ISSN: 2997-2256

Research Article

Journal of Investment, Banking and Finance

Foreign Direct Investment and Military Expenditure in the Face of Terrorism: Evidence from Sub-Saharan Africa

Alhaji Kabiru[1,2*] and Mohd Naseem bn Niaz Ahmed[1]

[1]*School of Business and Economics, University Putra Malaysia, Malaysia*

[2]*Department of Economics, Shehu Shagari College of Education, Sokoto State, Nigeria*

[*]Corresponding Author
Alhaji Kabiru, School of Business and Economics, University Putra Malaysia, Malaysia. and Department of Economics, Shehu Shagari College of Education, Sokoto State, Nigeria.

Submitted: 2024, Aug 16; **Accepted:** 2024, Sep 06; **Published:** 2024, Sep 17

Citation: Kabiru, A., Ahmed, M. N. N. (2024). Foreign Direct Investment and Military Expenditure in the Face of Terrorism: Evidence from Sub-Saharan Africa. *J Invest Bank Finance, 2*(1), 01-13.

Abstract

This study examines the relationship between military expenditure and foreign direct investment (FDI) amid terrorism. The study used Mean Group, Pooled Mean Group, Dynamic Fixed Effect, and Panel Quantile estimations techniques on 23 terrorized countries in Sub-Sharan Africa from 1999 to 2019. The outcome of the estimate discovered that military expenditure in the absence of terrorism negates FDI flow. But, amid terrorism, military expenditure has a significant positive impact on FDI inflow. Also, the results show that the effect varies at different quantiles. The results are robust using death from terrorism attacks to measure terrorism on a different model. The study suggests that countries should desist from high military spending in the absence of terrorism to facilitate FDI flow. Countries in mid-life terrorism should enhance military spending and augment military strategy with other options to boost investors' confidence in the economy's high influx of FDI.

Keywords: Terrorism, Military Expenditure, Attacks, Death, and FDI

JEL Classification: C33, F21, F52, H53

1. Introduction

Foreign Direct Investment (FDI) is a critical factor in economic development and is thus a significant component of emerging economies' economic growth. As an essential tool for growth and development, the value of FDI to the developing world's economic growth is crucial [1]. However, to attract foreign investors' interest, a country must maintain a peaceful environment for the smooth running of business activities. A country with a higher level of terrorism is liable to lower FDI than countries with a lower level of terrorist activities. Sub-Saharan African countries have a significant number of terrorist attacks with the highest number of deaths due to terrorism, making it the most vulnerable region in the world [2]. Consequently, the slowest receiver of FDI; United Nations Conference on Trade and Development [3,4]. On the other hand, Europe, North America, China, and most Asian countries that are less vulnerable to terrorist activities, are amongst the largest beneficiaries of the FDI influx around the globe.

Therefore, national security is necessary for the continuous inflow of FDI to be assured. Under these circumstances, increased military expenditure is the usual tactical approach for counterterrorism. The military policy protects the state from the menace of terrorism and leads to other economic and commercial spin-offs, such as secure investor returns [5]. However, in neoclassical's parlance, the funds expended on the military are a distraction from the real productive sector. Neoclassicals held that military expenditure was devastating by diverting wealth from the real productive sector. Military spending refutes the provision of necessary infrastructures such as good highways, power supplies, education, and health services [6,7]. Similarly, rising military expenditure often warns foreign investors to stop investing in the country because they expect an armed conflict in the future [3]. Nevertheless, others argued that countries with a high terrorist activity benefit from increased military expenditure by attracting more foreign investment inflows [3]. Growing military expenditures help stabilize terrorized countries; it increases foreign investors' confidence in the expectation of a healthy investment return, which would lead to a high influx of foreign direct investment.

Equally, numerous studies justify the Neocla conviction that investment is depressed by military spending. Studies conducted by Ram (1995), Dunne, Nikolaidou and Smith (2002), Kentor and Kick, (2008), Künü, Hopoğlu and Bozma (2016) and Lee (2017) have shown that increased military expenditure includes the opportunity cost of an increase in government spending that crowds out investment [8-12]. Conversely, Kollias and

Paleologou (2010), Yildirim and Öcal (2014) and Karadam, Yildirim and Öcal (2017) have shown that military expenditure encourages investment through the transfer of technology and high demand for goods and services [13-15]. In contrast, studies steered by Mang and Kabaklarl (2016), Pieroni (2009) and Ram (1995) found no association between investment and military spending [8,16,17]. On the other hand, other empirical investigations have claimed that increasing military expenditure benefits the economy if the rise is associated with conflict. They opined that military counter-c operations could gain foreign investors' trust in the safe return on investment [3,18]. There is no consistency in the literature regarding the correlation between military spending and investment.

Moreover, despite the role of military expenditure in ensuring a stable and secure economy, in countries with a higher number of terrorist activities, literature relating to military spending and FDI inflows in the face of terrorism is scant for effective decision making. The existing literature examines the connection between foreign direct investment and military expenditure in the front of conflicts, which may be more or less problematic than terrorism. Against this backdrop, the objective of this study is to examine the joint impact of military expenditure and terrorism on foreign direct investment in Sub-Saharan Africa, using panel data of 23 Sub-Saharan African countries. This study adds to the body of knowledge in different ways. First, apart from panel ARDL, this study employs quantile regression to gather data on the asymmetric and non-monotonic impacts of the conditional variables on the dependent variable. It can account for the effect of military spending on the direction and quantity of foreign direct investment inflows at various quantiles [19]. Second, while observing the military spending-FDI nexus in terrorized countries, this study postulate that the conflicts data is not a good choice for interaction with military expenditure. Conflict may cost more or less than terrorism. As a result, this study examines the role of terrorism in mediating the effect of military expenditure-foreign direct investment using the number of terrorist attacks (rather than conflicts). Lastly, the study will help fill the literature gap on military spending and foreign direct investment in Sub-Saharan Africa's terrorized countries. The other sections of the paper are section 2, data and methodology, section 4, discussion of the result, and finally, the conclusion section.

2. Data and Methodology

2.1 Theoretical Model

Profit maximization (π) is the primary objective of international investors. Transnational companies' FDI is determined by capital and production costs. The efficiency of capital K for firm $i(AK_i^{\alpha})$ is positively influenced by the safe investment of *i*. using the AK model as described in Aziz and Khalid (2017) [3], Bandyopadhyay et al. (2014) [20] & Lee (2017) [18], a profit function is:

$$\pi_i = AK_i^{\alpha} - rK_i, \qquad A > 0, \alpha > 0 \qquad (1)$$

where the cost of capital is *r*. Symbolizing τ as the political risk owing to terrorism, equation (1) can be rewritten as:

$$\pi_i = A(1-\tau)K_i^{\alpha} - rK_i, \quad \tau > 0 \qquad (2)$$

Through increased military expenditure, technological innovation (A) will increase productivity levels by reducing political risk. Therefore, profit (π) is determined by τ (political risk due to terrorism). If τ goes up, π in the terrorized economies shift downward, and FDI inflow decreases. However, if an increase in the terrorized economy's military expenditure decreases τ adequately, the π will grow and increase the country's FDI inflow. In terrorized economies, the effect of high military spending can be:

$$\pi_i = A\big(1 + (\theta - \tau)\big)K_i^{\alpha} - rK_i, \quad \theta > 0 \qquad (3)$$

the θ is the security machinery that, due to military expenditure, decreases the rate of τ. In the terrorized nations, the increase in the θ decreases τ, and the Security machineries will attract foreign investors to enjoy economic benefits.

2.2 Empirical Model

A functional model for the modeling of the relationship between FDI and military expenditure is in line with the AK model and the work of [3,21,22].

$$FDI_{it} = f(MEX_{it}, NTA_{it}, GDP_{it}, HC_{it}, MRT_{it}) \qquad (4)$$

Drift parameters and error terms in equation four transforms into an econometric form:

$$FDI_{it} = \alpha + \beta_1 MEX_{it} + \beta_2 NTA_{it} + \beta_3 GDPG_{it} + \beta_4 EYS_{it} + \beta_4 MRT_{it} + \varepsilon_{it} \qquad (5)$$

in Equation 6 below, the interaction period for military expenditure and the number of terrorist attacks (MEX*NTA) examines the collective impact of terrorism (NTA) on the marginal effect of military spending on FDI.

$$FDI_{it} = \beta_1 + \beta_2 MEX + \beta_3 NTA + \beta_4 (MEX * NTA)_{it} + \beta_5 GDP_{it} + \beta_6 EYS_{it} + \beta_7 MRT_{it} + \varepsilon_{it} \qquad (6)$$

where FDI is the inflow of foreign direct investment, MEX is the military expenditure. NTA denotes the number of terrorist attacks , GDPG means GDP growth, EYS is the expected years of schooling, a proxy of human resources, and MR is mineral rent. Although subscript *t* stands for years and I stand for countries, the ε is a stochastic error word. In equation (6), if $\beta_2 < 0$ *but* $\beta_3 > 0$, we will settle that in the long run:

$$\frac{dfdi}{dmex} = \beta_2 + \beta_3 NTA > \beta_2$$

if the negative impact of military expenditure on FDI is reversed by higher defense outlays in terrorism-prone countries than in countries without terrorism.

2.3 Estimation

This research work is strategizing to test unit root, the Pesaran and Smith (1995) mean group (MG), the Pesaran, Shin, and Simith (1999) pooled mean group (PMG), dynamic fixed effect (DFE), and Panel quantile regression analysis [23,24]. Four different panel unit-root tests are conducted, including Levin-Lin-Chu (LLC), IM-Pesaran Shin, Fisher ADF, and Fisher PP tests. For the panel ARDL, the MG first estimates and then averages short-run and long-run parameters differently for each cross-sectional unit. The PMG retains the same long-run parameters across units. DFE maintains the usual assumption of homogeneity in slope parameters. The estimates from each restrictive alternative – PMG and DFE – are then compared to those from the non-restrictive case (MG) through the Hausman test. The PMG allows for the difference between the cross-sectional units of the dynamic specifications [25]. The DFE eliminates the two other fundamental problems by providing diagnostic details on the degree of heterogeneity of the panel, with no instrumental variables needed in the estimation. The methods are advantageous since the panel ARDL techniques can be used if the variables are I (0) or I (1) or both. One crucial point about PMG and MG models is their ability to control endogeneity problems by including good lags of all variables [24,26].

Panel quantile regression (PQR) estimates the nonlinearity in the connection between military expenditure and FDI. The study employs quantile regression to determine various military expenditure indicators [27]. The spread of military spending, which can be captured using a variety of quantiles, explains why the nonlinear approach was chosen. The PQR can show areas of unequal and nonlinear conditional variable effects on the dependent variable. It can also detect the impact of unanticipated changes in military expenditure on the signal and strength of foreign direct investment inflow across different quantiles [19]. The conditional mean function E(y|x) is used in regular linear regression procedures to recapitulate the average association between a set of independent variables (x) and the dependent variable (y). As this study examines the association at different points in the conditional spreading of foreign direct investment inflow, the quantile regression provides such capability in investigating the association between military expenditure and FDI inflow of terrorized economies.

2.4 Data

The data for the study consists of a panel of 23 countries spanning from 1999 to 2019 period. Data on FDI inflow percentage of GDP, GDP-growth rate, and minerals rent (MRT) are from the [28]. The data for military expenditure (MEX) percentage of GDP is from the Stockholm International Peace Research Institute [29]. The number of terrorist attacks (NTA) is drawn from [30]. The data for NTA is converted to a natural log. African Development Bank (ADB) offers information on the expected year of schooling. The 23 countries are selected based on data availability and the Global Terrorism Index (2015, 2017, 2019, 2020) ranking Sub-Saharan African countries as the most terrorized [2,31-33]. The countries range from highly terrorized to deficient terrorized countries. The countries include Angola, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Cote's d'Ivoire, Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Mali, Mozambique, Niger, Nigeria, Republic of Congo, Rwanda, Senegal, South Africa, Sudan, Tanzania, Uganda, and Zimbabwe.

MEX is to affect FDI by reducing the inflow of FDI negatively. Neo-classists argue that MEX negatively affects investment by diverting government spending from the real economic sector [3,34]. The studies argued that military expenditure is a diversion of the funds from real sectors of the economy. However, some studies say that the impact of MEX on FDI inflow could be positive. MEX can increase the employment level and raise aggregate demand. After that, foreign and domestic investors will find the economy attractive and pave the way for the high influx of FDI [35].

Also, the study predicts a negative relationship between the number of terrorist attacks (NTA) and FDI. It is evident that terrorism depressed foreign direct investment [18,21]. GDP is likely to affect FDI positively; it determines income per capita and the ability to pay for goods and services [36,37]. Human capital represented by the expected year of schooling (EYS) is to affect foreign direct investment positively. MEX*NTA is to have a positive impact on FDI. When MEX rises in terrorized economies, FDI will increase because military expenditure provides security to raise foreign investors' confidence and thus increase foreign direct investment inflows [3,38]. MRT shall likely attract more investors and thus influence FDI inflow positively. Bokpin, Mensah and Asamoah (2015); Suleiman, Kaliappan and Ismail (2015) opined that natural resources are the main factor attracting foreign investors to Africa [22,39].

3. Results and Discussion

Tables 1 and 2 show the descriptive statistics and correlation matrix. Tables 1a, b, and c present the descriptive statistics of all terrorized countries (model 1), very low terrorized countries (model 2), and the highest level of terrorism (model 3) in SSA. The correlation test findings for independent variables of models 1, 2, and 3 are reported in Table 2 in the form of a matrix. Given the range of absolute values (-0.0098 to 0.4193) in all the models, the study can conclude no multicollinearity issue between our explanatory variables based on the rule of thumb. These values fall below the 0.80 benchmarks.

Variables	Observations	Mean	St. Deviation	Min.	Max.
FDI	483	3.763851	9.001702	-36.56	98
MEX	483	1.905383	1.490026	.2	17.3
NTA	483	1.603115	4.87491	0	6.570883
GDPG	483	4.591843	3.972806	-36.39	33.63
MRT	483	1.297143	2.655839	0	20.51
EYS	483	9.148157	2.973194	.46	19.24

Table 1a: Descriptive Statistics of all Terrorized Countries

Variables	Observations	Mean	St. Deviation	Min.	Max.
FDI	168	3.991845	7.000932	-6.4	40.2
MEX	168	1.960119	1.677614	.6	17.3
NTA	168	.7872984	.8097533	0	3.73767
GDPG	168	4.109286	5.451109	-17.67	19.68
MRT	168	.5069643	.8437681	0	5.53
EYS	168	9.845298	2.681846	.46	19.24

Table 1b: Descriptive Statistics of very Low Terrorized Countries

Variables	Observations	Mean	St. Deviation	Min.	Max.
FDI	315	3.642254	9.91335	-36.56	40.2
MEX	315	1.87619	1.38158	.2	17.3
NTA	315	2.038217	1.696697	0	3.73767
GDPG	315	4.849206	4.526035	-36.39	19.68
MRT	315	1.718571	3.152212	2.13	5.53
EYS	315	8.776349	3.057056	.46	19.24

Table 1c: Descriptive Statistics of Highly Terrorized Countries in SSA

Variables	FDI	MEX	NTA	GDPG	MRT	EYS
Model 1. All terrorised countries in SSA						
FDI	1.0000					
MEX	0.0692	1.0000				
NTA	0.0652	0.0558	1.0000			
GDPG	0.1879	-0.1008	-0.0676	1.0000		
MRT	-0.0499	-0.1358	0.3121	0.0217	1.0000	
EYS	0.0957	-0.2409	0.1639	-0.0435	0.0424	1.0000
Model 2. Very low terrorized countries in SSSA						
FDI	1.0000					
MEX	0.4193	1.0000				
NTA	0.1089	0.2901	1.0000			
GDPG	-0.1248	0.1309	-0.0345	1.0000		
MRT	-0.1539	-0.1226	0.0916	-0.0899	1.0000	
EYS	-0.1563	-0.3399	-0.1525	-0.0098	-0.0229	1.0000
Model 3. Highly terrorized countries in SSA						
FDI	1.0000					
MEX	-0.0879	1.0000				
NTA	0.0736	0.0116	1.0000			

GDPG	0.3406	-0.0744	-0.1348	1.0000		
MRT	-0.0383	-0.1601	0.2679	0.0237	1.0000	
EYS	0.1770	-0.2027	0.3500	-0.0444	0.1031	1.0000

Table 2: Correlation Matrix

A unit root test is carried out to determine how the variables are integrated. Based on estimates using Levin Lin & Chu, IM Pesaran Shin. ADF Fisher and PP Fisher indicate that the variables are a mixture of I(0) and I(1) suitable for the ARDL application panel (See Appendix 1). Table 3 present the empirical results for model1 (all terrorized countries), model 2 (low and very low terrorized counties), and model 3 for countries with a very high impact of terrorism. The table shows the combined Hausman test results and the related p-values of the parameters. The results established that the Hausman test fails to oppose the long-run homogeneity constraint at conventional significance levels, confirming the PMG estimation's suitability in all models. The values are greater than 0.05, and thus, the PMG is prescribed. However, the study has estimates of MG and DFE in the table, but we report only the PMG. The long-run coefficient for military expenditure (MEX) in the PMG model has a significant negative impact on FDI in all the models. MEX is not an essential determinant of FDI in the SSA terrorized countries in the short run. The outcome suggests that the rise in military expenditure in the countries under study negatively affected FDI inflow. The study finding aligns with the neoclassical's view that military expenditure crowd-out investments [3,34]. The low inflow could be due to the diversion of economic resources (supposedly used for providing basic infrastructures that will facilitate the inflow of FDI) from the real sector of the economy to the defense sector. Moreover, others argued that high military expenditure in free-conflict countries could cause a fear of future arms conflicts, hindering foreign capital flow from abroad [3,40]. The anxiety over safe return from investment could negate the inflow of foreign direct investment in the economy that spends hugely on defense without issues of terrorism or conflicts.

Although the terrorism coefficient (NTA) is a negative and significant determinant of FDI in the long run for models 1 and 3, the terrorist attack is not an essential determinant of FDI in the countries with low terrorist activities (model 2). In the short run, the effect of NTA on FDI is insensitive in both models. This shows that terrorist activities affect the inflow of FDI in countries with high levels of terrorism. It is in line with the expectation that terrorism will negate the inflow of FDI in the terrorised states. Also, to examine the joint effect of military expenditure and terrorism on FDI, the study introduced the interaction of military expenditure and the number of terrorist attacks (MEX*NTA). The long-run result of the interaction term revealed that the negative effect of MEX is overturned to positive by MEX*NTA. The coefficient values showed that the interaction terms are positive and significant in models 1 and 3. But, the values are irrelevant in countries with a shallow level of terrorism. This showed that amid terrorism, military expenditure could boost the confidence of foreign investors to invest in the economy. This agrees with the findings of Aziz and Asadullah (2017); Lee (2017) that military expenditure amid conflicts affected foreign direct investment positively [12,40]. Li (2006); Nigh (1985) also stated that when preparing to invest abroad, foreign investors do not only consider the basic structures of the host country but are also concerned with the assurance of a safe return on investment, which led to concerns on political uncertainty [41,42].

The other explanatory variables, such as GDP-growth (GDPG), mineral rent (MRT), and expected years of schooling (EYS), are statistically significant determinants of foreign direct investment in the long run for both models. This is consistent with the theory and empirical findings. For example, Mah (2010); Boateng et al., (2015); Suleiman, Kaliappan and Ismail (2015) discoursed that economic growth supports foreign direct investment influx [36,37,39]. They alleged that level of income is an essential determinant of FDI inflow despite terrorism challenges. Regarding the mineral rent, Bokpin et al. (2015) Suleiman [22]. kalliappan and Ismail (2015) reported a significant positive effect of natural resources on FDI In Sub-Saharan Africa [39]. The studies settled that mineral resources are the main factor attracting FDI inflow in the region. Also, Miningou and Tapsoba (2020) opined that education level (proxied by expected years of schooling) enhances foreign direct investment inflow [43]. Moreover, in line with the rule of thumb, all the models' error correction terms are statistically significant, negative, and less than1. This also shows the rate of convergence adjustment to long-term equilibrium.

Independent Variable	Model 1: All terrorized countries in SSA			Model 2: Very low terrorized countries in SSA			Model 3: Highly terrorized countries in SSA		
	MG	PMG ARDL 1,2,2,1,2,1	DFE	MG	PMG ARDL 1,0,2,1,2.1	DFE	MG	PMG ARDL 1,2,2,1,2,1	DFE
Long-run coefficients									
MEX	-2.540(-1.66)*	-0.221(-2.58)**	0.664(0.45)	-1.500(1.57)	-5.361(3.85)***	0.766(0.55)	-1.213(-0.99)	-1.949(-6.02)***	-1.076(-1.76)*
NTA	-9.436(-1.41)	-0.303(-2.29)**	2.759(2.56)*	-1.689(-1.49)	-0.218 (0.50)	-1.622(-1.05)	-7.097(-1.08)	-.285(3.18)***	-0.917(-2.11)**
MEX*NTA	1.611(-1.75)*	0.350(3.17)***	0.213(0.26)	3.051(2.05)**	1.62(1.09)	-0.425(-0.49)	6.931(1.02)	0.620(3.97)***	0.064(0.18)
GDPG	2.287(1.10)	0.009(2.88)***	0.072(0.23)	0.868(1.63)	0.621(4.90)***	0.043(-0.28)	2.042(1.85)*	0.139(2.27)**	0.368(2.35)**
EYS	2.535(0.92)	0.431(1.97)**	0.109(0.20)	-2.248(-1.50)	0.303(8.96)***	0.079(0.22)	-0.896(-0.38)	0.633(9.61)***	0.290(0.98)
MRT	-4.788(-0.80)	0.105(2.15)**	-0.465(0.63)	-1.460(-0.93)	0.349(2.98)***	-0.569(-0.44)	3.950(0.93)	0.227(3.85)***	0.038(0.15)
Speed of adjustment (ECT)	-0.572(-2.52)**	-0.245(-2.88)***	-0.282(-6.30)***	-0.604(-3.82)***	-0.288(-2.78)***	-0.425(-7.75)***	-0.607(-1.78)*	-0.902(-5.32)***	-0.974(-4.85)***
Short-run Coefficients									
Δ MEX	-2.819(-1.76)*	-0.949(-1.59)	0.029(0.10)	2.349(1.82)*	0.196(0.48)	2.163(4.41)***	-1.033(-0.91)	-0.290(-0.15)	1.320(1.48)
Δ NTA	-0.461(-1.05)	-0.585(-1.47)	0.042(0.20)	1.343(1.72)*	0.196(0.48)	2.163(4.41)***	-1.176(-1.04)	-0.124(0.16)	0.068(0.22)
MEX*NTA	1.075(0.65)	0.083(0.18)	0.641(4.46)***	0.434(2.22)**	0.521(1.74)	1.305(8.87)***	-3.019(-1.09)	-1.787(-0.88)	0.053(0.13)
ΔGDPG	0.962(1.22)	0.421(3.87)***	0.352(4.89)***	-0.023(-1.06)	-0.063(-1.40)	-0.017(-0.51)	-3.920(-0.77)	0.568(4.06)***	0.573(4.71)***
Δ EYS	0.232(0.15)	1.764(1.68)	0.412(0.64)	5.463(0.75)	4.231(0.94)	-0.243(-0.11)	1.142(0.23)	-1.915(-1.63)	-0.586(-0.48)
Δ MRT	-8.578(-0.29)	6.643(1.73)*	0.410(1.04)	1.912(1.04)	8.470(1.01)	-0.066(0.16)	-1.181(-0.95)	-1.384(-0.52)	0.252(0.66)
CONSTANT	-0.056(-0.01)	0.368(3.07)***	-0.499(-0.28)***	3.861(1.65)*	2.045(2.76)***	3.635(2.86)**	-4.190(-1.86)**	0.645(3.61)***	-0.858(.31)
Hausman Test	0.79(0.9923)		0.77(0.9929)	6.38(0.1119)		3.23(0.7801)	1.41(0.9650)		1.89(0.9895)
No. of countries	23	23	23	8	8	8	15	15	15
Observations	437	437	437	144	144	144	285	285	285

Note: The dependent variable is Foreign Direct Investment. Figures outside the parenthesis are the Z-values while those in the parenthesis are p-values. *** and ** represents 1% and 5% significant levels respectively.

Table 3: Panel ARDL Regression for the Terrorized Countries in SSA

3.1 Marginal Effect

The marginal effect of military expenditure on foreign direct investment was measured at various levels of terrorist attacks, at mean, minimum, and maximum. The mean level of model 1 (all countries) and model 3 (countries with a high level of terrorism) demonstrate a significant positive effect. The outcomes revealed 1% change in military expenditure is associated with an increase of 0.07% foreign direct investment inflow in all terrorized countries and the countries with a higher level of terrorism in the SSA. The mean result of the countries with low terrorism is not significant. At the median and maximum level, 1% changes in military expenditure would lead to an increase in FDI by approximately 0.06% and 0.08%, respectively, except for the countries with a low level of terrorism.

Interaction	Model	Marginal Effect	Coefficient
MEX*NTA	All countries	Mean	0.0665 *** (0.043)
		Median	0.0572** (0.523)
		Maximum	0.0756*** (0.143)
MEX*NTA	Very low terrorized countries	Mean	0.1605(0.025)
		Median	-1.054 (0.034)
		Maximum	0.0763 (0.261)
MEX*NTA	Highly terrorized countries	Mean	0.0681 *** (0.059)
		Median	0.0567 *** (0.096)
		Maximum	0.0791*** (0.072)

Notes: parentheses are standard errors. *, ** and *** indicates significant at 10%, 5% and 1% respectively.

Table 4: Marginal Effect of the Interaction Terms between Military Expenditure and Number of Terrorist Attacks on Foreign Direct Investment

3.2 Panel Quantile Regression

Tables 5, 6, and 7 show the panel quantile regression results. The outcome confirmed that the negative impact of the military expenditure differs noticeably and has a substantial effect on foreign direct investment at higher (75th and 90th percentiles). This empirical finding shows that the result is much stronger at higher quantiles. The variable specifying number of terrorist attacks also reveals a similar pattern of strong negative effect

at the higher quantile, except for the panel of countries with very low impact of terrorism (Table 6), which is statistically not significant at different quantiles. The coefficient of the interaction term of military expenditure and number of terrorist attacks (MEX*NTA) is positive and powerful in all terrorized countries (Table 5) and the panel of countries with a high level of terrorism (Table 7). Thus, when there is increased military expenditure amid terrorism. With high military spending, terrorized countries would gain the confidence of Foreign investors,' and thus, the FDI will increase [3]. However, the effect differs at different quantiles, with a strong impact at the highest quantile. The impact of the interaction term (MEX*NTA) appeared insignificant at all quantiles in the countries with a very low level of terrorism in table 6. Similarly, the expected years of schooling and mineral rents are positive and significant in all the panels. The estimated variables disclose that higher quantiles levels of the coefficients have the highest values in line with the literature, where better human and material resources promote foreign direct investment inflow.

The marginal effect where the number of terrorist attacks is evaluated at the minimum level shows an insignificant result throughout the quantiles in all the models. At the mean level, findings reveal a significant positive effect in the 10th, 25th, 75th, and 90th quantiles in all countries and countries with a higher level of terrorism. However, the results demonstrate the most elevated significance at the higher quantiles (75th and 90th). The mean result for the countries with a low level of terrorism is insignificant. At the maximum level, the marginal effect is positive with a higher level of significance at the highest percentile (75% and 90%) in all countries and countries with a higher level of terrorism. The outcome submits that military expenditure would enhance foreign direct investment inflow if countries face a higher level of terrorist activities. This is in line with our expectations and findings [3,18].

Independent Variable	Panel Quantile Regression			
	Q-10	**Q-25**	**Q-75**	**Q-90**
MEX	-0.342	-0.050	-0.178	-0.342
	(-0.78)	(-1.84) *	(-2.19) **	(-3.63) ***
NTA	-0.022	-0.048	-0.205	-0.241
	(-1.25)	(-1.89) *	(-2.80) ***	(5.72) ***
MEX*NTA	0.009	0.081	0.291	0.568
	(1.73) *	(2.05) **	(3.94) ***	(7.15) ***
GDPG	0.762	0.379	0.275	0.501
	(5.90) ***	(2.69) ***	(3.08) ***	(2.83) ***
EYS	0.191	0.157	0.313	0.084
	(2.32) **	(8.86) **	(8.22) ***	(5.05) ***
MRT	0.067	0.084	0.066	0.180
	(1.83) *	(1.72) *	(1.98) **	(5.98) ***
No. of countries	23	23	23	23
Observations.	483	483	483	483
Marginal Effect				
Mean	0.0765**	0.4302***	0.2245***	0.0323**
Median	0.0533	0.2522	0.1411	0.0524
Maximum	0.3113	0.6201*	0.2331**	0.0032**

Notes: The dependent variable for the panel quantile is FDI. The figures in parenthesis are the t-values. ***, ** and * represent 1%, 5% and 10% levels respectively.

Table 5: Panel Quantile Regression Result for all Countries

Independent Variable	Panel Quantile Regression			
	Q-10	**Q-25**	**Q-75**	**Q-90**
MEX	-0.342	-0.050	-0.178	-0.342
	(-1.78) *	(-1.84) *	(-2.19) **	(-3.63) ***
NTA	0.022	-0.048	-0.205	-0.241
	(0.25)	(-0.87)	(-1.23)	(-1.42)
MEX*NTA	0.009	0.081	0.291	0.568
	(0.33)	(1.05)	(1.44)	(1.45)
GDPG	0.762	0.379	0.275	0.501
	(2.90) ***	(3.69) ***	(3.08) ***	(2.83) ***
EYS	0.191	0.157	0.313	0.084
	(1.82) *	(3.22) **	(3.45) ***	(4.05) ***
MRT	0.067	0.084	0.066	0.180
	(1.78) *	(1.76) *	(2.02) **	(3.96) ***
No. of countries	8	8	8	8
Observations.	168	168	168	168
Marginal Effect				
Mean	0.1023	0.2377	0.6005	0.3405
Median	0.0031	0.0352	0.0211	-0.0401
Maximum	0.4211	0.0621	0.3015*	0.0722

Notes: The dependent variable for the panel quantile is FDI. The figures in parenthesis are the t-values. ***, ** and * represent 1%, 5% and 10% levels respectively.

Table 6: Panel Quantile Regression Result for Countries with a Low Level of Terrorism

Independent Variable	Panel Quantile Regression			
	Q-10	**Q-25**	**Q-75**	**Q-90**
MEX	-0.207	-0.79	-0.72	-0.182
	(-0.28)	(-2.37) **	(-2.38) **	(-3.49) ***
NTA	-0.022	-0.021	-0.214	-0.809
	(-1.25)	(-1.98) *	(-2.43) **	(3.52) ***
MEX*NTA	0.009	0.011	0.203	0.572
	(1.73) *	(2.35) **	(2.75) ***	(5.08) ***
GDPG	0.762	0.126	0.688	0.015
	(5.90) ***	(3.12) ***	(9.95) ***	(4.56) ***
EYS	0.191	0.163	0.205	0.106
	(2.32) **	(2.43) **	(3.71) ***	(2.45) ***
MRT	0.067	0.607	0.118	0.634
	(1.83) *	(1.98) **	(2.23) ***	(2.90) ***
No. of countries	15	15	15	15
Observations.	315	315	315	315
Marginal Effect				
Mean	0.0035*	0.1437**	0.0215***	0.0232***
Median	0.0814	0.6542	0.1226	0.0016
Maximum	0.1852*	0.0581**	0.0203***	0.52524***

Notes: The dependent variable for the panel quantile is FDI. The figures in parenthesis are the t-values. ***, ** and * represent 1%, 5% and 10% levels respectively.

Table 7: Panel Quantile Regression Result for Countries with a High Level of Terrorism

3.3 Robustness Checks

while examining the robustness of the results, this study estimated different models using the deaths from terrorist attacks (DTA) as a measure of terrorism instead of terrorist attacks (NTA). The Hausman test result of the robust model also supported PMG; hence, we reported PMG results in Table 8. The table presents

the PMG(NTA) comparison with PMG(DTA) for all the models. The outcome discovered that all the PMG variables (DTA) are significant and rightly signed in PMG(NTA). Most importantly, the long-run coefficients of terrorism (NTA and DTA) are substantial and similarly marked, as expected in all the models.

Independent Variable	Model 1: All Countries		Model 2: Very low terrorized Countries		Model 3: Highly terrorized Countries	
	PMG(NTA) ARDL 1,2,2,1,2,1	PMG(DTA) ARDL 1,2,2,0,1,1	PMG(NTA) ARDL 1,0,2,1,2.1	PMG(DTA) ARDL 1,2,2,0,0,1	PMG(NTA) ARDL 1,2,2,1,2,1	PMG(DTA) ARDL 1,2,2,1,1,1
MEX	-0.221(-2.58)**	-0.762(-3.79)***	-5.361(3.85)***	-0.986(-1.74)*	-1.949(-6.02)***	-2.035(-7.48)***
NTA/DTA	-0.303(-3.29)***	-0.279(-3.24)***	-0.218 (0.50)	-0.023(-0.75)	-0.285(2.18)**	-0.514(-5.41)***
MEX*NTA / MEX*DTA	0.350(3.87)	0.374(5.09)***	1.62(1.09)	0.306(1.41)	0.620(3.17)***	0.827(4.49)***
GDPG	0.009(0.88)	1.691(1.94)*	0.621(4.90)***	0.748(2.03)**	0.139(1.77)*	0.138(2.35)
EYS	0.431(11.07)***	0.227(6.62)***	0.303(8.96)***	0.422(4.93)***	0.633(9.61)***	0.032(0.44)
MRT	0.005(0.15)	0.027(0.43)	0.349(2.98)***	0.660(5.09)***	0.227(3.85)***	0.177(3.46)***
Speed of adjustment (ECT)	-0.245(-2.88)***	-0.308(-3.15)***	-0.288(-2.78)***	-0.781(-2.24)**	-0.902(-5.32)***	-0.967(-5.26)***
Short-run Coefficients						
Δ MEX	-0.949(-1.59)	-0.133(-0.32)	0.196(0.48)	-1.127(-0.68)	-0.290(-0.15)	-0.600(-0.34)
Δ NTA/DTA	-0.585(-1.47)	-0.357(-0.79)	0.196(0.48)	0.287(0.78)	-0.124(0.16)	2.363(1.71)*
MEX*NTA/MEX*DTA	0.083(0.18)	-0.135(-0.75)	0.521(1.74)	0.059(0.16)	-1.787(-0.88)	0.516(0.84)
ΔGDPG	0.421(3.87)***	0.489(3.92)***	-0.063(-1.40)	0.044(0.92)	0.568(4.06)***	0.681(4.94)***
Δ EYS	1.764(1.68)	0.322(0.78)	4.231(0.94)	4.734(0.95)	-1.915(-1.63)	-1.406(-1.27)
Δ MRT	-6.643(-1.73)*	3.860(0.77)	8.470(1.01)	7.454(-1.00)	-1.384(-0.52)	9.418(0.83)
CONSTANT	0.368(3.07)***	0..293(3.91)***	2.045(2.76)***	7.221(2.39)**	0.645(3.61)***	4.895(3.38)***
No. of countries	23	23	8	8	15	15
Observations	414	414	152	152	285	285

Table 8: Comparison of PMG (NTA) Models and PMG (DTA) Models

4. Conclusion

The study examines the premise that in the absence of terrorist attacks, high military expenditure decreases foreign direct investments inflow, while amid terrorism, increased military spending will ensure an increased influx of foreign direct investment in the terrorized countries. Using a panel of 23 terrorized countries in Sub-Saharan Africa between 1999 to 2019 on MG, PMG, and DFE estimations and panel quantile regression. The study focally reports PMG estimation as suggested by the Hausman test against MG and DFE and panel quantile estimation. The results revealed that the negative effect of military expenditure on FDI inflow is upturned positive by interaction terms of military spending and terrorism in the sample countries, except the group of countries with the low level of terrorism. Moreover, the quantile estimations reveal that the effect differs significantly at different quantiles. The marginal effect is estimated at the mean, minimum and maximum value based on the computed standard error. It shows a significant marginal impact, especially at the mean and maximum value, not at the minimum level.

The outcome is attributed to the fact that higher military spending denies countries the ability to provide economic and physical infrastructures and thus demotivates foreign investors' interest in investing in the said economy. Others opined that high defense spending signifies a risky return on investment owing to a possible security threat. In such a situation, foreign investors are afraid to invest in that country. However, amid terrorism, high military spending could boost the confidence of the investors to invest in the countries with the assurance of a safe return on investments. The study also robust-checked the result using a different measure of terrorism than the primary measure used. The study recommends that the government and policymakers desist from excessive spending on military hardware in the absence of terrorism or conflicts to encourage FDI flow into the countries. However, in the presence of terrorist activities, nations are recommended to expand their military expenditures and augment the military strategy with other options to attract more FDI inflow.

References

1. Alzaidy, G., Ahmad, M. N. B. N., & Lacheheb, Z. (2017). The impact of foreign-direct investment on economic growth in Malaysia: The role of financial development. *International Journal of Economics and Financial Issues, 7*(3), 382-388.
2. Global Terrorism Index. (2020). Measuring the impact of Terrorism. Global Terrorism Index.
3. Aziz, N., & Khalid, U. (2017). Armed conflict, military expenses and FDI inflow to developing countries. *Defence and Peace Economics, 30*(2), 238-251.
4. United Nations Conference on Trade and Development (UNCTAD). (2019). World Investment Report 2019. United Nations Publication, June, 1–237.
5. Deger, S. and, & Sen, S. (1983). The effect of miiitary expenditure on economic. *Journal of Development Economics, 13,* 67–83.
6. Deger, S., & Smith, R. (1983). Military expenditure and growth in less developed countries. *Journal of conflict resolution, 27*(2), 335-353.

7. Smith, R. P. (1980). The demand for military expenditure. *The Economic Journal, 90*(360), 811-820.
8. Ram, R. (1995). Defense expenditure and economic growth. *Handbook of defense economics, 1*, 251-274.
9. Dunne, J. P., Nikolaidou, E., & Smith, R. (2002). Military spending, investment and economic growth in small industrialising economies. *South African Journal of Economics, 70*(5), 789-808.
10. Kentor, J., & Kick, E. (2008). Bringing the military back in: Military expenditures and economic growth 1990 to 2003. *Journal of World-Systems Research, 14*(2), 142–172.
11. Künü, S., Hopoğlu, S., & Bozma, G. (2016). Conflict, defense spending and economic growth in the middle east: A panel data analysis. *International Journal of Economics and Financial Issues, 6*(1), 80-86.
12. Lee, C. Y. (2017). Terrorism, counterterrorism aid, and foreign direct investment. *Foreign Policy Analysis, 13*(1), 168-187.
13. Kollias, C., & Paleologou, S. M. (2010). Growth, investment and military expenditure in the European Union-15. *Journal of Economic Studies, 37*(2), 228-240.
14. Yildirim, J., & Öcal, N. (2014). Military expenditures , economic growth and spatial spillovers. *Defence and Peace Economics, 27*(1), 37–41.
15. Yolcu Karadam, D., Yildirim, J., & Öcal, N. (2017). Military expenditure and economic growth in Middle Eastern countries and Turkey: a non-linear panel data approach. *Defence and Peace Economics, 28*(6), 719-730.
16. Mangır, F., & Kabaklarlı, E. (2016). Defence Expenditures and Economic Growth Nexus: A Panel Data Analysis. *Economic Insights-Trends & Challenges, 68*(1).
17. Pieroni, L. (2009). Military expenditure and economic growth. *Defence and peace economics, 20*(4), 327-339.
18. Lee, H. (2017). Does armed conflict reduce foreign direct investment in the petroleum sector?. *Foreign policy analysis, 13*(1), 188-214.
19. Law, S. H., Sarmidi, T., & Goh, L. T. (2020). Impact of innovation on economic growth: Evidence from Malaysia. *Malaysian Journal of Economic Studies, 57*(1), 113-132.
20. Bandyopadhyay, S., Sandler, T., & Younas, J. (2014). Foreign direct investment, aid, and terrorism. *Oxford Economic Papers, 66*(1), 25-50.
21. Bandyopadhyay, S., Sandler, T., & Younas, J. (2014b). Foreign direct investment, aid, and terrorism. *Oxford Economic Papers, 66*(1), 25-50.
22. Bokpin, G. A., Mensah, L., & Asamoah, M. E. (2015). Foreign direct investment and natural resources in Africa. *Journal of Economic Studies, 42*(4), 608-621.
23. Pesaran, M. H., Smith, R. (1995). New Direction in Applied Macroeconomics Modelling. *Department of Applied Economics* University of Cambridge.
24. Pesaran, M. H., Shin, Y. and, & Simith, R. . (1999). Pooled Mean Group of Dynamic Hetrogeneous Panels. *Journal of the American Statistical Association, 446*, 621–634.
25. Baltagi, B. H., & Kao, C. (2001). Nonstationary panels, cointegration in panels and dynamic panels: A survey. In *Nonstationary panels, panel cointegration, and dynamic panels* (pp. 7-51). Emerald Group Publishing Limited.
26. Asteriou, D., Pilbeam, K., & Pratiwi, C. E. (2021). Public debt and economic growth: panel data evidence for Asian countries. *Journal of Economics and Finance, 45*(2), 270-287.
27. koenker, R. (2005). Quantile Regression. *Cambridge University Press.*
28. World Bank. (2020). World development indicators.
29. Stockholm International Peace Research Institute (SIPRI). (2020). Military expenditure by country as percentage of gross domestic product, 1988-2019. Data for all countries from 1988–2019 as a share of GDP.
30. Global Terrorism database. (2019).
31. Global Terrorism Index. (2015). Measuring The Impact of Terrorism. Institute for Economics and Peace.
32. Global Terrorism Index. (2017). Measuring and Understanding The Impact of Terrorism. In *Institute for Economics and Peace.*
33. Global Terrorism Index. (2019). Measuring the Impact of Terrorism.
34. Ebire, K., Onmonya, O., & Inim, V. E. (2018). Effects of the determinants of foreign direct investment in Nigeria: Error correction mechanism. *Asian Journal of Economics and Empirical Research, 5*(2), 155-164.
35. Faini, R., Annez, P., & Taylor, L. (1984). Defense spending, economic structure, and growth: Evidence among countries and over time. *Economic development and cultural change, 32*(3), 487-498.
36. Mah, J. S. (2010). Foreign direct investment inflows and economic growth of China. *Journal of Policy Modeling, 32*(1), 155-158.
37. Boateng, A., Hua, X., Nisar, S., & Wu, J. (2015). Examining the determinants of inward FDI: Evidence from Norway. *Economic Modelling, 47,* 118-127.
38. Landau, D. (1996). Is one of the 'peace dividends' negative? Military expenditure and economic growth in the wealthy OECD countries. *The Quarterly Review of Economics and Finance, 36*(2), 183-195.
39. Suleiman, N. N., Kaliappan, S. R., & & Ismail, N. W. (2015). Determinants of foreign direct investment: Empirical evidence from Southern Africa Customs Union (SACU) countries. *International Journal of Economics and Management, 9*(1), 1–24.
40. Aziz, N., & Asadullah, M. N. (2017). Military spending, armed conflict and economic growth in developing countries in the post-Cold War era. *Journal of Economic Studies, 44*(1), 47-68.
41. Li, Q. (2006). Chapter 11 Political Violence and Foreign Direct Investment. *Research in Global Strategic Management, 12*, 225–249.
42. Nigh, D. (1985). The effect of political events on United States direct foreign investment: A pooled time-series cross-sectional analysis. *Journal of International Business Studies, 16*, 1-17.
43. Miningou, E. W., & Tapsoba, S. J. (2020). Education systems and foreign direct investment: does external efficiency matter?. *Journal of applied economics, 23*(1), 583-599.

Appendix 1: Panel Unit Root Test Result all Terrorised Countries in SSA

Variables	Statistics	Constant	Constant & Trend	Constant	Constant & Trend
FDI	LLC	-4.0823 (0.0000)***	-4.6341 (0.0000)***	-10.7424 (0.0000)***	-7.5859 (0.0000)***
	IPS	-2.8125 (0.0025)***	-2.7812 (0.0027)***	-12.2409 (0.0000)***	-8.9886 (0.0000)***
	FDF	-3.5680 (0.0000)***	-3.4046 (0.0005)***	-18.5510 (0.0000)***	-12.8827 (0.0000)***
	FPP	-7.9901 (0.0000)***	-9.6733 (0.0000)***	-16.2705 (0.0000)	-18.7475 (0.0000)***
MEX	LLC	-2.9614 (0.0015)**	-4.0764 (0.0000)***	-10.3792 (0.0000)***	-8.6629 (0.0000)***
	IPS	-1.5863 (0.0563)*	-0.9319 (0.1757)**	-8.6629 (0.0000)***	-10.1882 (0.0000)***
	FDF	-2.6572 (0.0045)***	-2.5467 (0.0061)***	-14.6615 (0.0000)***	-12.2598 (0.0000)***
	FPP	-11.2325 (0.0000)***	-6.6916 (0.0080)***	-30.8866 (0.0000)	-27.8428 (0.0000)***
NTA	LLC	0.0599 (0.5239)	-2.2680 (0.0117)**	-10.0149 (0.0000)***	-8.2694 (0.000)**
	IPS	0.6819 (0.7523)	-0.6887 (0.2455)	-10.8068 (0.0000)***	-8.7638 (0.0001)***
	FDF	-0.5887 (0.2786)	-1.8139 (0.0362)**	-15.2892 (0.0000)***	-12.7511 (0.0000)***
	FPP	-3.4769 (0.0004)**	-4.7101 (0.0000)	-38.0727 (0.0000)***	-33.7030 (0.0000)***
EYS	LLC	0.7532 (0.7743)	-3.9000 (0.0000)***	-2.8506 (0.0022)***	-3.0461 (0.0012)**
	IPS	4.1424 (1.0000)	1.6573 (0.9513)	-1.7867 (0.0370)**	-1.1678 (0.0001)***
	FDF	3.9145 (0.9999)	0.4527 (0.6712)	-2.2727 (0.0124)**	-1.2400 (0.0056)**
	FPP	-1.7156 (0.0445)**	1.4843 (0.9298)	-19.7416 (0.0000)***	-14.9835 (0.0000)***
MRT	LLC	-2.3310 (0.0018)**	-1.5896 (0.0323)**	-5.6088 (0.0000)***	-7.5686 (0.0000)***
	IPS	-5.4945 (0.0000)***	-5.1166 (0.0001)***	-12.6006 (0.0000)***	-14.4428 (0.0000)***
	FDF	-4.3385 (0.0000)***	-8.4356 (0.0000)***	-22.8504 (0.0000)***	-16.5765 (0.0000)***
	FPP	-12.7762 (0.000)***	-13.2021 (0.0000)***	-18.0857 (0.0000)***	-2.3647 (0.0000)***
GDPG	LLC	-6.1121 (0.0000)***	-6.5255 (0.0000)***	-12.0629 (0.0000)***	-8.5972 (0.0000)***
	IPS	-5.4945 (0.0000)***	-5.1166 (0.0001)***	-14.5096 (0.0000)***	-11.3428 (0.0000)***
	FDF	-6.9355 (0.0000)***	-6.3350 (0.0000)	-22.5516 (0.0000)***	-16.5746 (0.0000)***
	FPP	-16.2766 (0.000)***	-15.3031 (0.0000)***	-55.0857 (0.0000)***	-48.3647 (0.0000)***

Note: The figures outside the parenthesis are the t-statics values while those in the parenthesis are p-values. *** and ** represents 1% and 5% significant levels respectively.

Appendix 2: Panel Unit Root Test Result for Very Low Terrorized Countries in SSA

Variables	Statistics	Level I(O)		First difference I(1)	
		Constant	Constant & Trend	Constant	Constant & Trend
FDI	LLC	-0.6676 (0.2522)	-1.2199 (0.1112)	-5.1140 (0.0000)***	-3.2277 (0.0000)***
	IPS	0.2351 (0.5929)	-0.3948 (0.3465)	-6.9342 (0.0000)***	-5.0214 (0.0000)***
	FDF	0.3641 (0.6412)	-0.4776 (0.3176)	--10.1629 (0.0000)***	-6.9647 (0.0000)***
	FPP	-2.6196 (0.0060)***	-5.5655 (0.0000)***	-32.1380 (0.0000)***	-26.5248 (0.0000)***
MEX	LLC	-0.8408 (0.2002)	-0.0520 (0.4793)	-12.2747 (0.0000)***	-9.9443 (0.0000)***
	IPS	-0.9635 (0.1676)	-0.1305 (0.4481)	-4.3668 (0.0000)***	-3.2366 (0.0006)***
	FDF	-1.0832 (0.1423)	-0.1032 (0.4591)	-5.8344 (0.0000)***	-4.2134 (0.0001)***
	FPP	-11.9142 (0.0000)***	-9.5171 (0.0000)***	-24.1770 (0.0000)	-22.1111 (0.0000)***
NTA	LLC	-3.4172 (0.0003)***	-2.4404 (0.0073)**	-6.7939 (0.0000)***	-5.4014 (0.000)***
	IPS	-3.0882 (0.0010)	-1.2455 (0.1065)	-6.9682 (0.0000)***	-5.5711 (0.0001)***
	FDF	-3.8081 (0.0000)	-1.6097 (0.0573)*	-9.9312 (0.0000)***	-7.7217 (0.0000)***
	FPP	-6.4576 (0.0004)***	-3.8846 (0.0002)***	-24.8633 (0.0000)***	-20.1126 (0.0000)***
GDPG	LLC	-2.6387 (0.0042)***	-3.0782 (0.0010)***	-7.5529 (0.0000)***	-5.8199 (0.0000)***
	IPS	-3.0457 (0.0012)***	-2.7101 (0.0034)***	-8.2514 (0.0000)***	-6.3748 (0.0000)***
	FDF	-3.5073 (0.0005)***	-12.5524 (0.0000)	-9.1429 (0.0000)***	-8.9083 (0.0000)***
	FPP	-8.9083 (0.000)***	-8.0556 (0.0000)***	-32.7049 (0.0000)***	-27.2811 (0.0000)***
EYS	LLC	-0.0871 (0.4653)	-5.3968 (0.0000)***	-2.3088 (0.0105)**	-0.7785 (0.2181)
	IPS	0.2578 (0.6011)	-6.6161 (0.0000)***	-1.4119 (0.0825)*	1.0770 (0.8563)
	FDF	-1.2741 (0.10151)	-0.2815 (0.3899)	-3.1185 (0.0000)**	-4.4148 (0.0000)***
	FPP	-1.2911 (0.10617)	2.3755 (1.0000)	-8.3668 (0.0000)***	-7.7678 (0.0000)***
MRT	LLC	0.8000 (0.7882)	-4.7053 (0.0000)***	-4.2632 (0.0000)***	-9.1682 (0.0005)***
	IPS	-8.3354 (0.0000)***	-7.6022 (0.0000)***	-4.3936 (0.0000)***	-4.8841 (0.0000)***
	FDF	-1.9359 (0.0301)**	-1.5277 (0.0673)*	-1.4147 (0.9175)	-8.4828 (0.0000)***
	FPP	-6.6950 (0.0000)***	--2.0109 (0.0256)**	0.5558 (0.7092)	-13.6308 (0.0000)***

Note: The figures outside the parenthesis are the t-statics values while those in the parenthesis are p-values. *** and ** represents 1% and 5% significant levels respectively.

Appendix 3: Panel Unit Root Test Result Highly Terrorised Countries in SSA

Variables	Statistics	Level I(0)		First difference I(1)	
		Constant	Constant & Trend	Constant	Constant & Trend
FDI	LLC	-4.7511 (0.0000)***	-4.9321 (0.0000)***	-9.5677 (0.0000)***	-7.0308 (0.0000)***
	IPS	-3.6543 (0.0001)***	-3.1564 (0.0008)***	-10.0936 (0.0000)***	-7.4633 (0.0000)***
	FDF	-7.7884 (0.0000)***	-4.36924 (0.0000)***	-3.8782 (0.0001)***	-15.6392 (0.0000)***
	FPP	-10.9281 (0.000)***	-8.0128 (0.0000)***	-7.9616 (0.0000)***	-34.0758 (0.0000)***
MEX	LLC	-3.1073 (0.0009)***	-5.3768 (0.0000)***	-16.0290 (0.0000)***	-14.4135 (0.0000)***
	IPS	-1.2607 (0.1037)	-1.0586 (0.1449)	-9.6632 (0.0000)***	-8.3634 (0.0006)***
	FDF	-2.5107 (0.0070)	-3.0855 (0.0014)***	-13.9567 (0.0000)***	-12.1537 (0.0001)***
	FPP	-5.2847 (0.0000)***	-1.3908 (0.0841)***	-20.7675 (0.0000)	-18.4909 (0.0000)***
NTA	LLC	1.4377 (0.9247)	-1.1520 (0.1247)	-7.5072 (0.0000)***	-6.3253 (0.000)***
	IPS	3.0997 (0.9990)	0.0569 (0.5227)	-8.2930 (0.0000)***	-6.7835 (0.0001)***
	FDF	2.1249 (0.9815)	-1.0685 (0.1444)	-11.7597 (0.0000)***	-10.2149 (0.0000)***
	FPP	0.4885 (0.6867)	-2.9967 (0.0019)***	-29.1869 (0.0000)***	-27.2152 (0.0000)***
GDPG	LLC	-5.5884 (0.0000)***	-5.7842 (0.0010)***	-9.5311 (0.0000)***	-6.5142 (0.0000)***
	IPS	-4.5794 (0.0000)***	-4.3565 (0.0000)***	-11.9410 (0.0000)***	-9.3900 (0.0000)***
	FDF	-5.7000 (0.0000)***	-5.3140 (0.0000)***	-18.8682 (0.0000)***	-13.9274 (0.0000)***
	FPP	-13.7280 (0.000)***	-13.1394 (0.0000)***	-44.6037 (0.0000)***	-40.2030 (0.0000)***
EYS	LLC	-1.5778 (0.9427)	-0.0745 (0.5297)	-1.8021 (0.0358)**	-3.3562 (0.0004)***
	IPS	4.4214 (0.9869)	4.3641 (0.8923)	-1.3089 (0.0953)*	-1.7492 (0.0401)**
	FDF	-2.8227 (0.0033)	4.6706 (0.9986)	-1.7949 (0.0383)**	-2.1971 (0.0155)**
	FPP	0.0944 (0.5375)	5.7549 (1.0000)	-7.2531 (0.0000)***	-7.9401 (0.0000)***
MRT	LLC	-1.5778 (0.0653)*	-1.1101 (0.1335)	-6.1558 (0.0000)***	-5.1102 (0.0000)***
	IPS	-0.8085 (0.2094)	0.8748 (0.8092)	-6.9226 (0.0000)***	-5.0044 (0.0000)***
	FDF	-0.5925 (0.2776)	-0.7618 (0.2242)	1.0060 (0.0412)*	-8.7156 (0.0000)***
	FPP	-6.3080 (0.0000)***	-0.7176 (0.6016)	1.4242 (0.9208)	-14.7086 (0.0000)***

Note: The figures outside the parenthesis are the t-statics values while those in the parenthesis are p-values. *** and ** represents 1% and 5% significant levels respectively.