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Globalization and Terror in Africa

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Abstract

This study examines the role of globalization on terrorism in 51 African countries for the period 1996-2011. Four terrorism indicators are used, namely: domestic, transnational, unclear and total terrorism. Political, economic, social and general globalisation variables are employed and the empirical evidence is based on Fixed Effects regressions and Generalised Method of Moments (GMM). Whereas the FE regressions are overwhelmingly not significant, the following findings are established from GMM estimations. Political globalisation increases both domestic and transnational terrorism. Social globalisation and general globalisation increase transnational terrorism. Economic globalisation reduces domestic terrorism. Political globalisation, social globalisation and general globalization positively affect unclear terrorism. Social globalisation has a positive impact on total terrorism. Possible channels and policy implications are discussed.

JEL Classification: C52; D74; F30; F42; O55
Keywords: Terrorism; Globalization; Africa

1. Introduction

This inquiry which investigates the linkage between globalization and terrorism in Africa is motivated by two main factors, namely: increasing terrorism levels in Africa on the one hand and on the other hand, gaps in the literature on the relationship between globalization and terrorism.

First, there has been a recent positive wave of terrorist attacks across Africa due to: endemic corruption, tribal and ethnic tensions and religious fundamentalism (Asongu et al., 2016; Alfa-Wali et al., 2015; Fazel, 2013). Unfortunately, despite the increasing incidences of terrorism, most of the media coverage and focus has substantially been skewed towards the

Middle East (see Clavarino, 2014). For instance, according to a recent report on the Global Terrorism Index (GTI, 2014), Nigeria's Boko Haram represents the deadliest terrorist organisation with 6,644 deaths compared to the Islamic State of Iraq and Levant (ISIL) which accounts for 6,073 deaths. Some other notable terrorists' movements on the continent include: Ansar Al-Shariya in Tunisia; Ansar Dine, led by a former close ally of Gaddafi, Iyad Ag Ghaly; Al-Qaeda in the Islamic Maghreb and Al-Qaeda-linked Mulathameen Brigade led by the Algerian Mokhtar Belmokhtar.

Some contemporary examples of underlying terrorism activities in Africa include the: 2013 Westgate shopping mall and 2015 Garissa University killings in Kenya by the Al-Shabab; the Bardo National Museum and Sousse attacks in March and June 2015 in Tunisia respectively, from ISIL-affiliated Islamic fundamentalists; wave of Boko Haram attacks in neighboring countries like, Cameroon, Chad and Niger; November 2015 Radison Blu Hotel attack in Mali and Sinai Russian plane crash in Egypt in November 2015.

The increasing scale and scope of underlying terrorist activities can be the result of integration and/or globalization-related features. For example, the attacks in Tunisia have fundamentally targeted tourists from developed countries. Moreover, the plethora of inherent weakenesses that Islamic fundamentalists (for the most part) are exploiting include: properous drug trade with a huge demand in Europe, from which profits are reinvested in the financing of terrorism; porous boders; undertrained/underequipped armies because terrorist organisations can easily buy weapons in the Black market and corrupt/vulnerable government agents that can benefit from globalisation-flourishing tax havens by masterfully concealing funds meant to fight terrorism. Moreover, owing to porous boders that are facilitated by growing economic integration, the collapse of the Muammar Gaddafi's Libyan regime in 2011 has led to a sharp rise in Islamic militancy and insurgency in the Sahel region.

Despite the apparent linkage between globalisation and terorism, recent literature on the causes and consequences of terorism in Africa has fundamentally focused on: exploring the role of multilateral development institutions like the African Union (Ewi & Aning, 2006); investigating the role of competition by military companies on the rate at which conflicts are resolved (Akcinaroglu & Radziszewski, 2013); examining the impact of poverty and freedoms on terrorism (Barros et al., 2008); assessing the comparative African economics of governance in combating terrorism (Asongu et al., 2017) and investigating the influence of externalities like geopolitical fluctuations (Straus, 2012).

We contribute to the last stream of literature by investigating how globalisation is influencing terrorism in Africa. In order to avail room for more policy implications, four

terrorism and globalisation variables are used respectively, namely: (i) domestic, transnational, unclear and total terrorism dynamics and (ii) political, social, economic and general globalisation indicators. The study in the literature closest to the current inquiry is Lutz and Lutz (2014) who have explored the connections between social, economic and political globalisation with terrorism, with particular emphasis on Africa. Unfortunately, the study is exploratory and recommends policy directions based on possible correlations that are not backed by statistical validity. Inferences based on explorations may be biased and policy recommendations based on possible correlations may be misguided because correlations are statistically fragile and falsifiable. We address these shortcomings by presenting empirical evidence that is based on robust causal linkages between globalisation and terrorism.

Further to the stylized facts on the connection between globalisation and terrorism, Zimmermann (2011) has documented an interesting body of theoretical underpinnings on the globalisation-terrorism linkage. According to the author, the consequences of globalisation in terms of terrorism may take different forms, namely: religious-cultural, ethno-separatist and ideological. Globalisation within the framework is defined as an intensification and extension in exchange of ideas, persons and commodities (Held et al., 1999). According to the narrative, terrorism is related to globalisation because of the spreading of ideas, mobility of people and increased financial and trade transactions. Terrorism in the narrative: (i) is fundamentally motivated by information asymmetry about time, place and the number of victims attacked and (ii) consists of fear-motivating violent attacks that target civilians with the purpose of influencing polity and political decisions. The definition of terrorism underlying the theoretical underpinnings advanced by Zimmermann (2011) is not very different from that of Enders and Sandler (2006) employed in this study: the actual and threatened use of force by subnational actors with the purpose of employing intimidation to meet political objectives.

In addition to the highlighted theoretical underpinnings, globalisation could nurse, habour and fuel terrorism because of numerous logical reasons (Asongu & Nwachukwu, 2017a). (i) Globalisation can encourage religious fundamentalism because three decades ago, religious terrorist cults were very not apparent in the world. (ii) Corollary to the preceding point, gloabalisation can produce sophisticated cross-country networks of terrorist organisations. In this vein, Al-Qaeda and ISIL can be considered as some kind of franchising agencies that work via religious internationalisation/globalisation and/or networks that are state-less. (iii) Globalisation has produced an international political economy wherein two types of nation states exist. On the one hand, industralized and advanced economies influence less developed/industralised economies politico-economically. From the political dimension,

calls for 'regime change' are a one way street: from developed to developing/poor African countries. From the economic angle, biased policies of globalisation that are dictated by developed countries constraint poor/African countries to remain suppliers of raw materials (see Stiglitz, 2007; Mshomba, 2011). (iv) Globalisation can influence terrorism from a socio-cultural angle because elements of terrorism may perceive the phenomenon as harmful to their system of values and cultures. The literal translation of 'Boko Haram' is 'No to Western Education/Civilisation'. Hence, the belief that Western commodities have negative influences on local people can be a cause of terrorism.

In the light of the above, the hypothesis tested in this study is the following: social, political, economic, general dimensions of globalisation fuel terrorism. It is important to substantiate the framing of this hypothesis with a clarification of globalisation concepts that are consistent with: (i) the engaged theoretical and empirical literature and (ii) the empirical analysis that follows this introduction. Consistent with Dreher et al. (2010): (i) economic globalization consists of the long distance flow of commodities (i.e. goods and services) and capital, including perceptions and information that accompany such market exchanges; (ii) social globalization can be understood in terms of the spread of people, images, information and ideas and (iii) political globalization is encapsulated in the diffusion of government policies.

The rest of the study is structured as follows. Section 2 discusses the data and methodology while Section 3 presents the empirical results and corresponding discussion. Section 4 concludes with future research directions.

2. Data and Methodology

2.1 Data

This paper examines a panel of 51 African countries with data for the period 1996-2011 from Dreher et al. (2010), Enders et al. (2011), Gailbulloev et al. (2012) and World Bank Development Indictors. The sample and periodicity are constrained by data availability. Accordingly, the political stability indicator used as control variable is only available from 1996 while 2011 is the end-year because data for most variables is not available after this year. It is important to note that the proposed terrorism variables are based on a decomposition method of the global index from original sources like the GTD (Global terrorism database) and ITERATE (International Terrorism: Attributes of Terrorist Events). Dreher et al. (2010) also discuss issues in the measurement of globalization. For lack of

space, the interested reader can find issues surrounding the measurement of globalization in the corresponding study.

The globalization independent variables from Greher et al. (2010) are: social globalization; economic globalization; political globalization and general globalization. Four distinct but related terrorism variables from Enders et al. (2011) and Gailbulloev et al. (2012) are used: domestic, transnational, unclear and total terrorism variables.Terrorism which is the actual and threatened use of force by subnational actors with the purpose of employing intimation to meet political objectives (Enders & Sandler, 2006), is measured in terms of the number of yearly terrorists incidents registered by a given country. In order to address concerns that are related to the positive skew and log tansformation of zeros, the data is improved by first adding one to the base and then taking the natural logarithm of the number of terrorist attacks. This transformation has been recently employed in recent literature (Choi & Salehyan, 2013; Bandyopadhyay et al., 2014; Efobi & Asongu, 2016; Asongu & Nwachukwu, 2016a).

Terrorism-specific definitions are from Efobi et al. (2015, p. 6). Domestic terrorism "*includes all incidences of terrorist activities that involves the nationals of the venue country: implying that the perpetrators, the victims, the targets and supporters are all from the venue country*" (p.6). Transnational terrorism is "*terrorism including those acts of terrorism that concerns at least two countries. This implies that the perpetrator, supporters and incidence may be from/in one country, but the victim and target is from another*". Unclear terrorism is that, "*which constitutes incidences of terrorism that can neither be defined as domestic nor transnational terrorism*" (p.6). Total terrorism is the sum of domestic, transnational and unclear dimensions of terrorism.

Five main control variables are used, namely: internet penetration; inclusive development in terms of the inequality adjusted human development index; Gross Domestic Product (GDP) growth; political stability and military expenditure. From a preliminary investigation, accounting for more than six control variables (including the lagged dependent variable) leads to the proliferation of instruments and hence, invalidity of estimated coefficients. We discuss expected signs of control variables in chronological order.

First, Argomaniz (2015) and Holbrook (2015) have established that internet is relevant in the coordination of terrorists' activities and recruitment of terrorists. Second, with regard to inclusive development, there is a bulk of literature maintaining that adherence to and sympathy for terrorists' entities is traceable to exclusive development (see Bass, 2014). This position is backed by Foster (2014) who has substantiated that the feeling of socio-economic

exclusion is a fundamental factor pushing Western-born and -educated youths to join ISIL. In Nigeria for instance, one of the factors behind the burgeoning Boko Haram in the Northern region is traceable to the Northern region's less development, compared to the Southern regions.

Third, economic prosperity in terms of economic growth could decrease the likelihood of social unrests (Asongu & Nwachukwu, 2016b) and terrorism because, GDP growth: (i) increases avenues for employment and social mobility and (ii) boosts government revenue needed to fight terrorism. This narrative is consistent with Gaibulloev and Sandler (2009) who have maintained that compared to low-income countries, their high-income counterparts have more financial resources with which to prevent and absorb economic shocks related to terrorism.

Fourth, political stability is likely to reduce terrorism for two reasons: one intuitive, the other theoretical. On the theoretical front, the political access theory of Eyerman (1998) argues that countries that are politically stable are less linked to terrorist activities. From the intuitive angle, political stability provides a non-violent atmosphere that is less favourable for the harbour of terrorism. Fifth, there is a substantial body of literature on the role of military expenditure in combating terrorism (see Sandler, 2005; Lum et al., 2006; Feridum & Shahbaz, 2010).

The sources of variables and full definitions are provided in Appendix 1. The summary statistics and correlation matrix are provided in Appendix 2 and Appendix 3 respectively. From the summary statistics, it can be broadly established that the variables are comparable and from corresponding standards deviation (though some are relative small), we can be confident that reasonable estimated linkages would emerge. In essence, the comparatively smaller variations (or standard deviations) are consistent with the units of corresponding means (or averages) of the same variables. Hence, this should intuitively not affect the quality of the estimation. The number of observations also differs across variables because of missing degrees of freedom. However, the issue of missing observations does not undermine the estimations because on the one hand, many estimation techniques are based on unbalanced panels data structures and on the other hand, the regression output is approximately based on a balanced dataset, contingent on the number of observations in the regression output. This is the case with the GMM approach in which the total number of observations in the regression output is not significantly different.

While a few outliers are also apparent, these outliers do not significantly affect the results. For instance, whereas the maximum value of GDP growth is 106%, the corresponding

standard deviation is not substantially different from the mean value in terms of units, notably: the maximum value is in units of hundreds while the mean and standard deviations are neither in the units of tens nor hundreds. It is important to note that, a more than 100% GDP growth is not uncommon for a post-war economy like Liberia which registered a 106% growth rate in 1997[1].

African countries have low globalization indicators which can possibly affect investigated linkages, when compared with relatively more developed economies with higher levels of globalization. It is important to note that the underlying difference in effect has been documented to be more structural than idiosyncratic. For example, McMillan (2013) has observed that the structural changes in Africa may not be the result of globalisation. Structural changes are medium and long term changes that require a multitude of economic actors. This is not the case with terrorism because a terrorist act can be perpetrated by an individual who gets up from bed (and without any complex planning) decides to resort to terrorism in order to materialise a grievance that is fuelled by globalisation.

The correlation matrix indicates that there are not substantial issues of high degrees of substitution (three in three strands, terrorism, globalisation, and control variables)

2.2 Methodology

2.2.1 Instrumental Variable Fixed Effects regressions

For the purpose of simplicity, common sense and evidence from the literature, the study assumes the presence of endogeneity[2]. Recent terrorism literature has shown that estimated effects become apparent when the corresponding specifications are tailored to control for

[1] The interested reader can find more information on the following link: https://tradingeconomics.com/liberia/gdp-growth-annual

[2] According to Asongu et al. (2017), the concern of endogeneity is very fundamental in regressions. This is essentially why most regression techniques are designed to address the underlying concern. For example, the use of Generalised Method of Moments (GMM) addresses endogeneity of: (i) simultaneity through an instrumentation process and (ii) the unobserved heterogeneity by controlling for time invariant omitted variables. The GMM technique is employed subsequently. It is important to note that Krieger and Meierrieks (2015) have used instruments to address the potential concern of endogeneity, which they found not be so large. Given that variables of interest are different in this study on the one hand and on the other hand, the level of aggregated data (i.e. index variables) is not a sufficient condition for the assumption of endogeniety, it is relevant to present more arguments on the assumption and source of endogeneity. These clarifications also guide in the choice of instrumental variables. First, terrorism could be related to specific time periods. Hence, the need to account for such unobserved heterogeneity. To this end, we control for time specific effects in two ways: as control variables and as strictly exogenous variables in the identification process. Second, while globalization can affect terrorism, terrorism can also affect globalization policies, notably: decisions by countries to embrace more political, economic and social openness. This concern of reverse causality is addressed in this study by accounting for simultaneity through instrumentation with forward orthogonal deviations.

endogeneity (see Krieger & Meierrieks, 2015; Asongu et al., 2017)[3]. Eq. (1) below represents an instrumental variable (IV) fixed effects (FE) specification.

$$T_{i,t} = \alpha_0 + \sigma_1 IVG_{i,t} + \sum_{h=1}^{5} \delta_h W_{h,i,t} + \eta_i + \xi_t + \varepsilon_{i,t} \quad (1)$$

where, $T_{i,t}$, is a terrorism variable (domestic, transnational, unclear or total) of country i at period t; $G_{i,t}$ denotes a measurement of globalisation (political, economic, social or total); α_0 is a constant; W is the vector of control variables (*internet penetration, GDP growth, political stability, inclusive development* and *military expenditure*), η_i is the country-specific effect, ξ_t is the time-specific constant, $\varepsilon_{i,t}$ the error term, $IVG_{i,t}$, represents an instrumented globalisation indicator in country i at period t. The instrumentation procedure is as follows in Eq. (2):

$$G_{i,t} = \alpha + \delta_j (G_{i,t-1}) + \varepsilon_{i,t} \quad (2)$$

The instrumentation procedure consists of regressing each globalisation variable on its first lag and then saving the fitted values that are subsequently used as the main independent variable in Eq. (1). The specifications are Heteroscedasticity and Autocorrelation Consistent (HAC) in standard errors. The instrumentation procedure is in accordance with recent literature on terrorism (Asongu et al., 2017).

2.2.2 GMM: Specification, identification and exclusion restrictions

Previous terrorism literature has employed: logistic regressions (Kavanagh, 2011; Bhavani, 2011); Ordinary Least Squares (Tavares, 2004; Bravo & Dias, 2006); the multilevel Poisson model (Lee, 2013); Zero-inflated Negative and Negative Binomial regressions (Drakos & Gofas, 2006; Savun & Phillips, 2009) and Generalized Method of Moments (GMM) (Bandyopadhyay et al., 2014). The inquiry adopts the GMM strategy for four main reasons.

First, the T<N basic criterion for its employment is met because 16 (or 2011-1996 periodicity) <51 (or number of countries). Second, the empirical strategy accounts for endogeneity in all the regressors. Third, cross-country variations are not restricted in the estimation approach. Fourth, biases from small samples that are typical of the 'difference estimator' are addressed

[3] It is also relevant to note that while Krieger and Meierrieks (2015) have used negative binomial regressions in dealing with this issue of over-dispersion (i.e. variances larger than corresponding means) in the terrorism variables, GMM can also be employed if the terrorism variables are log-normalized. This approach is consistent with recent terrorism literature (see Bandyopadhyay et al., 2014; Asongu et al., 2018a, 2018b).

by the *system* GMM approach. It is essentially for this reason that Bond et al. (2001) have recommended the *system* GMM approach (Arellano & Bover,1995; Blundell & Bond, 1998) instead of the *difference* GMM strategy (Arellano & Bond, 1991).

In this study, the Roodman (2009ab) extension of Arellano and Bover (1995) with forward orthogonal deviations (as opposed to first differences) is employed because it has been documented to limit some issues that are inherent in the *system* GMM approach, namely: (i) over-identification or proliferation of instruments and (ii) neglect of cross-sectional dependence (see Love & Zicchino, 2006; Baltagi, 2008; Boateng et al., 2017). In the specification, we adopt a *two-step* procedure because it accounts for heteroscedasticity. The *one-step* procedure is consistent with homoscedasticity.

The following equations in levels (2) and first difference (3) summarize the standard system GMM estimation procedure.

$$T_{i,t} = \sigma_0 + \sigma_1 T_{i,t-\tau} + \sigma_2 G_{i,t} + \sum_{h=1}^{5} \delta_h W_{h,i,t-\tau} + \eta_i + \xi_t + \varepsilon_{i,t} \quad (2)$$

$$T_{i,t} - T_{i,t-\tau} = \sigma_1 (T_{i,t-\tau} - T_{i,t-2\tau}) + \sigma_2 (G_{i,t} - G_{i,t-\tau}) + \sum_{h=1}^{5} \delta_h (W_{h,i,t-\tau} - W_{h,i,t-2\tau}) + (\xi_t - \xi_{t-\tau}) + \varepsilon_{i,t-\tau} \quad (3)$$

where, $T_{i,t}$ is a terrorism indicator (domestic, transnational, unclear or total terrorism) of country i at period t; $G_{i,t}$, represents an indicator of globalisation (which could be political, economic, social or general); σ_0 is a constant; τ denotes the degree of auto-regression; W is the vector of control variables (*internet penetration, GDP growth, political stability, inclusive development* and *military expenditure)*, η_i is the country-specific effect, ξ_t is the time-specific constant and $\varepsilon_{i,t}$ the error term.

Consistent with recent literature (see Dewan & Ramaprasad, 2014; Tchamyou & Asongu, 2017), all the independent indicators are considered as suspected endogeneous or predetermined variables. Hence, the *gmmstyle* is used to treat the suspected endogenous variables and only *years* are treated as strictly exogenous. The strategy for treating the corresponding *ivstyle* (years) is 'iv(years, eq(diff))' because it is not likely for years to become endogenous in first-difference (see Roodman, 2009b).

In order to address concerns about simultaneity, lagged regressors are employed as instruments for the forward-differenced indicators. Within this framework, Helmet transformations are used in order to remove fixed effects. The empirical strategy which is consistent with Love and Zicchino (2006) entails the computation of forward mean-variations

of the variables. Therefore, the average of all future observations are deducted from the variables as opposed to subtracting past observations from the present ones (Roodman, 2009b, p. 104). The transformations enable orthogonal or parallel conditions between lagged observations and forward-differenced values. Irrespective of lag numbers, in order to limit data loss, with the exception of the last observation for each country, the transformations are performed for all values. "*And because lagged observations do not enter the formula, they are valid as instruments*" (Roodman (2009b, p. 104).

Given the above clarification, *years* influence terrorism exclusively through the endogenous explaining, suspected endogenous or predetermined variables. The statistical validity of the exclusion restriction is investigated with the Difference in Hansen Test (DHT) for instrument exogeneity. In essence, the alternative hypothesis of the DHT should be rejected for the instruments to elucidate terrorism exclusively via the suspected endogenous indicators. Accordingly, in the standard Instrumental Variable (IV) approach, the failure to reject the null hypothesis of the Sargan Overidentifying Restrictions (OIR) test means that the instruments do not explain the outcome variable beyond the predetermined variables (see Asongu & Nwachukwu, 2016c; Beck et al., 2003). However, in the GMM strategy with forward orthogonal deviations, the information criterion for exclusion restriction is the DHT. Hence, the exclusion restriction is confirmed if the null hypothesis of the DHT corresponding to IV (year, eq(diff)) is not rejected.

3. Empirical results

3.1 Baseline Fixed Effects regressions

Table 1 presents results from the FE estimations. Whereas Panel A shows findings on domestic and transnational terrorism, Panel B displays results corresponding to unclear and total terrorism. With the exception of two specifications in regressions pertaining to transnational terrorism, the estimated coefficients corresponding to the globalization independent variables of interest are not overwhelmingly significant. Moreover, the coefficients of determination (i.e. Adjusted R^2) have a very low explanatory power on the one hand and on the other hand, some models (e.g. specifications related to unclear terrorism) are not valid (i.e. insignificant Fisher statistics). Most of the significant control variables have the expected signs. Accordingly, political stability and inclusive development are expected to negatively affect terrorism. In order to have a more comprehensive assessment of the globalization-terrorism nexus, we extend the analysis using the Generalised Method of

Moments (GMM). The use of GMM is consistent with recent literature on the governance-terrorism nexus (Asongu & Nwachukwu, 2017b).

Table 1: Fixed effects regressions on the nexus between globalisation and terror

Panel A : Domestic and Transnational Terrorism (Dependent variables)

	Domestic Terrorism				**Transnational Terrorism**			
Constant	0.453	0.449	0.479	0.395	-0.171	0.057	-0.294	-0.279
	(0.241)	(0.306)	(0.307)	(0.405)	(0.532)	(0.854)	(0.379)	(0.409)
Political Globalisation (IV)	0.001	---	---	---	**0.005***	---	---	---
	(0.728)				**(0.069)**			
Economic Globalisation (IV)	---	0.002	---	---	---	0.001	---	---
		(0.696)				(0.776)		
Social Globalisation (IV)	---	---	0.002	---	---	---	**0.015***	---
			(0.870)				**(0.088)**	
Globalisation (IV)	---	---	---	0.003	---	---	---	0.010
				(0.697)				(0.106)
Internet	0.007	0.006	0.007	0.006	0.002	0.003	0.0008	0.001
	(0.253)	(0.378)	(0.289)	(0.340)	(0.578)	(0.476)	(0.867)	(0.831)
GDP growth	0.004	0.001	0.004	0.004	-0.002	-0.0004	-0.003	-0.003
	(0.546)	(0.862)	(0.556)	(0.576)	(0.589)	(0.946)	(0.494)	(0.484)
Political Stability	**-0.362*****	**-0.419*****	**-0.361*****	**-0.364*****	**-0.273*****	**-0.303*****	**-0.272*****	**-0.278*****
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
Inclusive Development	**-0.316***	**-0.318***	**-0.311***	**-0.317***	-0.105	-0.087	-0.092	-0.103
	(0.068)	**(0.073)**	**(0.071)**	**(0.067)**	(0.393)	(0.487)	(0.450)	(0.403)
Military Expenditure	0.059	0.061	0.058	0.058	0.014	0.018	0.011	0.010
	(0.116)	(0.136)	(0.121)	(0.120)	(0.600)	(0.525)	(0.677)	(0.691)
Adj. R^2(within)	0.066	0.074	0.066	0.066	0.064	0.058	0.063	0.062
Fisher	**3.67*****	**3.84*****	**3.65*****	**3.67*****	**3.53*****	**3.00*****	**3.46*****	**2.59****
Countries	37	34	37	37	37	34	37	37
Observations	351	328	351	351	351	328	351	351

Panel B : Unclear and Total Terrorism (Dependent variables)

	Uuclear Terrorism				**Total Terrorism**			
Constant	0.031	-0.035	-0.036	0.017	0.266	0.418	0.267	0.124
	(0.829)	(0.825)	(0.837)	(0.922)	(0.521)	(0.374)	(0.598)	(0.808)
Political Globalisation (IV)	-0.0005	---	---	---	0.006	---	---	---
	(0.732)				(0.672)			
Economic Globalisation (IV)	---	0.0009	---	---	---	0.005	---	---
		(0.728)				(0.520)		
Social Globalisation (IV)	---	---	0.001	---	---	---	0.012	---
			(0.791)				(0.357)	
Globalisation (IV)	---	---	---	-0.0004	---	---	---	0.012
				(0.900)				(0.206)
Internet	-0.002	-0.003	-0.002	-0.002	0.002	0.002	0.002	0.001
	(0.350)	(0.244)	(0.283)	(0.376)	(0.672)	(0.748)	(0.762)	(0.888)
GDP growth	-0.0008	-0.002	-0.0009	-0.0007	-0.001	-0.001	-0.001	-0.002
	(0.770)	(0.445)	(0.749)	(0.780)	(0.865)	(0.895)	(0.808)	(0.766)
Political Stability	**-0.076****	**-0.100****	**-0.078****	**-0.077****	**-0.447*****	**-0.519*****	**-0.443*****	**-0.453*****
	(0.041)	**(0.014)**	**(0.037)**	**(0.041)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
Inclusive Development	0.005	0.0006	0.002	0.004	**-0.338***	**-0.326***	**-0.320***	**-0.337***
	(0.929)	(0.992)	(0.970)	(0.947)	**(0.070)**	**(0.087)**	**(0.085)**	**(0.071)**
Military Expenditure	0.011	0.009	0.011	0.011	**0.070***	**0.074***	0.066	0.066
	(0.427)	(0.535)	(0.405)	(0.410)	**(0.085)**	**(0.092)**	(0.102)	(0.103)
Adj. R^2(within)	0.025	0.032	0.024	0.024	0.083	0.090	0.080	0.082
Fisher	1.32	1.61	1.31	1.30	**4.68*****	**4.77*****	**4.50*****	**4.63*****
Countries	37	34	37	37	37	34	37	37
Observations	351	328	351	351	351	384	351	351

*,**,***: significance levels of 10%, 5% and 1% respectively. Adj: Adjusted. IV: Instrumental Variable.

3. 2 Analysis with Generalised Method of Moments

Table 2 presents findings on domestic terrorism and transnational terrorism whereas, Table 3 shows findings for unclear and total terrorism. For either table, four principal information criteria are used to examine the validity of the GMM model[4]. The following findings can be established from Table 2. (i) Political globalisation increases both domestic and transnational terrorism. (ii) Social globalisation and general globalisation increase transnational terrorism. (iii) Economic globalisation reduces domestic terrorism. (iv) Most of the significant control variables have the expected signs. The unexpected positive sign from the 'military expenditure' estimate is consistent with a strand of literature on the view that military mechanisms to fight terrorism have opposite effects because they further fuel terrorism for the most part (see Sandler, 2005; Lum et al., 2006; Feridun & Shahbaz, 2010).

The following findings can be established from Table 3. (i) Political globalisation, social globalisation and general globalisation positively affect unclear terrorism. (ii) Social globalisation has a positive impact on total terrorism. (iii) Most of the significant control variables have the expected signs.

[4] "*First, the null hypothesis of the second-order Arellano and Bond autocorrelation test (AR(2)) in difference for the absence of autocorrelation in the residuals should not be rejected. Second the Sargan and Hansen overidentification restrictions (OIR) tests should not be significant because their null hypotheses are the positions that instruments are valid or not correlated with the error terms. In essence, while the Sargan OIR test is not robust but not weakened by instruments, the Hansen OIR is robust but weakened by instruments. In order to restrict identification or limit the proliferation of instruments, we have ensured that instruments are lower than the number of cross-sections in most specifications. Third, the Difference in Hansen Test (DHT) for exogeneity of instruments is also employed to assess the validity of results from the Hansen OIR test. Fourth, a Fischer test for the joint validity of estimated coefficients is also provided*" (Asongu & De Moor, 2017, p.200).

Table 2: Domestic and Transnational Terrorism

	Dependent variables: Domestic and Transnational Terrorism							
	Domestic Terrorism				Transnational Terrorism			
Constant	**-0.576*** (0.000)**	0.064 (0.709)	**-0.601** (0.035)**	-0.217 (0.483)	**-0.473*** (0.008)**	**-0.253** (0.037)**	**-0.374*** (0.000)**	**-0.821*** (0.000)**
Domestic Terrorism (-1)	**0.349*** (0.000)**	**0.263*** (0.002)**	**0.313*** (0.000)**	**0.279*** (0.000)**	---	---	---	---
Transnational Terrorism (-1)	---	---	---	---	**0.223*** (0.000)**	**0.217*** (0.000)**	**0.238*** (0.000)**	**0.235*** (0.000)**
Political Globalisation	**0.006** (0.017)**	---	---	---	**0.006** (0.010)**	---	---	---
Economic Globalisation	---	**-0.012* (0.093)**	---	---	---	0.003 (0.141)	---	---
Social Globalisation	---	---	0.015 (0.112)	---	---	---	**0.014*** (0.003)**	---
Globalisation	---	---	---	0.002 (0.754)	---	---	---	**0.021*** (0.000)**
Internet	-0.0008 (0.900)	**0.016* (0.056)**	-0.003 (0.614)	-0.002 (0.728)	0.001 (0.659)	0.001 (0.707)	-0.005 (0.185)	**-0.008** (0.013)**
GDP growth	0.0007 (0.878)	0.006 (0.190)	0.004 (0.277)	0.003 (0.497)	**-0.003** (0.016)**	-0.002 (0.221)	-0.001 (0.215)	**-0.004*** (0.003)**
Political Stability	**-0.302*** (0.007)**	**-0.460*** (0.000)**	**-0.513*** (0.000)**	**-0.395*** (0.000)**	**-0.298*** (0.001)**	**-0.266*** (0.000)**	**-0.297*** (0.000)**	**-0.174** (0.029)**
Inclusive Development	**0.006*** (0.000)**	0.072 (0.292)	0.003 (0.483)	**0.008** (0.017)**	0.0004 (0.636)	0.009 (0.648)	**-0.004* (0.078)**	**-0.008*** (0.000)**
Military Expenditure	**0.087*** (0.001)**	**0.132*** (0.000)**	**0.083** (0.017)**	**0.077** (0.043)**	**0.035** (0.046)**	**0.035* (0.086)**	0.018 (0.391)	0.004 (0.785)
AR(1)	(0.005)	(0.005)	(0.004)	(0.004)	(0.008)	(0.011)	(0.010)	(0.008)
AR(2)	**(0.169)**	**(0.327)**	**(0.240)**	**(0.221)**	**(0.178)**	**(0.171)**	**(0.185)**	**(0.132)**
Sargan OIR	(0.000)	(0.000)	(0.000)	(0.000)	**(0.621)**	**(0.131)**	**(0.446)**	**(0.717)**
Hansen OIR	**(0.512)**	**(0.494)**	**(0.404)**	**(0.461)**	**(0.256)**	**(0.364)**	**(0.171)**	**(0.226)**
DHT for instruments								
(a)Instruments in levels								
H excluding group	(0.043)	(0.034)	**(0.218)**	**(0.035)**	**(0.347)**	**(0.281)**	**(0.661)**	**(0.513)**
Dif(null, H=exogenous)	**(0.972)**	**(0.979)**	**(0.564)**	**(0.966)**	**(0.256)**	**(0.443)**	(0.082)	**(0.157)**
(b) IV (years, eq(diff))								
H excluding group	**(0.235)**	**(0.326)**	**(0.383)**	**(0.309)**	**(0.419)**	**(0.140)**	**(0.362)**	**(0.523)**
Dif(null, H=exogenous)	**(0.769)**	**(0.617)**	**(0.420)**	**(0.590)**	**(0.203)**	**(0.727)**	**(0.138)**	**(0.127)**
Fisher	**1426.50***	**693.06***	**2283.73***	**17033.13***	**571.04***	**165.91***	**1295.64***	**3851.63***
Instruments	37	37	37	37	37	37	37	37
Countries	37	34	37	37	37	34	37	37
Observations	351	328	351	351	351	328	351	351

*,**,***: significance levels of 10%, 5% and 1% respectively. DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients, Hausman test and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan and Hansen OIR tests.

Table 3: Unclear and Total Terrorism

	Dependent variables: Domestic and Transnational Terrorism							
	Unclear Terrorism				Total Terrorism			
Constant	**-0.091****	-0.025	**-0.171*****	**-0.161***	-0.197	0.345	**-0.892*****	**-0.747****
	(0.044)	(0.781)	**(0.009)**	**(0.057)**	(0.398)	(0.253)	**(0.002)**	**(0.023)**
Unclear Terrorism (-1)	**0.050*****	**0.026***	**0.044*****	**0.030***	---	---	---	---
	(0.002)	**(0.093)**	**(0.001)**	**(0.062)**				
Total Terrorism (-1)	---	---	---	---	**0.423*****	**0.328*****	**0.422*****	**0.406*****
					(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
Political Globalisation	**0.001****	---	---	---	0.005	---	---	---
	(0.029)				(0.101)			
Economic Globalisation	---	0.00008	---	---	---	-0.010	---	---
		(0.973)				(0.170)		
Social Globalisation	---	---	**0.006*****	---	---	---	**0.025*****	---
			(0.002)				**(0.008)**	
Globalisation	---	---	---	**0.004*****	---	---	---	0.015
				(0.006)				(0.111)
Internet	-0.0006	-0.0007	**-0.003****	**-0.001***	0.001	0.013	**-0.012****	-0.005
	(0.432)	(0.631)	**(0.023)**	**(0.088)**	(0.834)	(0.139)	**(0.045)**	(0.361)
GDP growth	-0.0003	-0.003	-0.0008	**-0.001***	-0.002	0.00003	0.005	-0.00008
	(0.816)	(0.105)	(0.331)	**(0.071)**	(0.607)	(0.996)	(0.287)	(0.987)
Political Stability	0.020	**-0.079****	-0.042	-0.020	**-0.224***	**-0.323*****	**-0.441*****	**-0.265****
	(0.605)	**(0.046)**	(0.248)	(0.601)	**(0.058)**	**(0.007)**	**(0.005)**	**(0.015)**
Inclusive Development	**-0.001*****	**-0.003**	**-0.003*****	**-0.003*****	0.003	0.054	-0.003	-0.001
	(0.001)	**(0.692)**	**(0.000)**	**(0.000)**	(0.241)	(0.342)	(0.393)	(0.833)
Military Expenditure	**0.014*****	**0.019****	0.009	**0.009***	**0.041***	**0.088*****	**0.040***	**0.043****
	(0.008)	**(0.015)**	(0.149)	**(0.079)**	**(0.070)**	**(0.003)**	**(0.081)**	**(0.035)**
AR(1)	(0.037)	(0.035)	(0.030)	(0.030)	(0.001)	(0.002)	(0.001)	(0.001)
AR(2)	**(0.131)**	**(0.110)**	**(0.116)**	**(0.115)**	(0.096)	**(0.140)**	**(0.137)**	**(0.100)**
Sargan OIR	**(0.656)**	**(0.873)**	**(0.949)**	**(0.798)**	**(0.148)**	(0.077)	(0.081)	**(0.108)**
Hansen OIR	**(0.594)**	**(0.947)**	**(0.952)**	**(0.930)**	**(0.079)**	**(0.158)**	**(0.198)**	**(0.160)**
DHT for instruments								
(a)Instruments in levels								
H excluding group	**(0.910)**	**(0.945)**	**(0.905)**	**(0.934)**	(0.046)	(0.015)	**(0.260)**	(0.071)
Dif(null, H=exogenous)	**(0.318)**	**(0.808)**	**(0.851)**	**(0.775)**	**(0.282)**	**(0.744)**	**(0.236)**	**(0.419)**
(b) IV (years, eq(diff))								
H excluding group	**(0.651)**	**(0.965)**	**(0.888)**	**(0.725)**	**(0.142)**	(0.073)	**(0.271)**	**(0.169)**
Dif(null, H=exogenous)	**(0.435)**	**(0.702)**	**(0.840)**	**(0.913)**	**(0.141)**	**(0.498)**	**(0.230)**	**(0.276)**
Fisher	**36.94*****	**87.94*****	**260.48*****	**80.45*****	**26112*****	**122.80*****	**12610*****	**32547.17*****
Instruments	37	37	37	37	37	37	37	37
Countries	37	34	37	37	37	34	37	37
Observations	351	328	351	351	351	328	351	351

*,**,***: significance levels of 10%, 5% and 1% respectively. DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients, Hausman test and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan and Hansen OIR tests.

3.3 Discussion of results and policy implications

We set-out to investigate the hypothesis that globalization affects terrorism in order to complement a recent stream of the literature that is based on explorations and correlations. The findings confirm that the correlations established by the underlying stream of studies can be extended to causality. Hence, the findings are broadly consistent with Lutz and Lutz (2014, 2015) who have concluded on a positive nexus in Africa and the Middle East. It follows that globalization has non-tradable externalities that like 'individual value formation' and social values, have some influence on individuals' orientation to leadership and can shape resentments against political, economic and social orders that are dictated by more powerful

countries for the most part. Within this framework, terrorism becomes a weapon for less privileged groups who may resort to violence as a means of making their voices heard.

The findings have confirmed the Davis (2010) postulate that "*there is little doubt that globalization positively impacted the expansion and threat of transnational terrorism in Africa*" (p. 141). Such impact has possibly been facilitated by the burgeoning information and communication technology across the continent that is accelerating the conjunction of people, culture and ideas. Therefore, it is not surprising that such movement of material and ideas can facilitate collective actions by groups that aim to use violence in voicing their grievances. We now engage globalisation-specific discourses in the following order: 'economic globalisation and terrorism', 'political globalisation and terrorism' and 'social globalisation and terrorism'.

First, we have shown that economic globalisation exceptionally reduces domestic terrorism. This confirms the postulate of Li and Schaub (2006) that globalisation does not always have negative impacts, but could be engendering some nexuses with the world system that reduces the levels in terrorism. Whereas Bangura (2010, p. 129) has postulated that the globalization-oriented "*destabilizing factors and uncertainties in the global arena are increasing*", we argue based on the findings that some nations may also gain from stability as a result of increasing globalisation. A case in point is the resilience of Africa to the 2008 global economic crisis. It is important to understand this narrative in the light of the fact that the Arab Spring and terrorism externalities fundamentally resulted from Western politically-motivated interest of spreading democracy (Hehir, 2015). Today, Tunisia is relatively politically-stable, though terrorism still looms with the recent Bardo National Museum and Sousse attacks in March and June 2015 respectively. Egypt has returned to military rule and the law of the land in post-Gaddafi Libya is being dictated by both terrorist entities and rival governments. After highlighting the 'political globalization' dimension of the Arab Spring, it is now relevant to engage it in the light of our findings. This is essentially because the United Nations (UN) Security Council that played a fundamental role in this destabilization is included in our definition of political globalization (Bellamy, 2011).

Second, on the connection between political globalization and terrorism in Africa, the former concept, as defined in Appendix 1 captures the number of foreign embassies in a country, participation in the UN Security Council, membership in international organizations, *inter alia*. We have established from the findings that political globalization increases domestic, transnational and unclear dimensions of terrorism. The fact that African countries make-up close to 20% of the world's population and do not have a permanent seat at the UN Security Council to influence world decisions (that affect the destiny of Africa) cannot be

ruled-out as a potential motivation for terrorism (especially transnational terrorism). This is essentially because the Washington Consensus prioritizes political governance (or political rights)[5], yet some of its influential institutions are undemocratic. This narrative is consistent with the conclusions of Savun and Phillips (2009) that transnational terrorism is fueled for the most part by grievances that are linked to the foreign policy of wealthy nations. It is important to substantiate the economic and political narratives with a politico-economic narrative in order to put the stance of Africa into greater perspective.

From a politico-economic front, it is very likely that some entities in Africa resort to terrorism as means of making their voices heard because globalisation has brought about the development of an international political economy that emphasises two principal groups of nation states: the first group of advanced industrialised countries and a second group which includes Africa consisting of poor and less industrialised countries. Politics has been used to skew economic globalisation to the advantage of developed countries. African countries have been constrained to produce raw materials for the most part. For instance, in 'Making Globalization Work', Stiglitz (2007) articulates that "*The average European cow gets a subsidy of $2 a day; more than half of the people in the developing world live on less than that. It appears that it is better to be a cow in Europe than to be a poor person in a developing country*" (p. 85). Furthermore, "*Without subsidies, it would not pay for the Unites States to produce cotton; with them, the United States is, as we have noted, the world's largest cotton exporter*" (p.85). The Chang (2008) '*Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*' and the Mshomba (2011) narrative on relations between the World Trade Organization and Africa, aptly confirm that African countries are in the group of weak/poor/'less industrialized countries that are not benefiting from a globalization project that is designed by powerful/rich countries for the purpose of maintaining their hegemony. In the light of the above, it is not surprising that terrorism is used by weak nations to voice their frustrations of being unsuccessful at the international and local market places.

Third, on the link between social globalization and terrorism, based on the established findings, it is reasonable to infer that terror organizations in Africa have the belief that globalization-fuelled Western commodities are negatively affecting their communities, notably: their cultures and values as well as the way they behave. This narrative is also related to the perspective that some products associated with globalization (like the internet) are used

[5]The interested reader can find more insights in Asongu and Ssozi (2016) and Asongu (2016) who have reviewed and reconciled dominant schools of thought on Sino-African relations as well as priorities of the two dominant models of contemporary development, namely: the Washington Consensus which prioritizes political rights and the Beijing Model that prioritizes economic rights.

to promote Western culture and despise African values. Religion is one of such elements that reacts negatively to such challenges. To put this point into perspective, the Boko Haram (or Western Education is Forbidden) that is growing in Nigeria and neighboring countries is just an example of how terrorists can respond to increasing exposure to Western culture and disregard for indigenous culture. As shown by Eveslage (2013), globalization-fuelled economic dislocations have marginalized the northern Nigerian region and her population which consists of Muslims for the most part. This ensuing loss of both economic and social statuses has pushed the youth to follow leaderships like Boko Haram, which is increasing its international links for a broader jihad and attacking all agents it deems complicit in the advancement of foreign culture that undermine the Islamic religion (see Forest, 2011). Two contradictions of Boko Haram are worth articulating in order to balance the narrative. On the one hand, Islam which it defends is not traditionally an African/indigenous religion. On the other hand, the terrorist organization relies on Western education and logistics to wage its war.

5. Conclusion and future research directions

This study has examined the role of globalization on terrorism in 51 African countries for the period 1996-2011. Four terrorism indicators are used, namely: domestic, transnational, unclear and total terrorism. Political, economic, social and general globalisation variables are employed and the empirical evidence is based on Fixed Effects (FE) and Generalised Method of Moments (GMM) regressions. Whereas the FE regressions are overwhelmingly not significant, the following findings have been established from GMM estimations. Political globalisation increases both domestic and transnational terrorism. Social globalisation and general globalisation increase transnational terrorism. Economic globalisation reduces domestic terrorism. Political globalisation, social globalisation and general globalisation positively affect unclear terrorism. Social globalisation has a positive impact on total terrorism. Possible channels and policy implications have been discussed.

Whereas the results are in line with Lutz and Lutz (2014, 2015) who have established a positive relationship between globalization and terrorism in Africa and the Middle East, in these concluding paragraphs it is relevant to further substantiate the negative effect and/or non-significant effect of economic globalization. There are three potential explanations to these effects, notably: (i) the relevance of globalization in reducing policy syndromes; (ii) the weight of trade openness vis-à-vis financial openness in the economic globalization indicator and (iii) an intuition on the relevance of economic globalization in terrorism when compared

with political and social globalization dynamics. These explanations are expanded in chronological order.

First, contrary to the stated hypothesis, the impacts of globalisation are not absolutely and/or exclusively negative on macroeconomic outcomes and positive on policy syndromes. In fact with respect to the policy syndrome of terrorism, some interactions within the global system have been associated with lower levels of terrorism (see Li & Schaub, 2004). Hence, globalisation can both be a curse and blessing, especially in the light of the fact that countries that are more integrated into the system could enjoy more stability whereas those that are less integrated continue to be confronted with shocks and disruptions (Bussman & Schneider, 2007; Flaten & De Soysa, 2012).

Second, the appealing role of economic globalization could also be traceable to the influence of trade openness in relation to financial openness. In essence, while economic openness consists of both trade openness and financial openness, there is some consensus in the literature that trade openness has less detrimental macroeconomic outcomes when compared to financial openness in developing countries (Rodrik & Subramanian, 2009; Asongu, 2014, 2017; Price & Elu, 2014; Motelle & Biekpe, 2015). It follows that the positive rewards of trade openness may decrease the propensity of citizens to resort to terror tactics as a means of voicing their concerns on the questionable benefits of economic globalization.

Third, from intuition economic globalization may be less unfriendly to terrorism compared to the other underlying forms of globalization because terrorist depend on trade and financial activities (related to openness) to fund their terrorists organizations (Raphaeli, 2003; Basile, 2004).

Future research can improve the extant literature by assessing whether the suggested channels withstand empirical scrutiny. Moreover, investigating how the positive globalisation-terrorism nexus can be attenuated with institutions and other policy variables is worthwhile. Also in order to establish more targeted country-specific implications, it is vital to extend the analysis with other robust methodologies that are relevant to country-specific studies. This is essentially because, by definition, country-specific studies are eliminated from the adopted GMM approach in order to better control for endogeneity. This is essentially because, given the dynamic panel framework of the analysis, the correlation between the lagged dependent variable and error term is eliminated by differencing.

Appendices

Appendix 1: Variable Definitions

Variables	Signs	Variable Definitions (Measurement)	Sources
Political Globalisation	Polglob	"This captures the extent of political globalisation in terms of number of foreign embassies in a country, membership in international orgnisations, participation in UN security".	Dreher et al. (2010)
Economic Globalisation	Ecoglob	"Overall economic globalisation (considers both the flow and the restrictions in a given country to derive this). The higher, the better social globalisation".	Dreher et al. (2010)
Social Globalisation	Socglob	"Overall scores for the countries extent of social globalisation. The higher the better socially globalised the country".	Dreher et al. (2010)
Globalisation	Glob	This is an overall index that contains economic globalisation, social globalisation and political globalisation	Dreher et al. (2010)
Domestic terrorism	Domter	Number of Domestic terrorism incidents (in Ln)	Ender et al. (2011) and Gailbulloev et al. (2012)
Transnational terrorism	Tranter	Number of Transnational terrorism incidents (in Ln)	
Uuclear terrorism	Unclter	Number of terrorism incidents whose category in unclear (in Ln)	
Total terrorism	Totter	Total number of terrorism incidents (in Ln)	
Internet	Internet	Internet penetration (per 100 people)	World Bank (WDI)
Growth	GDPg	Gross Domestic Product (GDP) growth rates (annual %)	World Bank (WDI)
Political Stability	PS	"Political stability/no violence (estimate): measured as the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional and violent means, including domestic violence and terrorism"	World Bank (WGI)
Inclusive development	IHDI	Inequality Adjusted Human Development Index	UNDP
Military Expense	Milit	Military Expenditure (% of GDP)	World Bank (WDI)

WDI: World Bank Development Indicators. WGI: World Governance Indicators. UNDP: United Nations Development Program. Ln: Natural logarithm.

Appendix 2: Summary statistics (1996-2011)

	Mean	SD	Minimum	Maximum	Observations
Political Globalisation	58.142	18.323	19.958	94.164	816
Economic Globalisation	44.625	13.095	12.301	84.949	688
Social Globalisation	28.519	11.247	5.773	65.033	816
Globalisation	41.376	10.133	17.514	68.523	816
Domestic terrorism	0.401	0.847	0.000	4.828	816
Transnational terrorism	0.218	0.529	0.000	3.332	816
Unclear terrorism	0.093	0.397	0.000	4.488	816
Total terrorism	0.530	0.967	0.000	4.955	816
Internet penetration	3.620	6.919	0.000	52	792
GDP growth	4.863	7.297	-32.832	106.279	792
Political Stability	-0.572	0.954	-3.304	1.189	612
Inclusive Development	1.521	6.926	0.127	0.809	553
Military Expenditure	2.407	3.268	0.089	39.615	646

S.D: Standard Deviation.

Appendix 3: Correlation matrix (Uniform sample size: 295)

Globalization				Control variables					Terrorism				
Polglob	Ecoglob	Socglob	Glob	Milit	IHDI	Internet	GDPg	PolS	Domter	Tranter	Unclter	Totter	
1.000	-0.088	0.124	0.495	-0.155	0.164	0.290	0.036	0.013	0.041	0.105	0.091	0.089	Polglob
	1.000	0.675	0.755	-0.127	0.352	0.402	-0.074	0.404	-0.107	-0.098	-0.061	-0.135	Ecoglob
		1.000	0.852	-0.159	0.274	0.585	-0.170	0.523	-0.180	-0.133	-0.097	-0.202	Socglob
			1.000	-0.210	0.377	0.606	-0.097	0.425	0.116	-0.058	-0.031	-0.116	Glob
				1.000	-0.085	-0.053	-0.053	-0.314	0.262	0.307	0.091	0.313	Milit
					1.000	0.097	-0.069	0.089	0.085	0.035	-0.034	0.064	IHDI
						1.000	-0.070	0.237	-0.092	-0.053	-0.059	-0.098	Internet
							1.000	-0.034	0.040	-0.006	-0.069	0.018	GDPg
								1.000	-0.509	-0.508	-0.257	-0.563	PolS
									1.000	0.536	0.415	0.916	Domter
										1.000	0.495	0.752	Tranter
											1.000	0.606	Unclter
												1.000	Totter

Polglob: Political Globalisation. Ecoglob: Economic Globalisation. Socglob: Social Globalisation. Glob: Globalisation. Milit: Military Expenditure. IHDI: Inequality Human Development Index. Internet: Internet Penetration. FDI: Foreign Direct Investment. GDPg: Gross Domestic Product Growth. Educ: Secondary School enrolment. G.Exp: Government Expenditure. PolS: Political Stability. Domter: Domestic Terrorism. Tranter: Transnational Terrorism. Unclter: Unclear Terrorism. Totter: Total Terrorism.

References

Alfa-Wali, M., Sritharan, K., Mehes, M., Abdullah, F., & Rasheed, S., (2015). "Terrorism-related trauma in Africa, an increasing problem", *Journal of Epidemiology and Global Health*, 5(2), pp. 201-203.

Akcinaroglu, S., & Radziszewski, E., (2013). "Private Military Companies, Opportunities, and Termination of Civil Wars in Africa", *Journal of Conflict Resolution*, 57(5), pp. 5795-5821.

Arellano, M., & Bond, S., (1991). "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations", *The Review of Economic Studies*, 58(2), pp. 277-297.

Arellano, M., & Bover, O., (1995). "Another look at the instrumental variable estimation of error-components models", *Journal of Econometrics*, 68(1), pp. 29-52.

Argomaniz, J., (2015). "European Union responses to terrorist use of the Internet", *Cooperation and Conflict*, 50 (2), pp. 250-268.

Asongu, S. A., (2014). "Financial development dynamic thresholds of financial globalisation: evidence from Africa", *Journal of Economics Studies*, 41(2), pp. 166-195.

Asongu, S. A., (2016). "Sino-African relations: a review and reconciliation of dominant schools of thought", *Politics & Policy*, 44(2), pp. 351-383.

Asongu, S. A., (2017). "Assessing marginal, threshold, and net effects of financial globalisation on financial development in Africa", *Journal of Multinational Financial Management*, 40(June), pp. 103-114.

Asongu, S. A., & De Moor, L., (2017). "Financial globalisation dynamic thresholds for financial development: evidence from Africa", *The European Journal of Development Research*, 29(1), pp. 192-212.

Asongu, S. A., & Nwachukwu, J. C., (2016a). "Conditional linkages between iron ore exports, foreign aid and terrorism", *Mineral Economics*, 29(2-3), pp. 57–70.

Asongu, S. A., & Nwachukwu, J. C., (2016b). "Revolution empirics: predicting the Arab Spring", *Empirical Economics*, 51(2), pp. 439-482.

Asongu, S. A., & Nwachukwu, J. C., (2016c). "Foreign aid and governance in Africa", *International Review of Applied Economics*, 30(1), pp. 69-88.

Asongu, S. A., & Nwachukwu, J. C., (2017a). "Fighting terrorism: empirics on policy harmonization", *German Economic Review*. DOI: 10.1111/geer.12126.

Asongu, S. A., & Nwachukwu, J. C., (2017b). "The Impact of Terrorism on Governance in African Countries", *World Development*, 99(November), pp. 253-270.

Asongu, S. A., & Ssozi, J., (2016). "Sino-African relations: some solutions and strategies to the policy syndromes", *Journal of African Business*, 17(1), pp. 35-51.

Asongu, S. A., Tchamyou, V. S., Asongu, N., & Tchamyou, N. P., (2017). "The Comparative African Economics of Inclusive Development and Military Expenditure in Fighting Terrorism". *Journal of African Development*, 19(2), pp. 77-91.

Asongu, S. A., Tchamyou, V. S., Asongu, N., & Tchamyou, N. P., (2018a). "Fighting terrorism in Africa: evidence from bundling and unbundling institutions", *Empirical Economics*. DOI :10.1007/s00181-017-1378-3.

Asongu, S. A., Tchamyou, V. S., Jules R. Minkoua N., & Tchamyou, N. P., (2018b). "Fighting terrorism in Africa: Benchmarking policy harmonization", *Physica A: Statistical Mechanics and its Applications*, 492(February), pp. 1931-1957.

Baltagi, B. H., (2008). "Forecasting with panel data", *Journal of Forecasting*, 27(2), pp. 153-173.

Bandyopadhyay, S., Sandler, T., &Younas, J., (2014). "Foreign direct investment, aid, and terrorism", *Oxford Economic Papers*, 66(1), pp. 25-50.

Bangura, A. K., (2010). "Terrorism and Islam in Africa," in J. Davis, ed., Terrorism in Africa: The Evolving Front in the War on Terror. Lanham, MD: Lexington Books, 103-132.

Barros, C. P., Faira, J. R., & Gil-Alana, L. A., (2008). "Terrorism against American citizens in Africa: Related to poverty?", *Journal of Policy Modeling*, 30(1), pp. 55-69.

Basile, M., (2004). "Going to the Source: Why Al Qaeda's Financial Network Is Likely to Withstand the Current War on Terrorist Financing", *Studies in Conflict & Terrorism*, 27(3), pp. 169-185.

Bass, L., (2014). "What Motivates European Youth to Join ISIS?", Syria Comment, http://www.joshualandis.com/blog/push-factors-helping-isil-recruitment-loretta-bass/ (Accessed: 01/12/2015).

Beck, T., Demirgüç-Kunt, A., & Levine, R., (2003), "Law and finance: why does legal origin matter?", *Journal of Comparative Economics*, 31(4), pp. 653-675.

Bellamy, A. J., (2011). "Libya and the Responsibility to Protect: The Exception and the Norm", *Ethics & International Affairs*, 25(3), pp. 263-269.

Bhavnani, R., (2011), "Three Two Tango: Territorial Control and Selective Violence in Israel, the West Bank, and Gaza", *Journal of Conflict Resolution*, 55(1), pp. 133-158.

Blundell, R., & Bond, S., (1998). "Initial conditions and moment restrictions in dynamic panel data models", *Journal of Econometrics*, 87(1), pp. 115-143.

Boateng, A., Asongu, S., Akamavi, R., & Tchamyou, V., (2017). "Information Asymmetry and Market Power in the African Banking Industry", *Journal of Multinational Financial Management*. Forthcoming.

Bond, S., Hoeffler, A., & Tample, J., (2001). "GMM Estimation of Empirical Growth Models", University of Oxford.

Bravo, A. B. S., & Dias, C. M. M., (2006). "An Empirical Analysis of Terrorism: Deprivation, Islamism and Geopolitical Factors", *Defence and Peace Economics*, 17(4), pp. 329-441.

Bussman, M., & and Schneider, G., (2007). "When Globalization Discontent Turns Violent: Foreign Economic Liberalization and Internal War," *International Studies* Quarterly, 51(1), pp. 79–97.

Chang, H-J., (2008). Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism. Bloomsbury Press; Reprint edition (December 23, 2008).

Choi, S-W., & Salehyan , I., (2013). "No Good Deed Goes Unpunished: Refugees, Humanitarian Aid, and Terrorism", *Conflict Management and Peace Sciences*, 30(1), pp. 53-75.

Clavarino, T., (2014). "Africa, the new outpost of terrorism", *RT op-edge*. https://www.rt.com/op-edge/180996-africa-outpost-islamic-terrorism/ (Accessed: 20/01/2016).

Davis, J., (2010). "Understanding' terrorism' in' Africa,'" in J. Davis, ed., Terrorism in Africa: The Evolving Front in the War on Terror. Lanham, MD: Lexington Books, 133-158.

Dewan, S., & Ramaprasad, J., (2014). "Social media, traditional media and music sales", *MIS Quarterly*, 38(1), pp. 101-128.

Drakos, K., & Gofas. A., (2006). "In Search of the Average Transnational Terrorist Attack Venue", *Defence and Peace Economics*, 17(2), pp. 73-93.

Dreher, A., Gaston, N., Martens, P., & Van Boxem, L., (2010). "Measuring Globalization – Opening the Black Box. A Critical Analysis of Globalization Indices", *Journal of Globalization Studies*, 1(1), pp. 166-185.

Efobi, U., Asongu, S., A., (2016). "Terrorism and capital flight from Africa", *International Economics*. 148(December), pp. 81-94.

Efobi, U., Asongu, S., & Beecroft, I., (2015). "Foreign Direct Investment, Aid and Terrorism: Empirical Insight Conditioned on Corruption Control", *African Governance and Development Institute Working Paper* No. 15/007, Yaoundé.

Enders, W., & Sandler, T., (2006). *The Political Economy of Terrorism*. New York: Cambridge University Press.

Enders W, Sandler T & Gaibulloev K., (2011). "Domestic versus transnational terrorism: Data, decomposition, and dynamics", *Journal of Peace Research*, 48(3), pp. 319–337.

Eveslage, B. S. (2013). "Clarifying Boko Haram's Transnational Intentions, Using Content Analysis of Public Statements in 2012", *Perspectives on Terrorism*, 7(5), pp. 47-67.

Ewi, M., & Aning, E., (2006). "Assessing the role of the African Union in preventing and combating terrorism in Africa", *African Security Review*, 15(3), pp. 32-46.

Eyerman, J., (1998). "Terrorism and Democratic States: Soft Targets or Accessible Systems." *International Interactions,* 24(2), pp.151–70.

Fazel, A., (2013). "The growing terrorism threat in Africa", Mail & Guardian, http://mg.co.za/article/2013-12-17-the-growing-terrorism-threat-in-africa (Accessed: 20/01/2016).

Feridun, M., & Shahbaz, M., (2010). "Fighting Terrorism: Are Military Measures Effective? Empirical Evidence from Turkey", *Defence & Peace Economics*, 21(2), pp. 193-205.

Flaten, R. D., & De Soysa, I.,(2012). "Globalization and Political Violence, 1970-2008," *International Interactions*, 38(4),pp. 622-646.

Forest, J. J. F. (2011). "Al-Qaeda's Influence in Sub-Saharan Africa: Myths, Realities and Possibilities," *Perspectives on Terrorism*, 5(3-4), pp. 63-80

Foster, P., (2014). "Jihadists from around the world flock to fight with Isil; UN", *The Telegraph.* http://www.telegraph.co.uk/news/worldnews/islamic-state/11200701/Jihadists-from-around-the-world-flock-to-fight-with-Isil-UN.html (Accessed: 01/12/2015).

Gaibulloev, K., & Sandler, T., (2009). "The impact of terrorism and conflicts on growth in Asia", *Economics and Politics*, 21(3), pp. 359-383.

Gailbulloev, K., Sandler, T., & Santifort, C., (2012). "Assessing the Evolving Threat of Terrorism", *Global Policy*, 3(2), pp. 135-144.

GTI (2014). "Global Terrorism Index: Measuring and Understanding the Impact of Terrorism", *Institute for Economics and Peace*, pp. 2-90. http://www.visionofhumanity.org/sites/default/files/Global%20Terrorism%20Index%20Report%202014_0.pdf (Accessed: 28/04/2015).

Held, D., McGrew, A., Goldblatt, D., & Perraton, J., (1999). Global Transformations: Politics, Economics and Culture. Stanford University Press, Stanford CA.

Hehir, A., (2015). "Assessing the influence of the Responsibility to Protect on the UN Security Council during the Arab Spring", *Cooperation and Conflict*. DOI: 10.1177/0010836715612849.

Holbrook, D., (2015). "A critical analysis of the role of the internet in the preparation and planning of acts of terrorism", *Dynamics of Asymmetric Conflict: Pathways toward terrorism and genocide*, 8(2), pp. 121-133.

Kavanagh, J., (2011), "Selection, Availability, and Opportunity: The Conditional Effect of Poverty on Terrorist Group Participation", *Journal of Conflict Resolution*, 55(1), pp. 106-132.

Krieger, T., & Meierrieks, D., (2015). "Does Income Inequality Lead to Terrorism? Evidence from the Post-9/11 Era", Discussion Paper Series, Wilfried Guth Endowed Chair for Constitutional Political Economy and Competition Policy, University of Freiburg, No. 2015-04.

Lee, C-Y., (2013). "Democracy, civil liberties and hostage-taking terrorism", *Journal of Peace Research*, 50(2), pp. 235-248.

Li, Q., & Schaub, D., (2004). "Economic Globalization and Transnational Terrorism: A Pooled Time-Series Analysis," *Journal of Conflict Resolution*, 48(2), pp. 230-258.

Love, I., & Zicchino, L., (2006). "Financial Development and Dynamic Investment Behaviour: Evidence from Panel VAR", *The Quarterly Review of Economics and Finance*, 46(2), pp. 190-210.

Lum, C., Kennedy, L.W., & Sherley, A. J. (2006). "The effectiveness of counter-terrorism strategies. A Campbell Systematic Review", *Crime and Justice*, 2(2), pp.1-49.

Lutz, B. J., & Lutz, J. M., (2014). "Economic, Social and Political Globalization and Terrorism", *The Journal of Social, Political, and Economic Studies*, 39(2), pp. 186-218.

Lutz, B. J., & Lutz, J. M., (2015). "Globalisation and Terrorism in the Middle East", *Perspectives on Terrorism*, 9(5), pp. 27-46.

McMillan, M,S., (2013). "The Changing Structure of Africa's Economies." Background Paper for *African Economic Outlook 2013*. African Development Bank, OECD Development Center, and United Nations Development Program, Tunis.

Motelle, S., & Biekpe, N., (2015). "Financial integration and stability in the Southern African development community", *Journal of Economics and Business*, 79(May-June, 2015), pp. 100-117.

Mshomba, R. E., (2011). Africa and the World Trade Organization. Cambridge University Press; Reprint edition (February 21, 2011).

Omand, D., (2005). "Countering international terrorism: the use of strategy", *Survival,* 47(4), pp. 107-116.

Price, G. N., & Elu, J. U., (2014). "Does regional currency integration ameliorate macroeconomic shocks in sub-Saharan Africa? The case of the 2008-2009 global financial crisis", *Journal of Economic Studies*, 41(5), pp. 737-750.

Raphaeli, N., (2003). “Financing of terrorism: sources, methods, and channels”, *Terrorism and Political Violence*, 15(4), pp. 59-82.

Rodrik, D., & Subramanian, A., (2009). “Why Did Financial Globalization Disappoint?”, *IMF Staff Papers*, 56(1), pp. 112-138.

Roodman, D., (2009a). “A Note on the Theme of Too Many Instruments”, *Oxford Bulletin of Economics and Statistics*, 71(1), pp. 135-158.

Roodman, D., (2009b). “How to do xtabond2: An introduction to difference and system GMM in Stata”, *Stata Journal*, 9(1), pp. 86-136.

Sandler, T. (2005). “Collective versus unilateral responses to terrorism”. *In Policy Challenges and Political Responses, Springer USA,* pp. 75-93. DOI: 10.1007/0-387-28038-3_5.

Savun, B., & Phillips, B. J., (2009). “Democracy, foreign policy, and terrorism”. *Journal of Conflict Resolution*, 53(6), pp. 878-904.

Straus, S., (2012). “Wars do end. Changing Patterns of Political Violence in Sub-Saharan Africa”, *African Affairs*, 111(443), pp. 179-201.

Stiglitz, J. E., (2007). Making Globalization Work. W. W. Norton & Company; Reprint edition (September 17, 2007).

Tavares, J., (2004). “The Open Society Assesses Its Enemies: Shocks, Disasters and Terrorist Attacks”, *Journal of Monetary Economics*, 51(5), pp. 1039-1070.

Tchamyou, V. S., & Asongu, S. A., (2017). “Information Sharing and Financial Sector Development in Africa”, *Journal of African Business*, 18(1), pp. 24-49.

Zimmermann, E., (2011). “Globalisation and terrorism”, *European Journal of Political Economy*, 27 (2011), pp. S152–S161.