of the oil sector and the failed attempts at diversification of the Nigerian economy (Ogunjimi, 2022a, 2020b).

Given that increase in government spending is often financed by tax revenue, increase in military spending suggest that the tax burden on citizens and existing businesses will become heavier. This could threaten the survival of Nigerian business firms, most of which are small and medium scale enterprises (Afolabi and Oji, 2021; Ogunjimi, 2021). Given that Nigeria does not have the requisite technological capability to produce sophisticated military weapons, the country often resorts to importing these ammunitions from developed economies. This enhances job creation in the foreign country at the expense of the domestic labour market, which is highly saturated with teeming unemployed and underemployed youths. On the other hand, given the low revenue base of the Nigeria government, the government has been compelled to increase the country's debt stock to finance its rising military expenditure and annual budget. Thus, Nigeria's debt profile (debt from both domestic and international creditors) together with its associated cost of debt servicing poses critical threats to domestic resource mobilization for investment and growth imperatives (Onyele and Nwadike, 2021; Afolabi, 2022a, 2023).

In the light of the foregoing, this study provides empirical evidence on the effect of military spending on domestic investment in Nigeria. The key question this study answers is, "Does military spending crowd-out domestic investment in Nigeria?" This empirical investigation is crucial to provide evidence-based policy options to ameliorate the current unimpressive volume of domestic investment in Nigeria. The military spending-growth-investment nexus has been extensively researched in developed countries (Dunne et al., 2002 [industrializing countries]; Atesoglu, 2004 [USA]; Khalid and Mustapha, 2014 [China]; Kollias and Paleologou, 2017 [European Union]; Dunne and Smith, 2019 [OECD]). However, there are little evidence on this nexus in a developing country like Nigeria, where terrorism and insurgency are prevalent. The few studies on Nigeria focused on foreign direct investment with no reference to domestic investment (Aderemi et al., 2018; Edith et al., 2019). This study fills this research gap by employing the autoregressive distributed lag (ARDL) estimator to analyse the short-run and long-run effects of military spending on domestic investment in Nigeria at different time dimensions.

The remaining sections of this study are arranged as follows: Section 2 provides a brief review of relevant studies; Section 3 presents the methodological framework; Section 4 present and discusses the empirical findings; and Section 5 contains the conclusion and policy recommendation derived from the findings of the study.

2. Review of Relevant Studies

There is growing body of literature on the effects of military spending on investment across developing and developed countries. However, the results appear mixed due to the differences in methodological approaches, sample size, data sources, and country considered. For example, Atesoglu (2004) evaluated the effects of military spending on investment in the United States between 1947 and 2001. The result showed long-run convergence between military spending and investment, and that military spending stimulates investment although not as much as non-military spending. Kollias and Paleologou (2017) examined the growth and investment effects of military spending in 15 member states of the European Union between 1961 and 2014. The panel vector autoregression (PVAR) model result supported the effective demand stimulation argument because it was found that military spending stimulates growth but crowd-out investment in the sampled countries. In a later study, Kollias and Paleologou (2019) extended their enquiry to 65 countries in three different income groups. They employed the PVAR method to assess the growth and investment effects of military spending between 1971 and 2014. Findings revealed that military spending stimulates growth and crowds-in investment in high-income countries due to effective demand and technology spillover channels of the defense sector. However, the converse holds in both low-income and middle-income countries, where economic growth was found to be positively related to the military spending.

In a panel study of small industrializing economies, Dunne et al. (2002) used annual data from 1980 to 1998 to estimate the growth and investment effects of military spending. The result showed that military spending suppresses economic growth and crowds-out investment irrespective of the time dimension considered, signaling that reducing military spending could bolster macroeconomic performance and generate some cyclical benefits. In a later study, Dunne and Smith (2019) leveraged the extensive Stockholm International Peace Research Institute (SIPRI) military spending data to re-examine the growth and investment effects of military spending in a panel study using data from 1960 to 2014. The study specifically focused on examining the growth effect of military spending through the investment channel. The result showed that military spending has weak relations with both investment and economic growth. In another panel study comprising 109 non-high-income economies, d'Agostino et al. (2018) adopted the endogenous growth model and instrumental variables to account for the endogeneity problems that could arise from the relationship between military spending and economic growth

over the period 1998-2012. The result confirmed endogeneity in the military spending-growth nexus and also showed that military spending deters economic growth.

Biswas (1992) evaluated the growth effect of military spending in 74 countries using data for the period, 1981-1989. The empirical finding revealed that military expenditure is growth-enhancing although this positive effect is more evident in high-income countries than low-income and middle-income countries. This suggests that income group matters in the analysis of the military spending-growth nexus. Deger and Smith (1985) argued that military expenditure can affect investment from either the demand and supply sides. On the supply side, investment in capital stock often derives from household saving and fiscal surplus in the presence of a weak financial system. Raising military expenditure directly affects household saving through forced household saving and reduction in the time preference of saving. It indirectly affects household saving through deliberate reallocation of state budget, which will, in turn, lower government's proviso of public goods and services. This implies that private consumption will have to rise while saving to income ratio falls. The reduction in saving-income ratio will then lower capital formation. On the demand side, military spending affects investment through the allocation effect and absorptive capacity constraint. Diverting resources to the defense sector lower the investment in capital stock that can used to produce goods and services. This can instigate an absorptive capacity drag, which lowers investment.

On the other hand, Apanisile and Okunlola (2014) evaluated the growth effect of military expenditure in Nigeria between 1989 and 2013 using the bounds testing approach. The result of the short-run and long-run models suggest that military expenditure has growth-hindering effects hence the need to increase non-military spending to increase investment and spur economic growth. A similar study was carried out for China by Khalid and Mustapha (2014) using annual data from 1980 to 2011. The ARDL result showed an inverse relation between military spending and economic growth and the granger causality result revealed that causality runs from economic growth to military spending. In a similar study carried out for Turkey, Gokmenoglua et al. (2015) used data from 1988 to 2013 to demystify the causal and long-run relationship between military spending and economic growth. Findings affirmed the presence of long-run relationship between the variables although causality run from economic growth to military spending, suggesting that as the Turkish economy expands, its military spending also increases and vice versa. Raifu and Afolabi (2023) assessed the effects of military expenditure on unemployment rate in South Africa using quarterly data covering 1994Q1-2019Q4. The authors found that an increase in military spending is detrimental to unemployment whereas a reduction in military spending would reduce unemployment. Similarly, Gül and Torusdağ (2020), whose study focused on G8 countries, found that military expenditure aggravates inflation and unemployment rates.

Employing different econometric techniques, Aderemi et al. (2018) investigated the effects of security spending on foreign direct investment inflows to Nigeria between 1994 and 2016. The dynamic ordinary least square (DOLS) result showed that security spending exerts a positive impact FDI and the granger causality result showed a bidirectional causal relationship exist between security spending and FDI. Similarly, Edith et al. (2019) also evaluated the effect of defense spending on foreign direct investment inflows to Nigeria. The ARDL framework was adopted as the analytical technique and its result showed that defense spending has a significant positive relationship with FDI inflows to Nigeria. From the foregoing, there appears to be a lack of consensus on the effect of military spending on economic growth and investment in the literature. Moreover, there are only a few country-specific study in the investment effect of military spending, particularly for Nigeria. This study fills this research gaps by examining the effects of military spending on domestic investment in Nigeria. The autoregressive distributed lag (ARDL) framework is adopted in this regard as it has the ability to unveil the investment effects of military spending at different time dimensions – the short-run and long-run.

3. Methodology

3.1 Model Specification and Estimation Method

This study focuses on demystifying the effect of military spending on domestic investment in Nigeria. Following the extended version of the Keynesian model adopted by Atesoglu (2004), the investment model of this study is modelled as follows:

$$INV_t = \varphi_0 + \varphi_1 MLS_t + \varphi_2 INT_t + \varphi_3 INC_t + \varphi_4 CPS_t + \varepsilon_t \quad (1)$$

Where INV, MLS, INT, INC and CPS are investment, military spending, interest rate, gross national income and domestic credit to private sector, respectively. The inclusion of these variables in the investment model is based on their theoretical and empirical links with investment. Military expenditure is the key independent variable of

this study and it has been found to have positive (Atesoglu, 2004; Kollias and Paleologou, 2019) and negative (Dunne et al, 2002; Kollias and Paleologou, 2017) relationships with investment. Thus, its expected sign could either be positive (crowding-in effect on investment) or negative (crowding-out effect on investment). Interest rate has been established to have an inverse relationship with investment (Atesoglu, 2004; Ogunjimi, 2019) thus, its sign should be negative to depict that interest rate goes in opposite direction with investment. Income is incorporated into the investment model to account for the income effect of investment as highlighted by the accelerator theory of investment and studies like Kollias and Paleologou (2017), and Dunne and Smith (2019). The availability of domestic credits stimulates domestic investment (Aminu and Ogunjimi, 2019). Thus, the sign of domestic credit to private sector should be positive.

Equation 1 is estimated using the ARDL framework. The strengths of this framework lies in its simultaneous generation of short-run and long-run estimates; accommodation of variables stationary at level and first difference; inbuilt cointegration test approach (Bounds test); and accommodation of small samples (Pesaran and Shin, 1999). The estimates generated through the ARDL framework are more reliable and efficient than those from the ordinary least square estimator. These strengths have made the ARDL framework widely accepted and used extensively in empirical economic analysis in recent decades. The ARDL version of equation 1 is specified as:

$$\Delta INV_t = \pi INV_{t-1} + \omega_1 MLS_{t-1} + \omega_2 INT_{t-1} + \omega_3 INC_{t-1} + \omega_4 CPS_{t-1} + \sum_{i=1}^{p-1} \Psi_i \Delta INV_{t-i} + \sum_{i-1}^{p-1} \Psi_i \Delta MLS_{t-i} + \sum_{i-1}^{p-1} \Psi_i \Delta INT_{t-i} + \sum_{i-1}^{p-1} \Psi_i \Delta INC_{t-i} + \sum_{i-1}^{p-1} \Psi_i \Delta CPS_{t-i} + \varepsilon_{1t} \quad (2)$$

where Δ is the difference operator; π, ω *and* Ψ are parameters; and other variables remain as previously defined. Variables such as gross fixed capital formation, military spending and gross national income are expressed in logarithm to aid easy interpretation of results, given that real interest rate and domestic credits to private sector are in percentage form. Wu et al. (2021) alluded that transforming variables into natural logarithm helps to give the variable better distributional properties and also eliminates the problems of autocorrelation and heteroscedasticity.

3.2 Data Description and Sources

This study sourced annual time-series data on key variables of interest from the World Development Indicator (WDI) and Stockholm International Peace Research Institute (SIPRI) databases. Specifically, data on gross fixed capital formation (a proxy for investment), gross national income (a proxy for income), real interest rate, domestic credits to the private sector (% of GDP) are sourced from WDI database while data on military expenditure was sourced from SIPRI database (see Table 1). The data scope is 1981-2021, the choice of which is based on data availability. Apart from displaying the unit of measurement and source of data, Table 1 also shows the descriptive statistics of each of variables considered in this study. It reveals that gross fixed capital formation ranged between US$39.2 billion and US$109 billion between 1981 and 2021 although it averaged US$59.5 billion within the period. Its standard deviation signals that gross fixed capital formation has been volatile during the period under review and this might not be unconnected with the rising level of insecurity, terrorism and insurgency in Nigeria. Empirical studies have shown that social unrest is a major bane to investment as it discourages investors from investing in insecure areas (Edith et al., 2019; Raifu et al., 2022).

The high rate of insecurity in Nigeria is showcased by the response of the government through high military spending which ranged from US$0.4 billion to US$2.7 billion within the sample period. The emergence of the Boko Haram and ISWAP sects has been a major cause of concern for the Nigerian government, the military and other stakeholders in the country given the massive destruction of lives and infrastructural facilities, that could have facilitated improved investment position. The government has had to increase its military spending to combat this menace. Moreover, gross national income increased dramatically during the sample period as shown by its minimum and maximum values. Gross national income averaged US$247 billion with Nigeria being among the few lower-middle-income countries in Africa, where many countries belong to the lower-income group. The relatively high national income of Nigeria signals that the country has the potential to bolster investment toward achieving sustainable economic growth. However, the country has a low average interest rate (0.4%) and a low share of domestic credit to private sector in GDP (9.3%), both of which have severe implications for investment.

Table 1: Descriptive Statistics

Variables	Measure	Source	Mean	Maximum	Minimum	Std. Dev.
Gross Fixed Capital Formation (GFCF)	US$ Billion	WDI (2022)	59.5	109.0	39.2	13.8
Military Spending (MLS)	US$ Billion	SIPRI (2022)	1.4	2.7	0.4	0.7
Gross National Income (GNI)	US$ Billion	WDI (2022)	247.0	488.0	111.0	135.0
Real Interest Rate (RINT)	%	WDI (2022)	0.4	18.2	-65.9	14.4
Domestic Credit to Private Sector (DCPS)	% of GDP	WDI (2022)	9.3	19.6	5.0	3.5

Source: Author's Compilation from Eviews10

4. Results and Discussion

The primary focus of this study is to examine the effects of military spending on domestic investment in Nigeria. A preliminary analysis is conducted on the variables to determine their stationarity and cointegration status, which will then guide and justify the choice of an appropriate estimation technique. Afterwards, the main estimation is carried out using the ARDL framework of analysis. Lastly, diagnostic tests are carried out to determine the reliability of the ARDL short-run and long-run estimates.

4.1 Unit Root Test

Unit root tests are crucial in economic analysis involving time-series and panel data. The test helps to detect the stationarity status of the variables to be estimated as its results provide a guide on which analytical technique is appropriate for estimating empirical models. This is to prevent spurious results that can lead to misleading policy formulation. The unit root test methods used in this study are the Phillip Perron (PP) and Augmented Dickey Fuller (ADF) approaches, which test the null hypothesis of "Variables contains unit root." The null hypothesis is rejected if the probability value is greater than ten percent but accepted if otherwise. The results of these approaches to unit root test are reported in Table 2. The PP results show that the null hypothesis is rejected at level for log of gross fixed capital formation and real interest rate but rejected at first difference for log of military spending, log of gross national income and domestic credit to private sector are stationary at first difference. The ADF results, however, show that while log of gross fixed capital formation, real interest rate and domestic credit to private sector are stationary at level, log of military spending and log of gross national income are stationary at first difference. Overall the results of the two approaches show a mixture of stationary (I(0)) and non-stationary (I(1)), which satisfies the condition for employing the ARDL framework. Following this result, the Bound test cointegration approach is conducted to determine the long-run relationship status of the variables.

Table 2: Unit Root Test

Variables	Phillip Perron			Augmented Dickey Fuller		
	Level	First Diff.	I(d)	Level	First Diff.	I(d)
LOG(GFCF)	-5.16*	-	I(0)	-7.04*	-	I(0)
LOG(MLS)	-3.14	-7.11*	I(1)	-3.14	-7.15*	I(1)
LOG(GNI)	-2.99	-4.49*	I(1)	-1.53	-4.74*	I(1)
RINT	-7.27*	-	I(0)	-7.59*	-	I(0)
DCPS	-2.28	7.70*	I(1)	-4.11**	-	I(0)

Source: Author's Compilation from Eviews10

4.2 Cointegration Test

Cointegration tests are important as they display whether or not a long-run relationship exist among the variables in the empirical model. Interestingly, the ARDL framework has an inbuilt cointegration approach called the "Bounds Test", which tests for long-run relationship among variables. The Bound test generates F-statistics which is compared with the critical value at different level of significance. It tests the null hypothesis of no long-run relationship among the variables. The null hypothesis is rejected if the F-statistic exceed the critical value of

the upper bound but accepted if it is below the critical value of the lower bound. It is, however, declared inconclusive if the F-Statistic falls within the lower and upper bounds. The Bounds test result, reported in Table 3, shows that the F-statistic (7.2) exceeds the critical value of the upper bound at all three levels of significance. This indicates that the null hypothesis of no cointegration will be rejected, suggesting that long-run relationship exist among the variables in the empirical model. The presence of long-run relationship signals that all the variables achieve long-run convergence thus, a long-run model needs to be run to generate long-run estimates.

Table 3: Bounds Test Results

F-Bounds Test	**Null Hypothesis: No long-run relationships exist**			
	Value	**Significant Level**	**I(0)**	**I(1)**
F-statistic	7.162	10%	2.45	3.52
K	4	5%	2.86	4.01
		1%	3.74	5.06

Source: Author's Compilation from Eviews10

4.3 Effects of Military Spending on Domestic Investment

The preliminary tests' results suggest the appropriateness of running short-run and long-run with the ARDL estimator. The short-run and long-run estimates of the empirical model evaluating the effect of military spending on domestic investment in Nigeria are shown in Table 4. The coefficient of military spending shows that military spending has a significant negative effect on domestic investment in Nigeria both in the short-run and the long-run. This result has two implications. First, it suggests that military spending is a critical driver of domestic investment in Nigeria. Second, it suggests that military spending crowds-out domestic investment in Nigeria. This implies that when government increases its spending on the Nigerian defense sector, it limits the amount of investment expenditure, suggesting that the opportunity cost of increasing military spending is reduction in domestic investment. The rationale behind this is that given the limited financial resources at the disposal of the government to provide public goods and services, if the government channels more of these financial resources to the defense sector, only a small fraction will be available for financing investment and development imperatives.

On the other hand, the result also suggests that lowering military spending will make more financial resources available for investment purposes. Thus, Nigeria can bolster its domestic investment by tackling the prevailing social unrests in the country, which have been increasing its military spending in recent decades. The statistical significance of the short-run and long-run estimates suggest that the crowding out effect of military spending on investment is a short-run and long-run phenomena. However, it is noteworthy that the short-run estimate is larger than the long-run estimate, suggesting that military spending has crowding out effects on investment in the short term than in the long term. This suggests the need for the Nigerian government and its relevant agencies to act expeditiously in tackling the menace of social unrest that continues to increase the country's military spending. This result aligns with the findings of Dunne et al (2002) and Kollias and Paleologou (2017), who showed that military spending has a crowding-out effect on investment. It also confirms the finding of Afolabi (2022b) on the validity of the investment crowding-out effect in Nigeria. Nonetheless, the coefficient of first lag of military spending shows that military spending can crowd-in investment after one year of a shock to military spending.

The short-run and long-run coefficients of gross national income are both positive and statistically significant, signaling that gross national income exert a positive influence on investment and that it is a major determinant of domestic investment in Nigeria. The positive relationship also shows that gross national income has a crowding-in effect on domestic investment such that investment will increase when gross national income rises. By implication, the problem of low domestic investment in Nigeria can be solved by making efforts to raise national income, which can then be channeled to boost investment. This result is plausible and consistent with a priori expectation as well as the accelerator theory of investment which shows income is an increasing function of investment. The result also agrees with the findings of Kollias and Paleologou (2017), Dunne and Smith (2019), and Ogunjimi (2019), which showed that increase in national income makes huge financial resources available to boost investment. Even though the long-run estimate of gross national income is higher than its short-run estimate, the crowding-in effect of gross national income on domestic investment in Nigeria is both a short-run and long-run phenomena.

In contrast with the a priori expectation, the coefficient of real interest rate is positive but statistically insignificant, suggesting that real interest rate is not a significant driver of domestic investment in Nigeria in the short-run. While this short-run result is counterintuitive, its long-run coefficient shows that real interest rate has an inverse relationship with domestic investment although the relationship is not statistically significant.

However, the coefficient of the first period lag of real interest rate suggests that domestic investment in the current year is influenced by the real interest rate of the previous year, indicating the importance of putting previous year's real interest rate into consideration in the determination of the current level of domestic investment in Nigeria. This result contrast the findings of Aminu and Ogunjimi (2019), who showed that interest rate is a critical driver of domestic investment.

Similarly, the short-run and long-run coefficient of domestic credit to private sector is inconsistent with a priori expectation as it suggests that domestic investment plummets in the event of an increase in domestic credit to private sector. This result is counterintuitive as conventional knowledge suggests that an increase in financial credits to investors raises their investment potentials. However, this result suggests either of two things - domestic investors do not use financial credits for investment purposes or other macroeconomic conditions (such as high inflation, high tax rate and unfavourable government policies) erodes the financial credits. The two are probable in Nigeria given the prevailing business environment that does not necessarily support domestic investment. The statistical significance of the short-run coefficient of domestic credits to private sector shows that it is a major driver of investment in the short-run.

The error correction term, which shows the speed of adjustment from temporary disequilibrium towards long-run equilibrium, fulfils its required three conditions – negative, below unity in absolute term and statistically significant. It shows that the speed of adjustment for a shock to military spending, for example, to be corrected in the long-term is moderately fast at about 62.3 percent. In addition, the coefficient of determination (adjusted R-squared) shows that about 74.4 percent of the changes in domestic investment is explained by military spending, gross national income, real interest rate and domestic credits to private sector. More so, the statistical significance of the F-statistic suggests that military spending, gross national income, real interest rate and domestic credits to private sector jointly influence domestic investment in Nigeria. With regards to the model diagnostics, the results show that the null hypotheses of non-normality, heteroscedasticity, serial correlation and incorrect model specification are rejected. The stability test conducted using the cumulative sum (CUSUM) and cumulative sum (CUSUM) of squares of recursive residuals, shown in Figure 1, also signal that the model is stable. The results of the diagnostic tests show that the findings of the estimated model are reliable for policy prescriptions.

Table 4: ARDL Estimates

Short-Run Estimates		**Long-Run Estimates**	
Variables	**Coefficients**	**Variables**	**Coefficients**
DLOG(MLS)	-0.451* [0.0809]	LOG(MLS)	-0.072* [0.011]
DLOG(MLS(-1))	0.198* [0.0684]		
DLOG(GNI)	0.307* [0.0636]	LOG(GNI)	0.492* [0.1257]
D(RINT)	0.001 [0.0018]	RINT	-0.005 [0.0040]
D(RINT(-1))	0.003** [0.0014]		
D(DCPS)	-0.013*** [0.0071]	DCPS	-0.021 [0.0122]
ECT(-1)	-0.623* [0.1223]	C	13.591* [2.1097]
DIAGNOSTICS TESTS			
R-squared	0.806	Jarque-Bera Test	1.482 (0.4766)
Adjusted R-squared	0.744	Serial Correlation LM Test (Breusch-Godfrey)	3.860 (0.1495)
F-statistic	12.939 (0.0000)	Heteroskedasticity Test (ARCH)	0.796 (0.3723)
Durbin-Watson stat	2.393	Ramsey RESET Test	0.512 (0.4806)

Note: * p<0.01, ** p<0.05 and *** p<0.10. The values in parenthesis and block bracket are probability values and standard errors, respectively.
Source: Author's Compilation from Eviews10

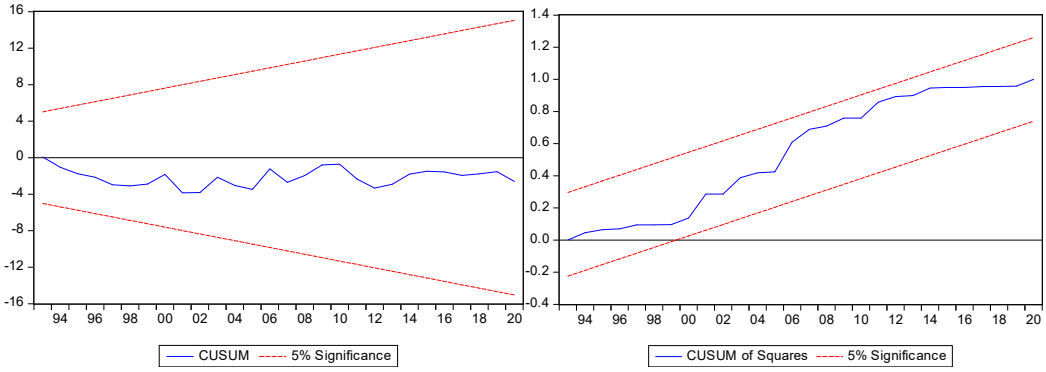

Figure 1: Stability Test

Source: Author's Compilation from Eviews10

5. Conclusion

The main focus of this study is the evaluation of the effects of military spending on domestic investment in Nigeria. In other words, this study answers the question of whether or not military spending crowd-out domestic investment in Nigeria. The ARDL estimator was employed to analyse annual time-series data of military spending and domestic investment, among other macroeconomic variables, for the period 1981-2021. Preliminary tests such as unit root test and cointegration were conducted before the main estimation and post-estimation tests were carried out afterwards. The result of the unit root shows a blend of stationary and non-stationary series, which satisfies the condition to employ the ARDL framework. The cointegration test result suggests the presence of long-run convergence among the variables considered. Accordingly, short-run and long-run ARDL estimates were generated to explain the effect of military spending on domestic investment in Nigeria. The main estimation results showed that military expenditure has a significant inverse relationship with domestic investment in Nigeria no matter the time dimension considered. This answers the main research question of this study, "Does military spending crowd-out domestic investment in Nigeria?", in the affirmative. Tacitly, the result confirms the crowding out effect hypothesis in Nigeria and indicates that effective management of military spending could influence the volume of domestic investment Nigeria can make to drive development imperatives. Further results showed that gross national income and real interest rate have positive effects on domestic investment in Nigeria while domestic credit to private sector affects domestic investment negatively.

These findings have implication for the Nigerian economy and presents empirical evidence policymakers can leverage to effectively manage military spending and domestic investment issues in Nigeria. First, the validity of the crowding out effect on investment by military spending signals that the Nigerian government and policymakers need to devise pragmatic ways of lowering military expenditure and judiciously using military budgetary allocations to make more financial resources available for investment purposes. Nigeria needs devise cost-effective strategies to tackle the growing menace of social unrests across the country. Second, policymakers need to put the current and present values of military spending into consideration in their design of policies to boost domestic investment in Nigeria. This is critical given the statistical significance of the lag values of the military spending variable. Despite the contribution of this study to the extant literature, the study has a few suggestions for future research. While this study employed aggregate military spending for its analysis, future research can explore breaking down military expenditure into recurrent and capital military expenditure to unveil the individual effect of these classes of military expenditure on investment in Nigeria. In addition, this study focused on the bivariate relationship between military spending and investment. Future study can extend the frontier of knowledge by accounting for the moderating role of institutional quality in the relationship between military spending and investment.

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