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Fighting terrorism in Africa: evidence from bundling and unbundling institutions

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Abstract

This study assesses government mechanisms in the fight against terrorism with particular emphasis on the bundling and unbundling of ten governance dynamics. The empirical evidence is based on a panel of 53 African countries for period 1998-2012 and Generalized Method of Moments. The following findings are established. First, for the most part, political governance and its constituents respectively have negative effects on all terrorism dynamics, with the following consistent increasing order of negative magnitude: unclear terrorism, transnational terrorism, domestic terrorism and total terrorism. Second, overwhelmingly for economic and institutional governances, the governance dynamics and their constituent components affect terrorism negatively, with the magnitude on domestic terrorism consistently higher than that on transnational terrorism. Third, for most specifications, the effect of general governance is consistently negative on terrorism variables.

Theoretical and practical policy implications are discussed.

JEL Classification: C52; D74; F42; O38 ; P37
Keywords: Terrorism; Common policies; governance; Africa

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1. Introduction

There are four main reasons for positioning an inquiry on the bundling and unbundling of institutions[1] in the fight against terrorism in Africa, notably: (i) growth trends in terrorism on the continent; (ii) debates on the effect of governance on terrorism; (iii) advances in the measurement of institutions and paradigm shifts in the conception of governance and (iv) gaps in the literature.

First, terrorism-related trauma is an increasing problem in Africa (Alfa-Wali et al. 2015). Whereas the phenomenon of terrorism is not new on the continent, its increasing trend has become a significant policy concern. Africa is offering a fertile grown for terrorism as a result of *inter alia*: extremist ideologies of groups lobbying to dismantle old states and establish new ones; continued political and regional instability; ethnic and tribal tensions and religious fundamentalism (Fazel 2013). This narrative is substantiated by Clavarino (2014) who posits that whereas the world is focusing on the Middle East, Africa is another part of the world where Islamic extremism is burgeoning and becoming radicalized. Notable examples of such groups that have increased their magnitude and sphere of activities include: the Boko Haram in Nigeria; al-Qaeda in the Islamic Maghreb and al-Shabab in Somalia.

Second, whether good governance reduces or promotes terrorism is the subject of debate in the literature (Lee 2013). There is a strand which posits that fundamental features of good governance like, civil society, democratic political systems, political participation and knowledge economy, can reduce resentment toward the State and hence, mitigate the likelihood of terrorist organizations recruiting extremists (Li 2005; Windsor 2003). On the contrary, another strand argues that good governance may not be useful in mitigating terrorism because the interests of terrorists' organizations are not represented in government institutions of democratic politics (Gause 2005). This contending strand is supported by Ross (1993) who is of the perspective that, terrorism can sprout in societies endowed with comparatively good institutions because there are a plethora of factors in nations enjoying good government quality that indirectly or directly build on grievances as well as conducive conditions for terrorist activities. These include, *inter alia*: freedom of speech to express disagreement and dissatisfaction, access and freedom to the media and civil liberties. This second strand is consistent with evolving narratives substantiating that the sympathy for and adherence to terrorist organisations is fundamentally motivated by exclusive socio-economic

[1] Governance and institutions are used interchangeably throughout the study. The latter concept is quite distinct from "institutional governance" which is represented by corruption-control and the rule of law (see Asongu 2016a).

development in countries with comparatively good governance standards (see Bass 2014). For instance, Western-born and -educated youths are joining the Islamic State of Iraq and Levant (ISIL) principally because they feel excluded by governance structures in Western nations (Foster 2014).

Third, there have been some interesting advances in the measurement of institutions and paradigm shifts in the conception of governance. This essentially builds on priorities of the two contemporary dominant models of development. Whereas the Washington Consensus prioritizes political governance, the Beijing Model places more emphasis on economic governance (Asongu 2016a). Within this framework, there is an evolving stream of literature sympathetic to the perspective that short-term governance priorities are needed to resolve Africa's poverty tragedy (Asongu and Ssozi, 2016; Asongu 2016b). Beyond this narrative on paradigm shifts, some indicators of good governance cannot be effectively measured without some employment of preliminary techniques to bundle governance variables into composite indicators. For instance, in the light of the debate between the Washington Consensus and the Beijing Model, it is difficult to appreciate political (economic) governance without deriving a composite indicator for political stability and "voice and accountability" (regulation quality and government effectiveness).

The paradigm shift has led to an evolving stream of literature on the bundling and unbundling of institutions for development outcomes in Africa, notably: the role of formal institutions in knowledge economy (Andrés et al. 2015); predicting the Arab Spring based on negative governance signals (Asongu and Nwachukwu 2016a); most effective governance channels in the fight against software piracy (Andrés and Asongu, 2013) and conflicts/crimes (Asongu and Kodila-Tedika 2016) or in the stimulation of innovation (Oluwatobi et al. 2015). In the light of these insights, the bundling and unbundling of governance addresses concerns of conceptual conflation in the usage of governance indicators. Hence, we aim to provide empirical validity for the usage of terms like political governance, economic governance, institutional governance and general governance in the connection between governance and terrorism.

Fourth, the available literature on channels by which terrorism and conflicts can be curbed has focused on the following mechanisms: educational tools (Brockhoff et al. 2014), like bilingualism (Costa et al. 2008); military dimensions (Feridun and Shahbaz 2010); publicity and press freedom (Hoffman et al. 2013); transparency (Bell et al. 2014) and assessment of terrorism behaviour (Gardner 2007). African-specific literature has focused on understanding: geopolitical fluctuations (Straus 2012); poverty and lack of politico-economic

freedom (Barros et al. 2008); competition in military companies in the swift termination of conflicts (Akcinaroglu and Radziszewski 2013); the role of global warming (Price and Elu 2016) and exploratory studies on the African Union's role in fighting terrorism (Ewi and Aning 2006). Moreover, the literature on the role of governance on terrorism has either been skewed on the effect of democracy for the most part (see Lee 2013; Savun and Phillips 2009) or oriented toward a few specific dimensions like the rule of law (Choi 2010) and transparency (Bell et al. 2014). Unfortunately, democracy (rule of law) is only an aspect of political (institutional) governance.

The present study contributes to the literature by assessing government mechanisms in the fight against terrorism with particular emphasis on the bundling and unbundling of governance dynamics. Thus, the inquiry complements the existing literature on the role of governance in fighting terrorism by articulating the conception, definition and measurement of governance variables. For instance, the concept of governance has been used in the literature without a measurement that is all-inclusive (Nangila 2016). A case in point is Kangoye (2013) who has employed "corruption-control" as "general governance". Moreover, the concepts of economic governance, institutional governance and political governance have been used in the literature without statistical validity (Kaufmann et al. 2007a, 2017b; Kurtz and Schrank 2007a, 2017b). It is argued in this study that is not appropriate to use the term "political governance" unless it encompasses "voice and accountability" and "political stability/no violence".

Adopted governance indicators include: political governance (political stability/no violence and voice & accountability); economic governance (government effectiveness and regulation quality); institutional governance (corruption-control and the rule of law) and general governance. The interest of bundling and unbundling institutions derives from recent evidence that the distinction as well as simultaneous consideration of governance indicators provide more room for more policy implications (see Asongu and Nwachukwu 2016b).

In addition to improving the consistency between the use of governance concepts and their empirical validity, because "applied econometrics" is also meant to confirm/reject existing theories and empirical trends in the literature, this study also aims to confirm findings from existing literature within the specific context of Africa[2].

The remainder of the study is structrued as follows. Section 2 presents theoretical underpinnings, clarifies governance concepts and presents graphical insights. The data and

[2] In the sentence, "applied econometrics" does not refer to a specific journal, but rather to the used of econometrics to accept or reject existing theoretical underpinnings and empirical trends.

methodology are discussed in Section 3. Section 4 presents the empirical results. Section 5 concludes with implications.

2. Clarification of governance and theoretical underpinnings

2.1 Clarification of governance

This section clarifies the concept of governance used in the study. It is engaged in two main strands: definitions of governance and debates surrounding adopted measurements of governance.

According to Asongu (2016a), governance is a multidimensional and complex phenomenon to which many definitions have been attributed. First, Dixit (2009 p.5) has defined economic governance as '*…structure and functioning of the legal and social institutions that support economic activity and economic transactions by protecting property rights, enforcing contracts, and taking collective action to provide physical and organizational infrastructure*'[3]. Second, in accordance with Tusalem (2015), governance consists of: political stability, regulation quality, rule of law, corruption-control and bureaucratic effectiveness. Third, from the perspective of Fukuyama (2013), the governance concept can be more comprehensively understood if it embodies four main factors: output measures, procedural measures, bureaucratic measures and indicators of capacity that consists of both resources and professionalism. Fourth, as far as we have reviewed, the definition, conception and measurement of governance by Kaufmann et al. (2010) are the most employed in the literature. These consist of three main governance types: political, economic and institutional governances. (i) Political governance is defined as the election and replacement of political leaders. It is measured with two indicators: political stability/no violence and "voice and accountability". (ii) Economic governance is defined as the formulation and implementation of policies that deliver public commodities. It is also measured with two indicators: regulation quality and government effectiveness. (iii) Institutional governance is defined as the respect by the State and citizens of institutions that govern interactions between them. It is measured with two variables: corruption-control and the rule of law.

In spite of the wide acceptance enjoyed by the Kaufmann et al. (2010) indicators in the literature, several criticisms on the quality of underlying indicators have emerged from scholarly circles. Kaufmann, Kraay and Mastruzzi have also been promptly responding to the corresponding criticisms in order to maintain the confidence enjoyed by their variables. As far

[3] Emphasis on original.

as we have reviewed, one of the most interesting debates has been a stream of rebuttals to criticisms from two notable academics: Andrew Schrank and Marcus Kurtz. For brevity and lack of space, the interested reader can find the main strands of the debate in: "models, measures and mechanisms" (Kurtz and Schrank 2007a); a reply (Kaufmann et al. 2007a); a defense (Kurtz and Schrank 2007b) and a rejoinder (Kaufmann et al. 2007b).

2.2 Theoretical underpinnings

We briefly discuss stylized facts motivating the linkage between governance and terrorism in Africa. Terrorism within the framework of this study is consistent with Enders and Sandler (2006) and is understood as the actual and threatened use of force by sub-nationals actors for the goal of using intimidation to secure political goals. As recently documented by Clavarino (2014), bad governance on the continent is substantially contributing to fertilizing the ground for the flourishing of extremism and terrorism. According to the narrative, terrorists groups in Africa are mushrooming essentially because Islamists on the continent can easily take advantage of certain weaknesses in governance, notably: corrupt and vulnerable central governments, underequipped and undertrained armies, porous borders, and booming drugs trade that is used to finance terrorism. The author further maintains that Islamic militancy has increased in the Sahel region for the most part because of the political instability and absence of the rule of law, following the 2011 collapse of the regime of Muammar Gaddafi. The recent French intervention in Mali has dispersed Islamic militants across the continent. Elsewhere in Africa, Islamist militancy is increasing because of poor governance. The Boko Haram influence in West Africa is predominantly in areas where the presence of government is not strong, Al-Shabaab has prospered in East Africa essentially because Somalia has been a failed state for decades while Islamic terrorists groups in North Africa have strongholds in areas with weak government influence. These movements include: Al-Qaeda in the Islamic Maghreb (AQIM); Al-Qaeda-linked Mulathameen Brigade led by the Algerian Mokhtar Belmokhtar; Ansar Al-Shariya in Tunisia and Ansar Dine, led by a former close ally of Gaddafi, Iyad Ag Ghaly.

The theoretical underpinnings can be discussed in three main strands: nexuses between governance and domestic terrorism; the relationship between governance and transnational terrorism and debates on the nexus between terrorism and governance. Consistent with Choi (2010), governance is linked to domestic terrorism in the perspective that ordinary citizens are endowed with incentives to employ political violence against institutions (or the government), political figures and other citizens under three scenarios,

namely, when they: (i) hold grievances; (ii) find no peaceful means to settling grievances, increasing sentiments of desperation and hopelessness and (iii) perceive the use of terrorism as a viable and legitimate action of last resort with which to communicate their frustration and anger. The underpinning of this logic is that in so far as ordinary citizens have access to peaceful channels of resolving conflicts, they are not very likely to contemplate terrorism options as practical means to settling disputes. Within this framework, we postulate that countries which promote good governance offer a peaceful environment for the settlement of conflicts. In other words, an atmosphere of good governance is not very conducive for domestic terrorism because citizens with grievances have peaceful options to making their voices heard.

In the second strand, governance is also linked to transnational terrorism in the view that good governance consolidates the legitimacy of a political system by providing a protective shield to both foreigners and citizens on the one hand, as well as nonviolent mechanisms to dispute resolution on the other hand (Choi 2010). Hence, in the light of governance definitions we have clarified above, terrorism is very likely to be limited by, *inter alia*: (i) a free and fair democratic procedure for the election and replacement of political leaders (political governance); (ii) the formulation and implementation of conducive policies that deliver public commodities to citizens (economic governance) and (iii) sound respect by the State and citizens of institutions that govern interactions between them (institutional governance).

The third strand focuses on various theoretical debates surrounding the relationship between governance and terrorism. According to Hoffman et al. (2013), studies on the nexus between governance and cross-national terrorism build on scholarship articulating regime-based disparities in opportunities for violence. Unlike bad governance characterized by autocracies, democracies provide citizens with liberties of politico-economic engagements without much government interference. Whereas good governance offers a plethora of benefits that are tied to freedom, it also offers substantial avenues of mischief. In effect, unlike stable autocracies, democracies could be more likely targeted by terrorists organizations because good governance institutions may do very little to curtail violence ex-ante. Emphasis is laid on stable autocracies because terrorism cannot be controlled by failing and failed states (Lai 2007; Piazza 2008a). This narrative is in accordance with Schmid (1992); Eubank and Weinberg (1994); Drakos and Gofas (2006) and Piazza (2007). On the contrary, theories of political access (Eyerman 1998) posit that good governance and strong democracies should be comparatively more immune to terrorism relative to non-democracies.

Governance features that contribute to this edge in democracies include: independence of judiciaries (Findley and Young 2011); respect of the rule of law (Choi 2010) and effective management of conflicts. It follows that good governance institutions could also provide an enabling environment for aggrieved citizens to support or resort to terrorism as means to conflict resolution (Li 2005).

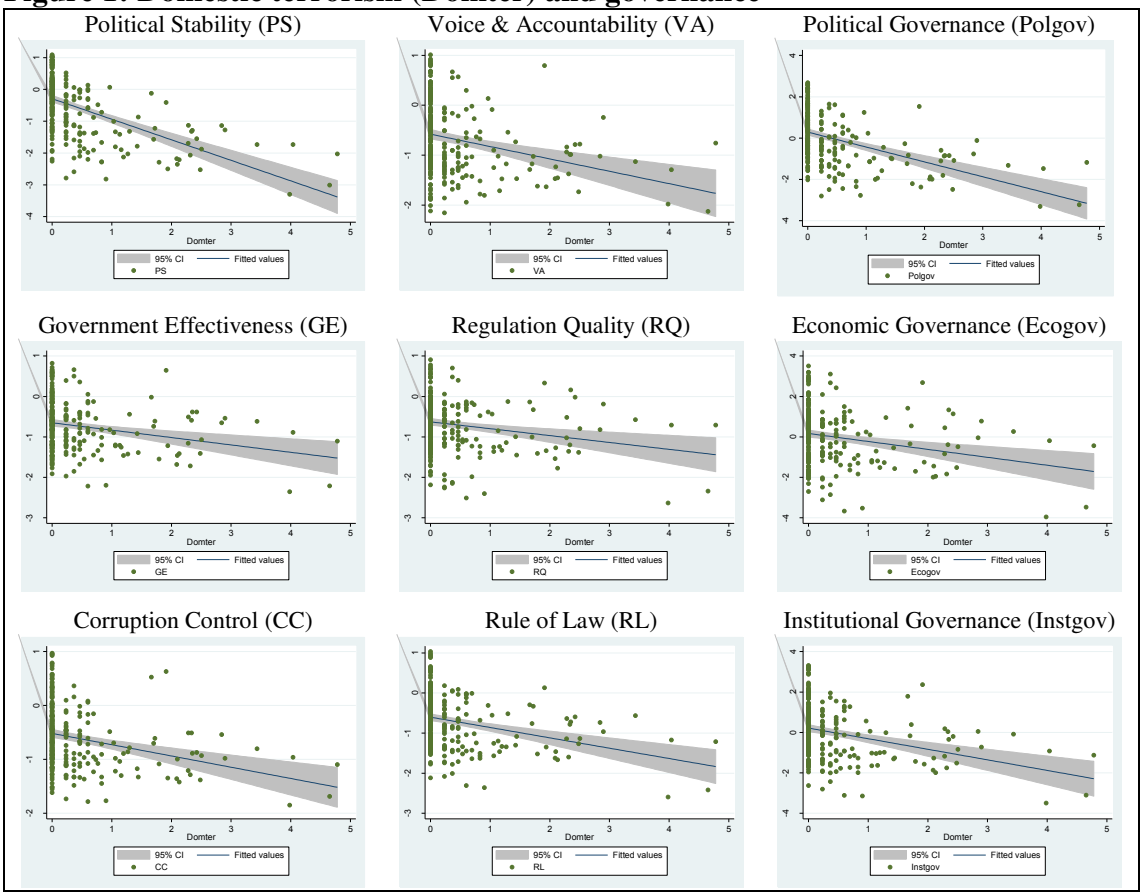
From an empirical perspective, many studies have documented (Lee 2013) and established the positive nexus between democracy and transnational terrorism (Eubank and Weinberg 1994, 2001; Piazza 2007, 2008b; Weinberg and Eubank 1998). Chenoweth (2010) has argued that good governance with democratic competition can stimulate terrorist organisations to resort to violence. Therefore, a positive nexus between political competition and terrorism can be expected. According to Li (2005), there are two competing effects from democracy. On the one hand, government constraints can boost transnational terrorism because of political deadlock from checks and balances. On the other hand, democratic participation mitigates transnational terrorism incidents. Savun and Phillips (2009) have shown that compared to good governance characteristics such as democracy, there is a stronger link between terrorism and foreign connections.

Some emphasis on the findings of Savun and Phillips (2009) is necessary to further articulate the nexus between good governance and international terrorism. The authors have concluded that foreign policy behaviour (irrespective of regime type) is associated with transnational terrorism. In essence, countries that are very involved in international politics are more likely to be targeted by transnational terrorism because their foreign policies are likely to create resentment abroad. It follows that nations with good governance characteristics such as democracy can still be targeted by transnational terrorist organisations due to their foreign policy and not because of their type of regime *per se*.

2.3 Graphical insights

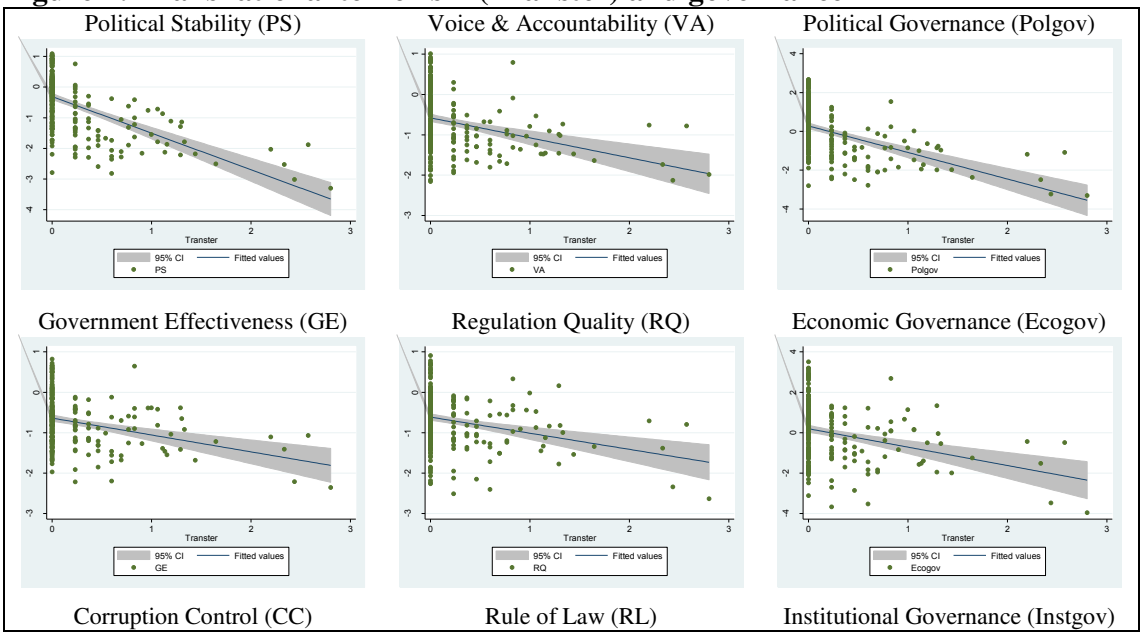
Figure 1, Figure 2 and Figure 3 respectively show linkages between governance and domestic terrorism, transnational terrorism and unclear terrorism. A negative relationship is consistently apparent when the figures are observed horizontally and vertically. The negative relationships imply that good governance is associated with lower levels of terrorism and vice-versa. An observation that is particularly striking is the relationship between political stability and terrorism. The corresponding curve which is consistently the steepest implies that political stability has the highest degree of sensitivity to terrorism. In the sections that follow, we substantiate these exploratory insights with empirical validity.

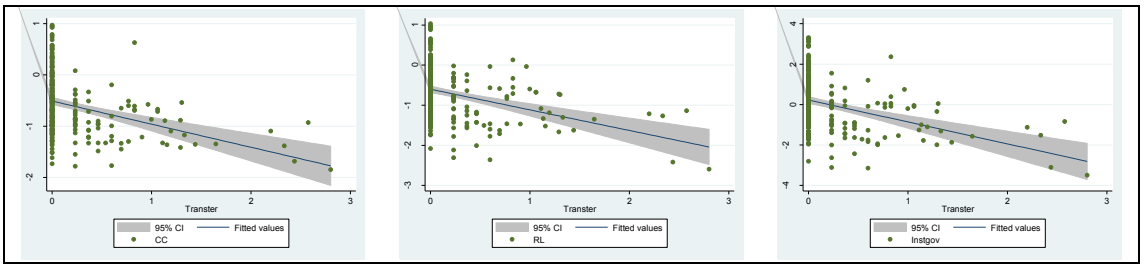
Figure 1: Domestic terrorism (Domter) and governance



Source: Authors

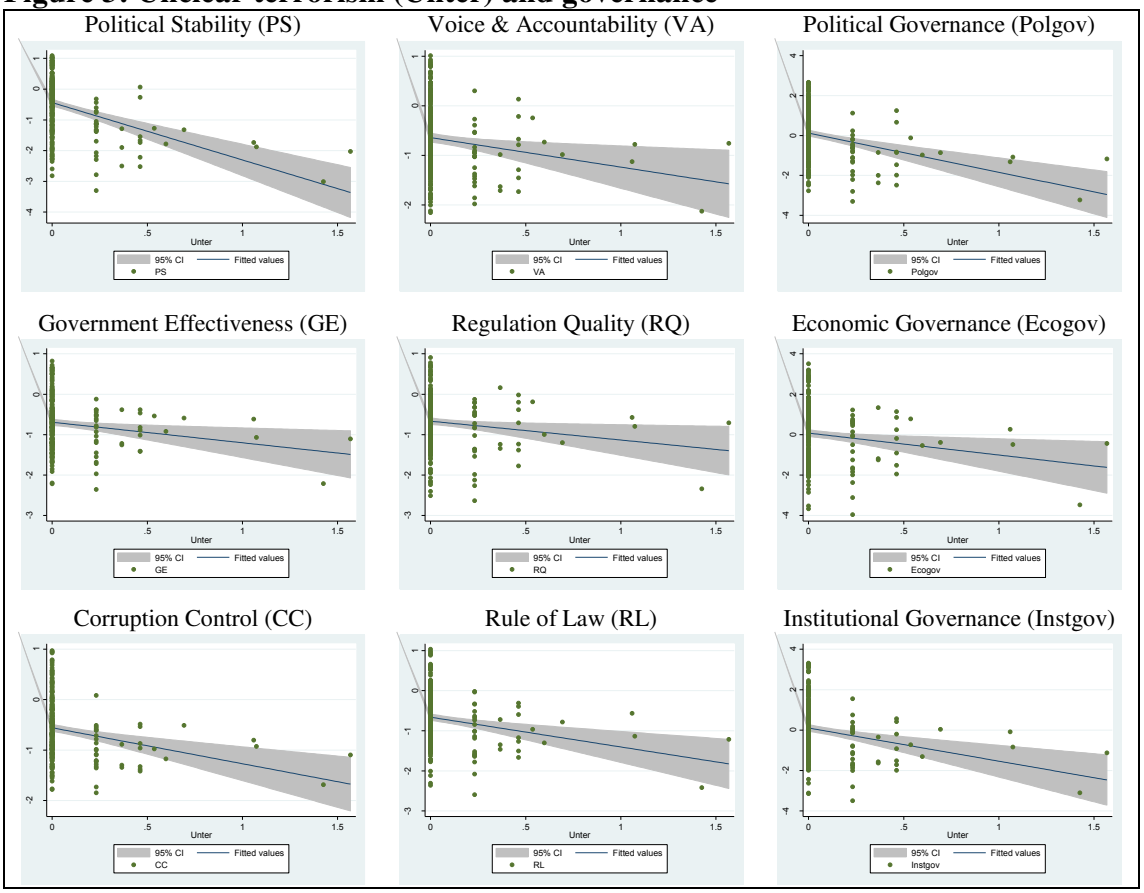
Figure 2: Transnational terrorism (Transter) and governance





Source: Authors

Figure 3: Unclear terrorism (Unter) and governance



Source: Authors

3. Data and Methodology

3.1 Data

We examine a panel of 53 African countries for the period 1996-2012 with data from: (i) the Global Terrorism Database, (ii) African Development indicators (ADI) and World Governance Indicators (WGI) of the World Bank and (iii) terrorism incidents from Enders et al. (2011) and Gailbulloev et al. (2012). The periodicity ends in the year 2012 because of constraints in data availability: (i) macroeconomic and institutional indicators from ADI of the World Bank on the one hand and (ii) terrorism variables from Enders et al. (2011) and

Gailbulloev et al. (2012) on the other hand. The periodicity begins from 1996 because government quality variables from WGI are only available from the year.

Given that the Generalised Method of Moments (GMM) estimation technique is the adopted estimation strategy, we are confronted with three major constraints. First, a basic condition for the employment of the GMM approach is that the number of years in the time series (T) should be lower than the number of countries (N). Hence, the T<N condition is required. Second, a minimum of 5 periods is required for the employment of GMM. Therefore, T≥5. The study addresses the two constraints by narrowing the sample to the period 1998-2012 and employing 3 year data averages or non-overlapping intervals (NOI) such that the number of periods is equal to 5 year (T=5). The use of data averages is also motivated by the need to mitigate short-run or business cycle disturbances that may loom substantially (Islam 1995, p. 323). Therefore we have five three-year NOI: 1998-2000; 2001-2003; 2004-2006; 2007-2009 and 2010-2012.

Four different but related terrorism dependent variables are employed: domestic, transnational, unclear and total terrorism dynamics. The dependent variable records the number of yearly terrorism incidents a country experiences. In order to avoid mathematical issues of log-transforming zeros and correct for the positive skew in the data, we are consistent with the terrorism literature in taking the natural logarithm of terrorism incidents after adding one to the base (Choi and Salehyan 2013; Bandyopadhyay et al. 2014; Efobi and Asongu 2016; Asongu and Nwachukwu 2016c).

Terrorism is defined in this study as the actual and threatened use of force by subnational actors with the purpose of employing intimidation to meet political objectives (Enders and Sandler, 2006). 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 terrorisms.

The independent variables of interest are the ten unbundled and bundled governance variables: corruption-control, the rule of law, government effectiveness, regulation quality, political stability, voice and accountability, general governance, institutional governance,

economic govenance and political governance. Whereas the first-six are unbundled governance indicators from Kaufmann et al. (2010), the last-four as bundled composite indicators by means of the Principal Component Analysis (PCA) technique which is discussed in Section 3.2.1. The first-six governance indicators are increasingly being employed in governance literature (see Gani, 2011; Andrés et al. 2015; Yerrabit and Hawkes 2015; Ajide and Raheem 2016).

In order to ensure that estimated results are not biased by omitted variables, this study includes six control variables: internet penetration, inclusive development, economic growth (GDP growth), inflation, military expenditure and a lagged value of the dependent variable. First, the internet is being increasingly used by terrorists' organisations like ISIL for propaganda, recruitment and coordination of terrorists' attacks (Argomaniz 2015; Holbrook 2015). Second, socio-economic exclusion has been documented to increase sympathy for and adherence to terrorist organisations (Bass 2014). This is specifically the case with some Western-educated fighters joining ISIL (Foster 2014). Moreover, one of the root causes of the Boko Haram of Nigeria is the less developed northern Nigerian region when compared to the more prosperous Southern part of the country (Tonwe and Eke 2013). The inequality adjusted human development index (IHDI) is used to proxy for inclusive development (see Asongu et al. 2015b) because of data availability constraints in the Gini index of inequality.

Third, economic growth is expected to decrease terrorism because it provides more financial resources with which to combat the phenomenon. This intuition is consistent with Gaibulloev and Sandler (2009) who have established that compared to high income countries which can easily absorb terrorism externalities without negative economic consequences, low income countries lack the financial resources to absorb underlying negative shocks. Fourth, chaotic inflation should intuitively be linked to political strife and violence because of *inter alia*: diminishing purchasing power and reducing domestic investment due to a negative economic outlook (Asongu and Nwachukwu 2016a). The latter point builds on the established evidence that investors prefer ambiguity-safe investment strategies (Kelsey and Le Roux 2017a, 2017b). Internal conflicts ultimately increase the likelihood for terrorist activities (Asongu and Nwachukwu 2017). Fifth, from logic and common sense, growing military expenditure is very likely to be negatively associated with terrorism ex-ante of warfare. This intuition is substantiated by recent empirical literature (see Feridun and Shahbaz 2010). Sixth, we expect the absolute value of the lagged dependent variables to fall within the interval of zero and one. This is the information criterion for evidence of catch-up in

terrorism: countries with low levels of terrorism catching-up their counterparts with higher levels.

For robustness check and/sensitivity analysis, another set of the conditioning information set is used. This new set of control variables consist of urbanization, population growth, openness/globalization and foreign aid that have been documented to affect terrorism (see Bandyopadhyay et al. 2014; Lutz and Lutz 2014, 2015). Whereas from intuition regions with high population densities (e.g. in urban areas) could more easily be targeted by terrorists, the effects of population growth and urbanization on terrorism are also contingent on the sophistication/modernisation of techniques used to trace, prevent and fight terrorism. While foreign aid has been documented to dampen terrorism (Bandyopadhyay et al. 2014), the incidence of development assistance is also contingent on dynamics of foreign aid, *inter alia*: purpose of aid (e.g. military aid versus aid to the economic sector) and type of aid (bilateral versus multilateral aid) (Asongu and Nwachukwu 2016c). In spite of the consensus in the literature that openness/globalization affects terrorism, the relevance of globalization is contingent on specific dimensions of openness (e.g. political, versus economic versus social) (see Lutz and Lutz 2014, 2015).

The definitions of variables are provided in Appendix 1, the summary statistics in Appendix 2 and the correlation matrix for initial (robustness check) regressions in Appendix 3(4). The summary statistics shows that the variables are comparable. Moreover, based on corresponding variations, we can be confident that reasonable estimated nexuses would emerge. The purpose of the correlation matrix is to mitigate concerns about multicollinearity.

3.2 Methodology

3.2.1 Principal Component Analysis

The study employs principal component analysis (PCA) for bundling governance variables (see Asongu and Nwachukwu 2016b). The PCA is a statistical technique that is used to reduce a set of highly correlated variables into a smaller set of uncorrelated indicators called principal components (PCs). The correlation matrix in Appendix 3 shows the high degree of substitution between governance variables. The Kaiser (1974) and Jolliffe (2002) criterion is used to retain common factors. The authors have suggested that only PCs with an eigenvalue greater than one or the mean should be retained. From Table 1, we notice that the first PC corresponding to general governance has an eigenvalue of 4.787. Moreover the corresponding variation associated with the underlying PC is 79.7%, which implies that more than 79% of information in the six governance indicators is contained in the general

governance composite indicator (*G.gov*). The narrative on eigenvalues and total variability is consistent with the other composite indicators, notably: political governance (*Polgov*) has an eigenvalue of 1.647 with more than 82% of information in the constituent indicators (political stability/no violence and voice & accountability); economic governance (*Ecogov*) has an eigenvalue of 1.863 with more than 93% of variability from constituent indicators (government effectiveness and regulation quality) and institutional governance (*Instgov*) displays an eigenvalue of 1.867 with approximately 94% of information contained in the rule of law and corruption-control. *Polgov* (or political governance) is defined as the election and replacement of political leaders. *Ecogov* (or economic governance) is the formulation and implementation of policies that deliver public commodities. *Instgov* (or institutional governance) is the respect by the State and citizens of institutions that govern interactions between them. The definitions are consistent with Kaufmann (2007a, 2007b, 2010) and recent governance literature on the bundling of institutions (Andrés et al. 2015; Asongu 2016a).

Table 1: Principal Component Analysis (PCA) for Governance (Gov)

Principal Components	Component Matrix(Loadings)						Proportion	Cumulative Proportion	Eigen Value
	VA	PS	RQ	GE	RL	CC			
First PC (G.Gov)	0.385	0.370	0.412	0.426	0.440	0.412	0.797	0.797	4.787
Second PC	0.093	0.850	-0.364	-0.343	0.007	-0.140	0.072	0.870	0.437
Third PC	0.862	-0.179	0.122	-0.192	-0.182	-0.373	0.058	0.929	0.353
First PC (Polgov)	0.707	0.707	---	---	---	---	0.823	0.823	1.647
Second PC	-0.707	0.707	---	---	---	---	0.176	1.000	0.352
First PC (Ecogov)	---	---	0.707	0.707	---	---	0.931	0.931	1.863
Second PC	---	---	-0.707	0.707	---	---	0.068	1.000	0.137
First PC (Instgov)	---	---	---	---	0.707	0.707	0.933	0.933	1.867
Second PC	---	---	---	---	-0.707	0.707	0.066	1.000	0.132

P.C: Principal Component. VA: Voice & Accountability. RL: Rule of Law. R.Q: Regulation Quality. GE: Government Effectiveness. PS: Political Stability. CC: Control of Corruption. G.Gov (General Governance): First PC of VA, PS, RQ, GE, RL & CC. Polgov (Political Governance): First PC of VA & PS. Ecogov (Economic Governance): First PC of RQ & GE. Instgov (Institutional Governance): First PC of RL & CC.

It is important to devote some space to clarifying potential concerns that might result from using PC regressors. As far as we have reviewed, these concerns were first raised by Pagan (1984, p. 242). The author maintained that three principal concerns are associated with augmented regressors or second-stage variables derived from an initial regression, notably issues: about efficiency, consistency and inferential validity of estimations. Consistent with the narrative, whereas a *two-step* process results in consistent and efficient estimates, not all corresponding inferences are valid. The inferential concern broadly aligns with an abundant supply of literature devoted to articulating the same concern: (Oxley and McAleer 1993; McKenzie and McAleer 1997; Ba and Ng 2006; Westerlund and Urbain 2013a).

Within the specific framework of PC-derived regressors, to the best of our knowledge, Westerlund and Urbain (2012, 2013b) have provided insights into tackling the issue. The authors have built on more contemporary literature (Stock and Watson 2002; Bai, 2003; Pesaran 2006; Bai 2009; Greenaway-McGrevy et al. 2012) to establish that normal inferences are possible with PC regressors in so far as the estimated coefficients converge to their real values at the rate of rate $\sqrt{NT}$, where N (T) is the number of cross-sections (time series). Whereas the authors have emphasised that T and N should be sufficiently larger for this convergence to be feasible, as far as we know, they have stopped short of eliciting how "large is large". Within the context of this study, we are confronted with three major concerns. First, we cannot stretch N further because we have engaged 53 countries in Africa. The exclusion of South Sudan is because data for the country is not available before 2011. Second, extending T to a period before 1996 is not possible because good governance indicators are only available from 1996. Third, we cannot employ annual periodicities instead of non-overlapping intervals because we have several analytical and methodological constraints. Moreover, recent African development literature on unbundling institutions (albeit with lower values of T and N) has established that inferences with bundled governance indicators are valid (Asongu and Nwachukwu 2015a; Asongu 2016a).

3.2.2 Estimation technique

Previous literature on fighting terrorism has employed the following estimation approaches: Ordinary Least Squares (OLS) (Tavares 2004; Bravo and Dias 2006); Negative Binomial and Zero-inflated Negative Binomial regressions (Drakos and Gofas 2006; Savun and Phillips 2009); the multilevel Poisson model (Lee 2013); logistic regression (Kavanagh 2011; Bhavani 2011) and Generalized Method of Moments (GMM) (Bandyopadhyay et al. 2014). We adopt the GMM approach for reasons that are supported by both empirical literature and requirements of the estimation approach.

In the light of the above, at least four main factors motivate the choice of a GMM estimation technique (Asongu and De Moor, 2017; Tchamyou and Asongu, 2017). First, the number of years per country (T) is lower than the number of countries (N). Second, the estimation approach controls for potential endogeneity in all regressors. In essence, in addition to controlling for simultaneity by instrumenting regressors, the bite on endogeneity is also increased by accounting for time invariant omitted variables. It is important to note that most of the highlighted empirical approaches in the terrorism literature have failed to address the concerns about endogeneity (e.g. OLS and logistic regressions). Moreover, Krieger and

Meierrieks (2015) have recently shown that it is difficult to establish robust results without tackling this concern of endogeneity.

Third, cross-country differences are not eliminated by the estimation technique. Fourth, the *system* estimator corrects for small sample bias issues in the *difference* estimator. It is essentially for this fourth motivation that Bond et al. (2001, pp. 3-4) have recommended that the *system* GMM estimator (Arellano and Bover 1995; Blundell and Bond 1998) be preferred to the *difference* estimator (Arellano and Bond, 1991).

Within the specific framework of this study, we adopt the Roodman (2009a, 2009b) extension of Arellano and Bover (1995) that employs forward orthogonal deviations instead of first differences. The estimation technique has been documented to: limit the proliferation of instruments or restrict over-identification and control for cross-sectional dependence (see Love and Zicchino 2006; Baltagi 2008). A *two-step* approach is adopted in the specification because it controls for heteroscedasticity. In essence, the *one-step* approach is consistent with homoscedasticity.

The following equations in levels (1) and first difference (2) summarize the standard system GMM estimation procedure.

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

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

where $T_{i,t}$, is a terrorism variable (domestic, transnational, unclear and total) of country i at period t; $G_{i,t}$ is a governance indicator (political, economic or institutional governance); σ_0 is a constant; τ represents the coefficient of autocorrelation; W is the vector of control variables (*internet penetration, inclusive development, economic growth, inflation,* and *military expenditure*), η_i is the country-specific effect, ξ_t is the time-specific constant and $\varepsilon_{i,t}$ the error term.

3.2.3 Exclusion restriction

Consistent with Love and Zicchino (2006), Dewan and Ramaprasad (2014) and Asongu and De Moor (2017), we treat all independent variables as suspected endogenous or predetermined variables. Therefore, the *gmmstyle* is adopted for them. Only years are treated

as exogenous and the method for treating the *ivstyle* (years) is "iv(years, eq(diff))" because it is not possible for the years to become endogenous in first-difference (see Roodman 2009b).

As recently documented by Asongu and De Moor (2017), in order to address the concern about simultaneity, lagged regressors are used as instruments for forward-differenced variables. In essence, in order to remove fixed effects that could affect the investigated nexuses, Helmet transformations are performed for the regressors, in line with Arellano and Bover (1995) and Love and Zicchino (2006). These transformations consist of forward mean-differencing of the variables: instead of subtracting the pervious observation from the contemporaneous one (see Roodman 2009b, p. 104), the mean of all future observations is subtracted from the variables.

We further argue that years or instruments which are treated as strictly exogenous affect the outcome variable only via the endogenous explaining variables. The statistical validity of this exclusion restriction is assessed with the Difference in Hansen Test (DHT) for instrument exogeneity. In essence, the null hypothesis of the test should not be rejected for the instruments to explain the outcome variable exclusively through the endogenous explaining variables. In a standard instrumental variable (IV) procedure, failure to reject the null hypothesis of the Sargan Overidentifying Restrictions (OIR) test is an indication that the instruments do not elicit the outcome variable beyond engaged channels of endogenous explaining variables. While this information criterion has been substantially used in the literature employing an IV estimation strategy (see Beck et al. 2003), the DHT in a GMM procedure is used to assesses whether years exhibit strict exogeneity, by not explaining terrorism beyond the proposed channels (or endogenous explaining variables). Hence, reported findings should confirm the validity of the exclusion restriction if the null hypotheses of the DHT corresponding to IV (year, eq(diff)) are not rejected.

4. Empirical analysis

4.1 Presentation of results

Four main information criteria are used to assess the validity of a GMM model with forward orthogonal deviations (See Asongu and De Moor 2017). First, the null hypothesis of the second-order Arellano and Bond autocorrelation test (AR(2)) in difference should not be rejected because it argues for the absence of autocorrelation in the residuals. Second, the alternative hypothesis of the Sargan (Hansen) over-identification restrictions (OIR) test should be rejected because it is of the position that the instruments are correlated with the error terms and hence, not valid. It is important to note that the Hansen (Sargan) OIR test is

robust (not robust) but weakened (not weakened) by instruments. In essence, for the restriction of overidentification, we have ensured that rule of thumb or criterion for limiting the proliferation of instruments is met. Accordingly, for each specification, the number of instruments is lower than the corresponding number of countries. In addition, the Hansen OIR test is further examined with the Difference in Hansen Test (DHT) for instrument exogeneity. Fourth, the Fisher test is also provided to assess the joint validity of estimated coefficients. Since the Hansen test is robust but weakened by instruments (compared to the Sargan test that is not robust, but not weakened by instruments), the Hansen test is prioritised to the Sargan test and the issue of instrument proliferation is addressed by respecting the rule of thumb for the avoidance of instrument proliferation, notably: the number of instruments should be less than the number of cross sections in each specification.

Tables 2, 3, 4 and 5 respectively show findings for political governance, economic governance, institutional governance and general governance. The first-three tables have three-different sets of specifications which correspond to respective composite indicators and their two constituents.

The following findings can be established from Table 2 on the nexus between political governance and terrorism. First, political governance and its constituents (voice & accountability and political stability) respectively have negative effects on all terrorism dynamics. Second, irrespective of governance variables, the negative effect increases consistently with the following order to increasing negative magnitude: unclear terrorism, transnational terrorism, domestic terrorism and total terrorism. Third, the terrorism variables are stationary because their lagged absolute values are between zero and one. Fourth, most of the significant control variables have the expected signs: (i) inclusive development, military expenditure and economic growth decrease terrorism while (ii) internet penetration increases it.

In Table 3, with the exceptions of: (i) unclear terrorism for which economic governance and its constituents are not significant and (ii) total terrorism for which the effect of regulation quality is not significant; economic governance and its constituent components negatively affect terrorism dynamics. The negative magnitude on domestic terrorism is consistently higher than that on transnational terrorism. There is consistent evidence of convergence and most of the significant control variables have expected signs.

The discourse of findings in Table 4 is consistent with that of Table 3 on nexuses between institutional governance and terrorism. In Table 5 on linkages between general governance and terrorism: (i) the effect of governance is consistently negative on terrorism

dynamics; (ii) there is evidence of convergence and (iii) the significant control variables have the expected signs.

Table 2: Political governance and terrorism

	Dependent Variables: Terrorism Dynamics											
	Voice and Accountability				Political Stability				Political Governance			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	**0.282*** **	-0.025	**0.069*** **	0.331	**0.243*** **	**0.200*** **	**0.074*** **	**0.262** **	**0.639*** **	**0.406*** **	**0.119*** **	**0.593** **
	(0.225)	(0.787)	**(0.006)**	(0.221)	**(0.004)**	**(0.003)**	**(0.004)**	**(0.013)**	**(0.003)**	**(0.000)**	**(0.000)**	**(0.036)**
Domestic Terror(-1)	**0.822*** **		---	---	**0.716*** **	---	---	---	**0.715*** **	---	---	---
	(0.000)				**(0.000)**				**(0.000)**			
Trans. Terror(-1)	---	**0.342*** **	---	---	---	**0.188** **	---	---	---	0.159	---	---
		(0.004)				**(0.044)**				(0.129)		
Unclear Terror (-1)	---	---	**0.745*** **	---	---	---	**0.616*** **	---	---	---	**0.540*** **	---
			(0.000)				**(0.000)**				**(0.000)**	
Total Terror(-1)	---	---	---	**0.654*** **		---	---	**0.540*** **	---	---	---	**0.515*** **
				(0.000)				**(0.000)**				**(0.000)**
Voice & Accountability	**-0.307*** **	**-0.172*** **	**-0.008***	**-0.317*** **	---	---	---	---	---	---	---	---
	(0.000)	**(0.001)**	**(0.062)**	**(0.000)**								
Political Stability	---		---	---	**-0.464*** **	**-0.382*** **	**-0.052*** **	**-0.560*** **	---	---	---	---
					(0.000)	**(0.000)**	**(0.000)**	**(0.000)**				
Political governance	---		---	---	---	---	---	---	**-0.343*** **	**-0.316*** **	**-0.025*** **	**-0.447*** **
									(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
Internet	**0.007** **	**0.002***	-0.00008	**0.006***	**0.013*** **	**0.010*** **	0.0009	**0.017*** **	**0.013*** **	**0.009*** **	0.0001	**0.018*** **
	(0.010)	**(0.075)**	(0.925)	**(0.053)**	**(0.000)**	**(0.000)**	(0.387)	**(0.000)**	**(0.000)**	**(0.001)**	(0.890)	**(0.002)**
Inclusive development	**-0.020*** **	-0.003	-0.0001	**-0.017*** **	**-0.026*** **	**-0.006*** **	**-0.0007*** **	**-0.023*** **	**-0.017*** **	0.001	0.00001	**-0.011*** **
	(0.000)	(0.245)	(0.413)	**(0.000)**	**(0.000)**	**(0.001)**	**(0.005)**	**(0.000)**	**(0.000)**	(0.505)	(0.956)	**(0.008)**
GDPg growth	0.0004	-0.007	**-0.004** **	-0.008	-0.016	**-0.022*** **	**-0.006** **	**-0.028** **	-0.019	**-0.025** **	-0.003	-0.009
	(0.978)	(0.370)	**(0.020)**	(0.646)	(0.141)	**(0.004)**	**(0.013)**	**(0.018)**	(0.241)	**(0.013)**	(0.191)	(0.600)
Inflation	-0.001	**0.003*** **	**-0.001*** **	0.001	**-0.005*** **	**-0.001***	**-0.002*** **	**-0.004*** **	**-0.006*** **	**-0.001***	**-0.002*** **	**-0.005*** **
	(0.477)	**(0.002)**	**(0.000)**	(0.630)	**(0.001)**	**(0.079)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.086)**	**(0.000)**	**(0.002)**
Military Expenditure	**-0.140***	-0.011	**-0.019***	-0.109	**-0.105** **	**-0.072** **	-0.007	**-0.102** **	**-0.176*** **	**-0.056***	**-0.028*** **	**-0.135***
	(0.075)	(0.725)	**(0.085)**	(0.267)	**(0.011)**	**(0.033)**	(0.497)	**(0.035)**	**(0.005)**	**(0.069)**	**(0.002)**	**(0.088)**
AR(1)	(0.010)	(0.011)	(0.057)	(0.016)	(0.022)	(0.020)	(0.058)	(0.011)	(0.013)	(0.017)	(0.081)	(0.017)
AR(2)	**(0.830)**	**(0.715)**	**(0.296)**	**(0.653)**	**(0.454)**	**(0.934)**	**(0.312)**	**(0.260)**	**(0.569)**	**(0.903)**	**(0.296)**	**(0.306)**
Sargan OIR	(0.038)	(0.001)	(0.054)	(0.006)	(0.026)	(0.001)	(0.059)	(0.007)	(0.032)	(0.001)	(0.049)	(0.007)
Hansen OIR	(0.037)	**(0.656)**	**(0.720)**	**(0.150)**	**(0.185)**	**(0.425)**	**(0.548)**	**(0.201)**	(0.050)	**(0.668)**	**(0.828)**	**(0.141)**
DHT for instruments												
(a)Instruments in levels												
H excluding group	**(0.116)**	**(0.233)**	**(0.662)**	**(0.189)**	(0.072)	**(0.175)**	**(0.337)**	(0.033)	(0.088)	**(0.162)**	**(0.614)**	(0.050)
Dif(null, H=exogenous)	(0.070)	**(0.847)**	**(0.616)**	**(0.219)**	**(0.470)**	**(0.650)**	**(0.628)**	**(0.679)**	**(0.120)**	**(0.920)**	**(0.793)**	**(0.445)**
(b) IV (years, eq(diff))												
H excluding group	**(0.127)**	**(0.777)**	**(0.768)**	**(0.200)**	**(0.131)**	**(0.279)**	**(0.456)**	**(0.142)**	(0.073)	**(0.656)**	**(0.714)**	**(0.207)**
Dif(null, H=exogenous)	(0.031)	**(0.211)**	**(0.334)**	**(0.183)**	**(0.586)**	**(0.874)**	**(0.643)**	**(0.612)**	**(0.151)**	**(0.457)**	**(0.855)**	**(0.149)**
Fisher	**378.41*** **	**258.93*** **	**91.80*** **	**205.41*** **	**899.84*** **	**234.88*** **	**95.26*** **	**894.29*** **	**656.84*** **	**176.60*** **	**49.39*** **	**748.78*** **
Instruments	30	30	30	30	30	30	30	30	30	30	30	30
Countries	49	49	49	49	49	49	49	49	49	49	49	49
Observations	167	167	167	167	167	167	167	167	167	167	167	167

*,**,***: 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 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 OIR and DHT tests.

Table 3: Economic governance and terrorism

	Dependent Variables: Terrorism Dynamics											
	Regulation Quality				Government Effectiveness				Economic Governance			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	**0.301*** **	0.094	0.028	**0.497*** **	0.015	0.136	**0.042*** **	0.224	**0.320** **	**0.293*** **	**0.079*** **	**0.514*** **
	(0.004)	(0.266)	(0.130)	**(0.001)**	(0.910)	(0.108)	**(0.001)**	(0.214)	**(0.017)**	**(0.004)**	**(0.000)**	**(0.005)**
Domestic Terror(-1)	**0.882*** **	---	---	---	**0.872*** **	---	---	---	**0.941*** **	---	---	---
	(0.000)				**(0.000)**				**(0.000)**			
Trans. Terror(-1)	---	**0.323*** **	---	---	---	**0.437*** **	---	---	---	**0.398*** **	---	---
		(0.000)				**(0.000)**				**(0.000)**		
Unclear Terror (-1)	---	---	**0.651*** **	---	---	---	**0.544*** **	---	---	---	**0.603*** **	---
			(0.000)				**(0.000)**				**(0.000)**	
Total Terror(-1)	---	---	---	**0.774*** **	---	---	---	**0.726*** **	---	---	---	**0.774*** **
				(0.000)				**(0.000)**				**(0.000)**
Regulation Quality	**-0.129*** **	**-0.092*** **	0.002	0.025	---	---	---	---	---	---	---	---
	(0.000)	**(0.004)**	(0.696)	(0.668)								
Government Effectiveness	---	---	---	---	**-0.307*** **	**-0.161*** **	-0.006	**-0.237*** **	---	---	---	---
					(0.000)	**(0.000)**	(0.529)	**(0.000)**				
Economic Governance	---	---	---	---	---	----	---	---	**-0.103*** **	**-0.056*** **	-0.002	**-0.055** **
									(0.000)	**(0.000)**	(0.652)	**(0.024)**
Internet	**0.007*** **	0.0007	-0.0002	0.002	**0.016*** **	**0.004*** **	-0.0009	**0.014*** **	**0.011*** **	0.001	-0.001	**0.007*** **
	(0.000)	(0.642)	(0.772)	(0.231)	**(0.000)**	**(0.007)**	(0.407)	**(0.000)**	**(0.000)**	(0.268)	(0.345)	**(0.002)**
Inclusive development	**-0.027*** **	**-0.005*** **	**-0.0005*** **	**-0.030*** **	**-0.022*** **	**-0.006*** **	-0.0001	**-0.021*** **	**-0.026*** **	**-0.005*** **	-0.0002	**-0.026*** **
	(0.000)	**(0.002)**	**(0.004)**	**(0.000)**	**(0.000)**	**(0.000)**	(0.515)	**(0.000)**	**(0.000)**	**(0.001)**	(0.207)	**(0.000)**
GDPg growth	0.007	**-0.018** **	-0.001	-0.001	0.008	**-0.016***	-0.001	-0.006	0.006	**-0.019** **	-0.001	-0.012
	(0.536)	**(0.045)**	(0.441)	(0.885)	(0.585)	**(0.072)**	(0.532)	(0.688)	(0.676)	**(0.028)**	(0.408)	(0.336)
Inflation	0.001	**0.003*** **	**-0.001*** **	**0.005*** **	-0.0001	**0.002*** **	**-0.001*** **	0.002	0.0006	**0.003*** **	**-0.001*** **	**0.003** **
	(0.163)	**(0.000)**	**(0.000)**	**(0.000)**	(0.917)	**(0.001)**	**(0.000)**	(0.166)	(0.583)	**(0.000)**	**(0.000)**	**(0.042)**
Military Expenditure	**-0.115** **	-0.025	0.006	-0.097	**-0.100** **	**-0.079*** **	-0.007	-0.110	**-0.102** **	**-0.047***	-0.011	-0.115
	(0.014)	(0.287)	(0.560)	(0.149)	**(0.049)**	**(0.007)**	(0.390)	(0.174)	**(0.037)**	**(0.063)**	(0.299)	(0.116)
AR(1)	(0.010)	(0.018)	(0.075)	(0.005)	(0.010)	(0.014)	(0.103)	(0.007)	(0.008)	(0.015)	(0.075)	(0.006)
AR(2)	**(0.619)**	**(0.799)**	**(0.290)**	**(0.832)**	**(0.716)**	**(0.928)**	**(0.298)**	**(0.756)**	**(0.663)**	**(0.875)**	**(0.289)**	**(0.789)**
Sargan OIR	(0.034)	(0.000)	(0.046)	(0.012)	(0.020)	(0.000)	**(0.104)**	(0.003)	(0.051)	(0.000)	(0.072)	(0.010)
Hansen OIR	**(0.240)**	**(0.385)**	**(0.232)**	**(0.233)**	**(0.153)**	**(0.449)**	**(0.703)**	**(0.148)**	**(0.213)**	**(0.549)**	**(0.811)**	**(0.192)**
DHT for instruments												
(a)Instruments in levels												
H excluding group	**(0.112)**	**(0.394)**	**(0.622)**	**(0.104)**	(0.070)	**(0.273)**	**(0.574)**	**(0.031)**	**(0.136)**	**(0.356)**	**(0.502)**	**(0.055)**
Dif(null, H=exogenous)	**(0.477)**	**(0.381)**	**(0.132)**	**(0.482)**	**(0.405)**	**(0.564)**	**(0.649)**	**(0.565)**	**(0.386)**	**(0.613)**	**(0.831)**	**(0.548)**
(b) IV (years, eq(diff))												
H excluding group	**(0.354)**	**(0.415)**	**(0.671)**	**(0.297)**	**(0.310)**	**(0.299)**	**(0.828)**	**(0.226)**	**(0.281)**	**(0.421)**	**(0.837)**	**(0.232)**
Dif(null, H=exogenous)	**(0.143)**	**(0.307)**	**(0.018)**	**(0.201)**	(0.072)	**(0.876)**	**(0.203)**	**(0.138)**	**(0.187)**	**(0.769)**	**(0.395)**	**(0.226)**
Fisher	**592.87*** **	**196.26*** **	**125.54*** **	**198.18*** **	**507.85*** **	**90.25*** **	**55.94*** **	**270.06*** **	**639.26*** **	**136.62*** **	**84.78*** **	**228.66*** **
Instruments	30	30	30	30	30	30	30	30	30	30	30	30
Countries	49	49	49	49	49	49	49	49	49	49	49	49
Observations	167	167	167	167	167	167	167	167	167	167	167	167

*,**,***: 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 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 OIR and DHT tests.

Table 4: Institutional governance and terrorism

	Dependent Variables: Terrorism Dynamics											
	Rule of Law				Corruption-Control				Institutional Governance			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	**0.210***	0.111	**0.041****	**0.440*****	0.179	0.061	**0.058*****	**0.271****	0.236	**0.187****	**0.051****	**0.396****
	(0.079)	(0.144)	**(0.029)**	**(0.003)**	(0.130)	(0.398)	**(0.003)**	**(0.033)**	(0.115)	**(0.048)**	**(0.010)**	**(0.018)**
Domestic Terror(-1)	**0.846*****	---	---	---	**0.930*****	---	---	---	**0.939*****	---	---	---
	(0.000)				**(0.000)**				**(0.000)**			
Trans. Terror(-1)	---	**0.337*****	---	---	---	**0.415*****	---	---	---	**0.363*****	---	---
		(0.001)				**(0.000)**				**(0.000)**		
Unclear Terror (-1)	---	---	**0.539*****	---	---	---	**0.594*****	---	---	---	**0.620*****	---
			(0.000)				**(0.000)**				**(0.000)**	
Total Terror(-1)	---	---	---	**0.669*****	---	---	---	**0.726*****	---	---	---	**0.723*****
				(0.000)				**(0.000)**				**(0.000)**
Rule of Law	**-0.251*****	**-0.113*****	-0.009	-0.062	---	---	---	---	---	---	---	---
	(0.000)	**(0.006)**	(0.496)	(0.466)								
Corruption-Control	---	---	---	---	**-0.263*****	**-0.161*****	-0.016	**-0.213*****	---	---	---	---
					(0.000)	**(0.000)**	(0.159)	**(0.000)**				
Institutional Governance	---	---	---	---	---	---	---	---	**-0.156*****	**-0.083*****	-0.008	**-0.108*****
									(0.000)	**(0.000)**	(0.171)	**(0.000)**
Internet	**0.011*****	**0.002***	-0.001	**0.005****	**0.009*****	**0.003****	-0.0004	**0.009*****	**0.013*****	**0.004*****	-0.0003	**0.011*****
	(0.000)	**(0.075)**	(0.327)	**(0.015)**	**(0.000)**	**(0.042)**	(0.700)	**(0.001)**	**(0.000)**	**(0.009)**	(0.733)	**(0.000)**
Inclusive development	**-0.027*****	**-0.006*****	-0.0002	**-0.025*****	**-0.027*****	**-0.005*****	-0.0003	**-0.024*****	**-0.028*****	**-0.005*****	-0.00009	**-0.024*****
	(0.000)	**(0.001)**	(0.231)	**(0.000)**	**(0.000)**	**(0.000)**	(0.162)	**(0.000)**	**(0.000)**	**(0.003)**	(0.685)	**(0.000)**
GDPg growth	-0.0006	**-0.019****	-0.001	-0.006	0.004	**-0.013***	-0.0005	-0.003	-0.0002	**-0.017****	-0.002	-0.007
	(0.961)	**(0.029)**	(0.650)	(0.614)	(0.757)	**(0.099)**	(0.801)	(0.760)	(0.985)	**(0.048)**	(0.408)	(0.549)
Inflation	-0.0003	**0.003*****	**-0.001*****	**0.004****	0.0003	**0.003*****	**-0.001*****	**0.003****	-0.0007	**0.003*****	**-0.001*****	0.002
	(0.795)	**(0.000)**	**(0.000)**	**(0.022)**	(0.747)	**(0.000)**	**(0.000)**	**(0.019)**	(0.532)	**(0.000)**	**(0.000)**	(0.102)
Military Expenditure	**-0.109****	-0.041	-0.006	-0.080	**-0.121****	**-0.064****	**-0.001*****	-0.086	**-0.113****	**-0.053****	-0.008	-0.081
	(0.044)	(0.109)	(0.514)	(0.290)	**(0.020)**	**(0.018)**	**(0.000)**	(0.175)	**(0.022)**	**(0.047)**	(0.428)	(0.239)
AR(1)	(0.013)	(0.016)	(0.097)	(0.010)	(0.009)	(0.014)	(0.088)	(0.010)	(0.011)	(0.016)	(0.073)	(0.010)
AR(2)	**(0.842)**	**(0.809)**	**(0.305)**	**(0.781)**	**(0.632)**	**(0.872)**	**(0.283)**	**(0.828)**	**(0.764)**	**(0.854)**	**(0.293)**	**(0.756)**
Sargan OIR	(0.019)	(0.001)	(0.033)	(0.004)	(0.078)	(0.001)	**(0.103)**	(0.016)	(0.061)	(0.001)	(0.063)	(0.010)
Hansen OIR	**(0.119)**	**(0.609)**	**(0.803)**	**(0.114)**	**(0.121)**	**(0.429)**	**(0.432)**	**(0.140)**	(0.074)	**(0.460)**	**(0.580)**	(0.070)
DHT for instruments												
(a)Instruments in levels												
H excluding group	(0.080)	**(0.261)**	**(0.696)**	**(0.168)**	(0.079)	**(0.156)**	**(0.379)**	(0.016)	(0.035)	**(0.242)**	**(0.398)**	(0.007)
Dif(null, H=exogenous)	**(0.299)**	**(0.772)**	**(0.710)**	**(0.176)**	**(0.306)**	**(0.685)**	**(0.449)**	**(0.685)**	**(0.312)**	**(0.610)**	**(0.617)**	**(0.621)**
(b) IV (years, eq(diff))												
H excluding group	**(0.177)**	**(0.690)**	**(0.827)**	**(0.385)**	**(0.184)**	**(0.360)**	**(0.618)**	**(0.236)**	**(0.147)**	**(0.362)**	**(0.525)**	**(0.165)**
Dif(null, H=exogenous)	**(0.146)**	**(0.267)**	**(0.399)**	(0.022)	**(0.139)**	**(0.567)**	**(0.130)**	**(0.112)**	(0.085)	**(0.666)**	**(0.542)**	(0.061)
Fisher	**388.55*****	**175.20*****	**34.60*****	**198.90*****	**764.93*****	**96.03*****	**53.27*****	**252.41*****	**650.05*****	**97.39*****	**50.40*****	**267.44*****
Instruments	30	30	30	30	30	30	30	30	30	30	30	30
Countries	49	49	49	49	49	49	49	49	49	49	49	49
Observations	167	167	167	167	167	167	167	167	167	167	167	167

*,**,***: 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 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 OIR and DHT tests.

Table 5: General governance and terrorism

	Dependent variables: Terrorism Dynamics			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	**0.345****	**0.366*****	**0.089*****	**0.390***
	(0.034)	**(0.000)**	**(0.000)**	**(0.066)**
Domestic Terror(-1)	**0.911*****	---	---	---
	(0.000)			
Trans. Terror(-1)	---	**0.343*****	---	---
		(0.000)		
Unclear Terror (-1)	---	---	**0.592*****	---
			(0.000)	
Total Terror(-1)	---	---	---	**0.717*****
				(0.000)
General Governance	**-0.112*****	**-0.083*****	**-0.006***	**-0.109*****
	(0.000)	**(0.000)**	**(0.067)**	**(0.000)**
Internet	**0.014*****	**0.006*****	-0.0002	**0.014*****
	(0.000)	**(0.001)**	(0.830)	**(0.000)**
Inclusive development	**-0.024*****	-0.002	0.0001	**-0.021*****
	(0.000)	(0.198)	(0.501)	**(0.000)**
GDPg growth	-0.001	**-0.023*****	-0.001	-0.016
	(0.901)	**(0.006)**	(0.539)	(0.211)
Inflation	-0.001	**0.001****	**-0.001*****	0.0002
	(0.283)	**(0.026)**	**(0.000)**	(0.874)
Military Expenditure	**-0.121****	**-0.068*****	**-0.019****	**-0.127***
	(0.024)	**(0.006)**	**(0.046)**	**(0.079)**
AR(1)	(0.010)	(0.015)	(0.066)	(0.009)
AR(2)	**(0.832)**	**(0.935)**	**(0.285)**	**(0.696)**
Sargan OIR	(0.035)	(0.000)	(0.085)	(0.004)
Hansen OIR	(0.050)	**(0.608)**	**(0.653)**	(0.076)
DHT for instruments				
(a)Instruments in levels				
H excluding group	(0.053)	**(0.255)**	**(0.514)**	(0.012)
Dif(null, H=exogenous)	**(0.169)**	**(0.775)**	**(0.626)**	**(0.516)**
(b) IV (years, eq(diff))				
H excluding group	**(0.164)**	**(0.491)**	**(0.530)**	**(0.163)**
Dif(null, H=exogenous)	(0.032)	**(0.736)**	**(0.769)**	(0.072)
Fisher	**590.23*****	**116.84*****	**45.91*****	**314.47*****
Instruments	30	30	30	30
Countries	49	49	49	49
Observations	167	167	167	167

*,**,***: 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 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 OIR and DHT tests.

4.2 Robustness checks using alternative specifications and conditioning information sets

This section investigates the robustness of the findings established in Section 4.1. Accordingly, we assess whether the established effects withstand further empirical scrutiny when an alternative specification and a different conditioning information set are employed. The alternative modeling consists of including the lags of other terrorism variables in the specification whereas the new set of control variables include: urbanization, population growth, foreign aid and openness in terms of foreign direct investment and trade.

The following findings can be established in Tables 6 on the nexus between political governance and terrorism. First, for the most part, political governance and its constituents

(voice & accountability and political stability) respectively have negative effects on terrorism. Exceptions to these include: unclear terrorism in regressions pertaining to political stability and political governance on the one hand and on the other hand, insignificant effects on domestic, unclear and total terrorism from "voice & accountability"-oriented estimations. Second, we do not engage the expected signs of the lagged terrorism variables because they are highly correlated among themselves. In essence, in presence of multicollinearity, variables enter into conflict and not all emerge with the expected signs in the estimation output (see Beck et al. 2003). It is important to note that such issues of multicollinearity do not concern the independent variables of interest (or governance indicators) employed in the study. Third, the order of magnitude in the significance of estimated coefficients established in Table 2 is not apparent in Table 6.

In Table 7, regulation quality reduces transnational terrorism whereas government effectiveness decreases both transitional and unclear terrorism. In Table 8, institutional governance and its constitutions (corruption-control and the rule of law) mitigate transnational terrorism, while the rule of law (institutional governance) further reduces unclear (total) terrorism. Both transnational and unclear terrorism are significantly curbed by general governance in Table 9. Most of the control variables in Table 6-9 are significant. The findings in Tables 2-9 are also robust to the inclusion of trend instead of year fixed effects. Unfortunately, eight more tables cannot be reported because of space constraint.

The following are more distinctive features between baseline regressions (Tables 2-5) and robustness checks (Tables 6-9). First, whereas political governance and its constituents consistently have negative effects on terrorism in baseline regressions (Table 2), in the robustness checks (Table 6), the effects of political governance and constituents are not significant on unclear terrorism. Moreover, "voice & accountability" does not significantly influence domestic terrorism. Second, economic governance and its constituents largely affect terrorism negatively in baseline regressions, with the exception of a consistent insignificant effect on unclear terrorism (Table 3). Conversely, for the most part, in the robustness checks (Table 7), the corresponding effects are not significant on at least two terrorism dynamics. Moreover, effects of domestic terrorism and total terrorism are consistently insignificant. Third, with regard to institutional governance, the comparative insights between Table 3 and Table 7 are broadly consistent with the differences between Table 4 and Table 8. Moreover, from the perspective of general governance, the underlying comparative insights from Table 3 (versus Table 7) and Table 4 (versus Table 8) can also be extended to differences between Table 5 (in baseline regressions) and Table 9 (for robust

regressions). This is essentially because, whereas the findings in the baseline regressions pertaining to general governance are overwhelmingly significant, corresponding results in robustness specifications are not significant on domestic terrorism and total terrorism.

We further attempt to validate the GMM results by exploring what the traditional fixed effects models suggest. Hence, we replicate Tables 2-9 using fixed effects regressions[4]. In what follows, the first point compares the baseline regressions with the fixed effects regressions whereas the second point compares the robustness check results with the fixed effects estimations. Hence, the term "expected" is used to articulate consistency with the GMM results. First, from the baseline regressions, fixed effects estimates have: (i) expected significant signs with a higher negative magnitude for political governance regressions; (ii) unexpected insignificant positive signs for economic governance regressions (iii) expected insignificant negative effects from institutional governance regressions and (iv) expected negative signs with a higher magnitude in regressions pertaining to general governance. Second, with regard to the robustness checks, corresponding fixed effects estimates: (i) have expected significant signs with a higher negative magnitude for political governance regressions; (ii) largely have expected significant signs with a higher negative magnitude for economic governance regressions; (iii) substantially display expected insignificant negative effects from institutional governance regressions and (iv) show expected negative signs with a higher magnitude in regressions pertaining to general governance. In terms of signs and significance, the fixed effects results are broadly consistent with the GMM findings.

[4] The fixed effects results are not reported because of lack of space.

Table 6: Political governance and terrorism

	Dependent Variables: Terrorism Dynamics											
	Voice and Accountability				Political Stability				Political Governance			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	-0.081	**0.103***	-0.004	-0.205	0.331	**0.315*****	0.056	0.293	0.120	**0.447*****	0.062	0.068
	(0.789)	**(0.099)**	(0.926)	(0.412)	(0.151)	**(0.002)**	(0.188)	(0.229)	(0.623)	**(0.000)**	(0.168)	(0.781)
Domestic Terror(-1)	**0.505*****	**0.144****	**0.118*****	---	**0.530*****	**0.115*****	**0.084*****		**0.469*****	**0.166*****	**0.098*****	---
	(0.002)	**(0.014)**	**(0.000)**		**(0.000)**	**(0.006)**	**(0.000)**		**(0.003)**	**(0.000)**	**(0.000)**	
Trans. Terror(-1)	-0.027	**0.233*****	0.028	---	-0.015	0.021	0.022		-0.063	-0.011	-0.014	---
	(0.789)	**(0.004)**	(0.146)		(0.858)	(0.792)	(0.181)		(0.442)	(0.848)	(0.449)	
Unclear Terror (-1)	-0.078	**-0.468****	-0.006	---	-0.471	-0.188	0.050	---	-0.177	-0.159	0.043	---
	(0.863)	**(0.047)**	(0.918)		(0.151)	(0.289)	(0.433)		(0.641)	(0.362)	(0.556)	
Total Terror(-1)	---	---	---	**0.533*****	---	---	---	**0.386*****	---	---	---	**0.359*****
				(0.000)				**(0.000)**				**(0.000)**
Voice & Accountability	0.005	**-0.126*****	-0.009	0.059	---	---	---	---	---	---	---	---
	(0.950)	**(0.000)**	(0.631)	(0.617)								
Political Stability	---	---	---	---	**-0.213****	**-0.254*****	-0.010	**-0.335*****	---	---	---	---
					(0.012)	**(0.000)**	(0.418)	**(0.004)**				
Political governance	---	---	---	---	---	---	---	---	**-0.131****	**-0.175*****	-0.007	**-0.199****
									(0.022)	**(0.000)**	(0.555)	**(0.044)**
Urbanisation	**-0.109*****	0.013	-0.011	**-0.136****	**-0.197*****	**-0.068***	-0.013	**-0.227*****	**-0.165*****	-0.030	-0.011	**-0.174****
	(0.003)	(0.642)	(0.178)	**(0.011)**	**(0.002)**	**(0.077)**	(0.312)	**(0.005)**	**(0.001)**	(0.379)	(0.312)	**(0.020)**
Population growth	**0.117***	**-0.088***	0.016	**0.197****	0.113	-0.039	0.004	0.147	**0.165***	-0.063	0.004	0.167
	(0.071)	**(0.080)**	(0.150)	**(0.026)**	(0.243)	(0.501)	(0.842)	(0.193)	**(0.099)**	(0.303)	(0.820)	(0.172)
Foreign Investment	0.004	**-0.005****	0.0004	0.0006	0.001	**-0.004****	0.0002	-0.004	0.002	-0.003	0.0002	-0.003
	(0.108)	**(0.027)**	(0.480)	(0.840)	(0.501)	**(0.044)**	(0.718)	(0.243)	(0.342)	(0.189)	(0.685)	(0.284)
Foreign Aid	0.001	0.001	**-0.0009***	-0.003	0.0008	**-0.004*****	-0.0001	-0.004	0.002	-0.001	-0.0004	-0.0005
	(0.709)	(0.225)	**(0.091)**	(0.606)	(0.804)	**(0.006)**	(0.853)	(0.173)	(0.697)	(0.471)	(0.534)	(0.911)
Trade Openness	**0.006****	0.001	0.0002	**0.009*****	0.003	**0.001***	-0.0001	**0.005****	**0.005****	0.0001	-0.0002	**0.007*****
	(0.020)	(0.240)	(0.649)	**(0.000)**	(0.114)	**(0.053)**	(0.691)	**(0.024)**	**(0.039)**	(0.885)	(0.546)	**(0.003)**
AR(1)	(0.048)	**(0.126)**	(0.075)	(0.017)	(0.041)	**(0.132)**	(0.057)	(0.023)	(0.044)	**(0.180)**	(0.053)	(0.036)
AR(2)	**(0.895)**	**(0.461)**	**(0.416)**	**(0.698)**	**(0.915)**	**(0.339)**	**(0.408)**	**(0.446)**	**(0.992)**	**(0.316)**	**(0.408)**	**(0.524)**
Sargan OIR	**(0.370)**	(0.000)	**(0.135)**	**(0.239)**	**(0.235)**	(0.000)	**(0.139)**	(0.067)	**(0.524)**	(0.001)	**(0.111)**	**(0.187)**
Hansen OIR	**(0.125)**	**(0.300)**	**(0.449)**	**(0.434)**	(0.084)	**(0.285)**	**(0.574)**	**(0.143)**	**(0.114)**	**(0.457)**	**(0.485)**	**(0.371)**
DHT for instruments												
(a)Instruments in levels												
H excluding group	**(0.590)**	**(0.338)**	**(0.475)**	**(0.239)**	**(0.168)**	**(0.214)**	**(0.364)**	**(0.100)**	**(0.200)**	**(0.212)**	**(0.490)**	**(0.105)**
Dif(null, H=exogenous)	(0.066)	**(0.317)**	**(0.408)**	**(0.522)**	**(0.127)**	**(0.394)**	**(0.632)**	**(0.313)**	**(0.155)**	**(0.628)**	**(0.441)**	**(0.702)**
(b) IV (years, eq(diff))												
H excluding group	**(0.227)**	**(0.332)**	**(0.865)**	**(0.363)**	**(0.167)**	**(0.310)**	**(0.764)**	**(0.151)**	**(0.177)**	**(0.336)**	**(0.883)**	**(0.319)**
Dif(null, H=exogenous)	(0.092)	**(0.279)**	(0.023)	**(0.574)**	(0.080)	**(0.291)**	**(0.126)**	**(0.283)**	**(0.130)**	**(0.782)**	(0.025)	**(0.509)**
Fisher	**28.52*****	**10.60*****	**99.49*****	**16.85*****	**24.94*****	**21.61*****	**109.84*****	**25.67*****	**26.75*****	**12.36*****	**114.81*****	**24.80*****
Instruments	34	34	34	30	34	34	34	30	34	34	34	30
Countries	52	52	52	52	52	52	52	52	52	52	52	52
Observations	200	200	200	200	200	200	200	200	200	200	200	200

*,**,***: 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 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 OIR and DHT tests.

Table 7: Economic governance and terrorism

	Dependent Variables: Terrorism Dynamics											
	Regulation Quality				Government Effectiveness				Economic Governance			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	-0.023	-0.008	0.006	-0.280	-0.080	0.117	0.041	-0.297	-0.107	**0.230****	0.037	-0.620**
	(0.935)	(0.928)	(0.878)	(0.335)	(0.775)	(0.324)	(0.378)	(0.298)	(0.681)	**(0.011)**	(0.440)	(0.013)
Domestic Terror(-1)	**0.508*****	**0.154*****	**0.109*****	---	**0.473*****	**0.156*****	**0.115*****		**0.515*****	**0.174*****	**0.120*****	---
	(0.002)	**(0.006)**	**(0.000)**		**(0.000)**	**(0.001)**	**(0.000)**		**(0.001)**	**(0.001)**	**(0.000)**	
Trans. Terror(-1)	-0.051	**0.232*****	**0.038****	---	-0.077	0.109	-0.037	---	-0.075	0.114	**0.031***	---
	(0.682)	**(0.005)**	**(0.041)**		(0.497)	(0.165)	(0.577)		(0.532)	(0.157)	**(0.076)**	
Unclear Terror (-1)	-0.099	-0.251	-0.050	---	0.096	-0.065	-0.037	---	-0.062	-0.274	-0.077	---
	(0.850)	(0.190)	(0.318)		(0.817)	(0.765)	(0.577)		(0.899)	(0.180)	(0.200)	
Total Terror(-1)	---	---	---	**0.484*****	---	---	---	**0.434*****	---	---	---	**0.461*****
				(0.000)				**(0.000)**				**(0.000)**
Regulation Quality	0.054	**-0.129***	-0.013	0.116	---	---	---	---	---	---	---	---
	(0.539)	**(0.071)**	(0.469)	(0.387)								
Government Effectiveness	---	---	---	---	0.028	**-0.295*****	**-0.026***	0.066	---	---	---	---
					(0.739)	**(0.000)**	**(0.093)**	(0.648)				
Economic Governance	---	---	---	---	---	----	---	---	0.024	**0.112*****	-0.009	0.048
									(0.537)	**(0.005)**	(0.241)	(0.455)
Urbanisation	-0.083	0.0005	-0.004	-0.084	-0.015	0.042	-0.0002	-0.027	-0.039	0.023	-0.001	-0.060
	(0.137)	(0.983)	(0.586)	(0.192)	(0.637)	(0.200)	(0.982)	(0.619)	(0.322)	(0.422)	(0.824)	(0.257)
Population growth	0.071	**-0.083****	-0.0001	0.135	0.013	**-0.175*****	-0.008	0.105	0.057	**-0.127****	-0.006	**0.140***
	(0.382)	**(0.033)**	(0.987)	(0.140)	(0.789)	**(0.002)**	(0.433)	(0.212)	(0.356)	**(0.013)**	(0.519)	**(0.081)**
Foreign Investment	**0.007****	-0.002	0.0008	0.003	**0.005***	-0.002	0.0007	0.002	**0.007****	-0.001	0.0008	0.002
	(0.027)	(0.175)	(0.106)	(0.387)	**(0.071)**	(0.123)	(0.285)	(0.488)	**(0.031)**	(0.474)	(0.119)	(0.430)
Foreign Aid	0.004	0.001	-0.0006	-0.0005	0.004	0.0004	-0.0004	-0.0002	0.003	0.001	-0.0004	-0.0009
	(0.396)	(0.426)	(0.154)	(0.927)	(0.295)	(0.707)	(0.387)	(0.965)	(0.488)	(0.474)	(0.286)	(0.861)
Trade Openness	**0.005****	**0.002****	0.0002	**0.009*****	**0.004****	-0.045	-0.0003	**0.007*****	**0.004****	0.001	-0.00003	**0.008*****
	(0.022)	**(0.011)**	(0.625)	**(0.002)**	**(0.033)**	(0.111)	(0.364)	**(0.002)**	**(0.046)**	(0.227)	(0.935)	**(0.001)**
AR(1)	(0.064)	**(0.105)**	**(0.104)**	(0.024)	(0.064)	**(0.104)**	(0.090)	(0.031)	(0.058)	**(0.131)**	**(0.101)**	(0.029)
AR(2)	**(0.825)**	**(0.411)**	**(0.367)**	**(0.741)**	**(0.941)**	**(0.287)**	**(0.382)**	**(0.754)**	**(0.872)**	**(0.396)**	**(0.358)**	**(0.758)**
Sargan OIR	**(0.432)**	(0.000)	**(0.148)**	**(0.191)**	**(0.280)**	(0.000)	**(0.180)**	**(0.172)**	**(0.319)**	(0.000)	**(0.163)**	**(0.150)**
Hansen OIR	**(0.173)**	**(0.251)**	**(0.614)**	**(0.476)**	**(0.207)**	**(0.195)**	**(0.457)**	**(0.589)**	**(0.213)**	**(0.180)**	**(0.579)**	**(0.547)**
DHT for instruments												
(a)Instruments in levels												
H excluding group	**(0.525)**	**(0.144)**	**(0.681)**	**(0.121)**	**(0.258)**	**(0.199)**	**(0.668)**	**(0.108)**	**(0.561)**	**(0.156)**	**(0.769)**	**(0.122)**
Dif(null, H=exogenous)	**(0.114)**	**(0.426)**	**(0.482)**	**(0.801)**	**(0.250)**	**(0.277)**	**(0.320)**	**(0.922)**	**(0.138)**	**(0.295)**	**(0.383)**	**(0.871)**
(b) IV (years, eq(diff))												
H excluding group	**(0.234)**	**(0.157)**	**(0.787)**	**(0.500)**	**(0.251)**	**(0.151)**	**(0.812)**	**(0.551)**	**(0.248)**	**(0.108)**	**(0.689)**	**(0.514)**
Dif(null, H=exogenous)	**(0.174)**	**(0.810)**	**(0.140)**	**(0.339)**	**(0.220)**	**(0.538)**	(0.039)	**(0.499)**	**(0.243)**	**(0.780)**	**(0.213)**	**(0.478)**
Fisher	**52.18*****	**9.91*****	**37.95*****	**13.02*****	**47.23*****	**7.30*****	**35.38*****	**15.31*****	**55.28*****	**7.69*****	**32.27*****	**15.81*****
Instruments	34	34	34	30	34	34	34	30	34	34	34	30
Countries	52	52	52	52	52	52	52	52	52	52	52	52
Observations	200	200	200	200	200	200	200	200	200	200	200	200

*,**,***: 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 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 OIR and DHT tests.

Table 8: Institutional governance and terrorism

	Dependent Variables: Terrorism Dynamics											
	Rule of Law				Corruption-Control				Institutional Governance			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	-0.202	0.071	0.038	-0.306	0.113	0.104	0.034	-0.227	-0.080	**0.272****	0.062	-0.290
	(0.437)	(0.512)	(0.478)	(0.258)	(0.616)	(0.348)	(0.428)	(0.355)	(0.736)	**(0.015)**	(0.236)	(0.236)
Domestic Terror(-1)	**0.525*****	**0.140*****	**0.119*****	---	**0.599*****	**0.136*****	**0.109*****	---	**0.549*****	**0.135*****	**0.115*****	---
	(0.001)	**(0.008)**	**(0.000)**		**(0.000)**	**(0.005)**	**(0.000)**		**(0.000)**	**(0.006)**	**(0.000)**	
Trans. Terror(-1)	-0.077	**0.184****	**0.040****	---	-0.170	**0.118****	**0.039****	---	-0.115	**0.140****	**0.029***	---
	(0.440)	**(0.010)**	**(0.011)**		(0.151)	**(0.038)**	**(0.032)**		(0.319)	**(0.046)**	**(0.079)**	
Unclear Terror (-1)	-0.060	-0.361	-0.054	---	-0.353	-0.198	0.011	---	-0.121	-0.278	-0.010	---
	(0.888)	(0.120)	(0.436)		(0.372)	(0.463)	(0.853)		(0.780)	(0.335)	(0.874)	
Total Terror(-1)	---	---	---	**0.467*****	---	---	---	**0.487*****	---	---	---	**0.485*****
				(0.000)				**(0.000)**				**(0.000)**
Rule of Law	-0.027	**-0.269*****	**-0.029***	0.019	---	---	---		---			---
	(0.772)	**(0.008)**	**(0.097)**	(0.891)								
Corruption-Control	---	---	---	---	-0.117	**-0.268*****	-0.009	-0.117	---	---	---	---
					(0.285)	**(0.001)**	(0.352)	(0.470)				
Institutional Governance	---	---	---	---	---	---	---	---	-0.050	**-0.129*****	-0.009	**-0.040*****
									(0.288)	**(0.001)**	(0.141)	**(0.000)**
Urbanisation	-0.013	-0.019	-0.011	0.017	-0.075	-0.028	-0.007	-0.037	-0.043	-0.022	0.004	-0.035
	(0.709)	(0.633)	(0.122)	(0.721)	(0.261)	(0.383)	(0.519)	(0.634)	(0.285)	(0.465)	(0.656)	(0.545)
Population growth	0.041	-0.087	0.002	0.020	0.036	**-0.087***	-0.003	0.027	0.046	**-0.092***	-0.017	0.057
	(0.420)	(0.184)	(0.803)	(0.767)	(0.689)	**(0.075)**	(0.766)	(0.792)	(0.472)	**(0.070)**	(0.187)	(0.479)
Foreign Investment	**0.006****	**-0.004****	0.0003	0.002	**0.007****	-0.001	0.0003	0.004	**0.006****	-0.002	0.0007	0.002
	(0.031)	**(0.048)**	(0.519)	(0.366)	**(0.028)**	(0.615)	(0.532)	(0.150)	**(0.028)**	(0.197)	(0.228)	(0.437)
Foreign Aid	0.004	0.001	-0.0006	0.004	0.002	0.0009	-0.0002	0.003	0.003	**-0.092***	-0.0002	0.002
	(0.381)	(0.435)	(0.233)	(0.439)	(0.649)	(0.559)	(0.686)	(0.627)	(0.451)	**(0.070)**	(0.688)	(0.633)
Trade Openness	**0.004****	**0.002***	-0.00007	**0.006*****	0.002	**0.002***	0.00001	**0.006*****	**0.004****	-0.002	-0.0003	**0.007*****
	(0.022)	**(0.082)**	(0.849)	**(0.007)**	(0.147)	**(0.055)**	(0.973)	**(0.001)**	**(0.026)**	(0.197)	(0.400)	**(0.002)**
AR(1)	(0.055)	**(0.128)**	(0.078)	(0.023)	(0.043)	**(0.125)**	(0.070)	(0.020)	(0.049)	**(0.134)**	(0.071)	(0.023)
AR(2)	**(0.893)**	**(0.324)**	**(0.400)**	**(0.775)**	**(0.787)**	**(0.291)**	**(0.406)**	**(0.746)**	**(0.852)**	**(0.288)**	**(0.384)**	**(0.725)**
Sargan OIR	**(0.312)**	(0.001)	**(0.219)**	**(0.176)**	**(0.529)**	(0.001)	(0.084)	**(0.355)**	**(0.400)**	(0.001)	**(0.116)**	**(0.249)**
Hansen OIR	**0.177)**	**(0.391)**	**(0.490)**	**(0.616)**	**(0.114)**	**(0.445)**	**(0.623)**	**(0.357)**	**(0.198)**	**(0.400)**	**(0.467)**	**(0.605)**
DHT for instruments												
(a)Instruments in levels												
H excluding group	**(0.324)**	**(0.347)**	**(0.677)**	**(0.224)**	**(0.160)**	**(0.185)**	**(0.516)**	**(0.126)**	**(0.173)**	**(0.224)**	**(0.499)**	**(0.086)**
Dif(null, H=exogenous)	**(0.178)**	**(0.421)**	**(0.349)**	**(0.816)**	**(0.182)**	**(0.647)**	**(0.587)**	**(0.637)**	**(0.307)**	**(0.541)**	**(0.415)**	**(0.957)**
(b) IV (years, eq(diff))												
H excluding group	**(0.228)**	**(0.271)**	**(0.926)**	**(0.491)**	**(0.163)**	**(0.375)**	**(0.805)**	**(0.269)**	**(0.233)**	**(0.261)**	**(0.856)**	**(0.490)**
Dif(null, H=exogenous)	**(0.193)**	**(0.804)**	(0.016)	**(0.764)**	**(0.155)**	**(0.580)**	**(0.131)**	**(0.647)**	**(0.307)**	**(0.890)**	**(0.029)**	**(0.730)**
Fisher	**44.92*****	**10.97*****	**34.27*****	**14.06*****	**24.94*****	**11.10*****	**75.93*****	**11.31*****	**40.42*****	**9.07*****	**59.58*****	**12.72*****
Instruments	34	34	34	30	34	34	34	30	34	34	34	30
Countries	52	52	52	52	52	52	52	52	52	52	52	52
Observations	200	200	200	200	200	200	200	200	200	200	200	200

*,**,***: 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 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 OIR and DHT tests.

Table 9: General governance and terrorism

	Dependent variables: Terrorism Dynamics			
	Domestic Terror	Trans. Terror	Unclear Terror	Total Terror
Constant	-0.243	**0.281*** **	0.027	-0.402
	(0.345)	**(0.001)**	(0.596)	(0.125)
Domestic Terror(-1)	**0.503*** **	**0.173*** **	**0.123*** **	---
	(0.002)	**(0.000)**	**(0.000)**	
Trans. Terror(-1)	-0.054	0.055	0.014	---
	(0.596)	(0.470)	(0.402)	
Unclear Terror (-1)	-0.049	-0.349	-0.059	---
	(0.912)	(0.135)	(0.370)	
Total Terror(-1)	---	---	---	**0.452*** **
				(0.000)
General Governance	-0.022	**-0.092*** **	**-0.008***	-0.003
	(0.416)	**(0.000)**	**(0.062)**	(0.938)
Urbanisation	**-0.082** **	-0.023	0.00004	-0.071
	(0.012)	(0.425)	(0.996)	(0.176)
Population growth	**0.111***	-0.070	-0.005	0.154*
	(0.076)	(0.187)	(0.619)	(0.057)
Foreign Investment	**0.005***	-0.002	0.0008	0.001
	(0.057)	(0.201)	(0.163)	(0.632)
Foreign Aid	0.002	-0.00001	-0.0006	-0.0009
	(0.699)	(0.991)	(0.153)	(0.872)
Trade Openness	**0.004** **	0.0009	-0.00003	**0.009*** **
	(0.045)	(0.366)	(0.938)	**(0.001)**
AR(1)	(0.049)	**(0.175)**	(0.090)	(0.029)
AR(2)	**(0.934)**	**(0.362)**	**(0.367)**	**(0.727)**
Sargan OIR	**(0.434)**	(0.000)	**(0.136)**	**(0.250)**
Hansen OIR	**(0.138)**	**(0.289)**	**(0.428)**	**(0.536)**
DHT for instruments				
(a)Instruments in levels				
H excluding group	**(0.226)**	**(0.176)**	**(0.613)**	(0.082)
Dif(null, H=exogenous)	**(0.175)**	**(0.443)**	**(0.317)**	**(0.922)**
(b) IV (years, eq(diff))				
H excluding group	**(0.244)**	**(0.182)**	**(0.841)**	**(0.496)**
Dif(null, H=exogenous)	(0.096)	**(0.835)**	(0.024)	**(0.492)**
Fisher	**40.08*** **	**11.39*** **	**43.91*** **	**17.18*** **
Instruments	34	34	34	30
Countries	52	52	52	52
Observations	200	200	200	200

*,**,***: 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 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 OIR and DHT tests.

4.3 Discussion of results and policy implications

4. 3.1 Nexus with the literature

The established negative governance-terrorism nexus is consistent with a stream of the literature that has focused on broad samples of developed and developing countries. Accordingly, the negative relationship with the rule of law is in accordance with Choi (2010) who has established a negative relationship between democratic rule of law and citizens' willingness and opportunity of resorting to political violence and terrorism as means to resolving conflicts.

Assuming that voice and accountability employed in the study can be similar to "publicity and press freedom" and transparency respectively, the findings from the perspective of accountability/transparency run counter to the conclusions of Bell et al. (2014) who have concluded that transparency is likely to increase domestic and transnational terrorisms. Hence, our findings do not provide empirical support for the narrative that freer information transmission endows radical dissidents with opportunities to employ violence as means to draw attention to their agendas. On the view of voice/"publicity and press freedom", the findings also run counter to Hoffman et al. (2013) who have recently maintained that publicity and press freedom are instrumental in motivating terrorism.

The relationship between political stability/non violence and terrorism is logical and consistent with intuition because the presence of political instability provides opportunities for citizens to resort to violence as means to communicating their grievances. It is important to articulate that while most African countries are generally qualified as poor democracies or autocracies, most are also stable autocracies. Hence, while there are some pockets of failing states on the continent, the weight of stable regimes is more relevant in the role of political governance on terrorism. It is important to articulate the notion of stable autocracies because as emphasized by Lai (2007) and Piazza (2008a), it is difficult to control terrorism in failed and failing states. Hence, the absence of sound democratic/political competition is not very likely to stimulate terrorists' organizations to resort to violence in the settlement of grievances.

Overall the consistent negative nexus between governance and terrorism is not in accordance with the stream of literature suggesting that the characteristics of good governance are likely to induce terrorist activities. This includes both theoretical (Schmid 1992; Eubank and Weinberg 1994; Drakos and Gofas 2006; Piazza 2007) and empirical (Eubank and Weinberg 1994, 2001; Weinberg and Eubank 1998; Piazza 2007, 2008b; Chenoweth 2010) literatures. On the other hand, the findings accord with the stream of literature on the positive rewards of governance in mitigating terrorism activities, namely: theories of political access (Eyerman 1998) and empirical literature from perspectives of the rule of law (Choi 2010) and independence of the judiciary (Findley and Young 2011). As a point of synthesis, in the light of Li (2005), competing effects of good governance may not be apparent because: government constraints are not resulting in political deadlocks from checks and balances on the one hand and political participation reduces transnational terrorism on the other hand.

4.3.2 Practical contributions

Practical implications are discussed on three fronts, notably, in the light of the: conception and definition of governance variables; specificities of findings and inappropriate use of the governance term in the literature.

On the first front, three points are worth emphasizing. The election and replacement of political leaders (or political governance) reduces terrorism. The formulation and implementation of policies that deliver public commodities (or economic governance) mitigates terrorism. The respect by the State and citizens of institutions that govern interactions between them (or institutional governance) curbs terrorism.

With regard to the magnitude of governance estimates on terrorism dynamics, we have consistently established in initial regressions that the negative magnitude on domestic terrorism is higher compared to transnational terrorism[5]. The difference in magnitude is expected because domestic governance policies are intended for the most part to prevent citizens from resorting to violent means of voicing their grievances, by providing viable and legitimate mechanisms through which their hopelessness and desperations can be communicated. Conversely, transnational terrorism which is more likely to result from cross-country differences in governance structures cannot be mitigated by the same degree as domestic terrorism because good governance externalities benefit domestic citizens for the most part. Hence, because of non-interference (national sovereignty and territorial integrity), domestic policies in one country may not substantially affect citizens in other countries. It follows that, peaceful mechanisms of dispute resolution adopted by one country enjoying good governance may not necessarily be transferred to neighboring countries. Therefore, cross-country differences in governance may still provide opportunities of violence.

There has been an inappropriate use of governance terms in the literature because these terms have been employed without empirical validity to substantiate their usage. For instance, it is inappropriate to employ "general governance" unless the corresponding estimate from which it is inferred consists of a plethora of governance indicators. For instance, taking the concept of political governance as an example, there are many countries (e.g. China) that enjoy political stability but have limited voice and accountability. While these countries are generally considered to be associated with undemocratic political governance, the inference is misguided until it can be established empirically with an

[5] While the discussion of findings is tailored to incorporate both initial/baseline results and robustness check estimations, emphasis on "initial regressions" here is because the comparative perspective is not apparent with robustness check results. This is essentially because for the most part, the effects on domestic terrorism are not significant in robustness check results.

indicator of political governance. In the same vein, there are many African countries that enjoy political stability because of stable dictatorships, but which lack voice and accountability. These cannot also be qualified as poor in terms of political governance unless the qualification is substantiated with some empirical analysis using a political governance composite indicator. It follows that the third practical contribution of this study to the institutional literature is a clarification of governance concepts. Therefore, the bundling and unbundling of governance addresses concerns of conceptual conflation in the usage of governance indicators in the literature on terrorism.

5. Conclusion and future research directions

This study has contributed to the literature by assessing government mechanisms in the fight against terrorism with particular emphasis on the bundling and unbundling of ten governance dynamics. Domestic, transnational, unclear and total terrorism variables are used whereas the adopted governance indicators are: voice & accountability and political stability for political governance; regulation quality and government effectiveness for economic governance; corruption-control and the rule of law for institutional governance and; general governance consisting of political, economic and institutional governances. The bundling exercise is achieved by means of principal component analysis. The empirical evidence is based on: a panel of 53 African countries for period 1998-2012 and Generalized Method of Moments.

The following findings have been established. First, for the most part, political governance and its constituents respectively have negative effects on all terrorism dynamics, with the following consistent increasing order of negative magnitude: unclear terrorism, transnational terrorism, domestic terrorism and total terrorism. Second, overwhelmingly for economic and institutional governances, the governance dynamics and their constituent components affect terrorism negatively, with the magnitude on domestic terrorism consistently higher than that on transnational terrorism. Some exceptions in initial regressions are: (i) unclear terrorism for which economic governance and its constituents are not significant and (ii) total terrorism for which the effect of regulation quality is not significant. Third, for most specifications, the effect of general governance is consistently negative on terrorism variables.

Whereas the adopted GMM is not the best estimation technique with which to establish causality, constraints in degrees of freedom have prevented the study from engaging

other models. Accordingly, estimation techniques that directly engage causality (e.g. Granger Causality and Vector Error Correction) require basic initial data properties we do not have at the moment. For instance, these techniques require that N<T: a condition that is not feasible because we have 54 African countries and good governance indicators are only available from 1996.

Future inquiries devoted to enriching the extant literature could assess how established linkages apply to specific fundamental features of African development such as, religious domination, resource-wealth and income levels. Within this suggested framework, decomposing the sample into fundamental characteristics of the continent's development would provide more room for policy implications. Moreover, future studies can engage natural experiments in countries (e.g. Somalia, Sudan, and Nigeria) with a multiplicity of conflicts and hundreds of ethnic groups on the one hand and assess the effect of Libya on the proliferation of terrorism on the other hand. Employing interactive regressions to examine indirect impacts through mediating mechanisms is also worthwhile.

It is also important to acknowledge that political stability and terrorism may be jointly endogenous. This is essentially because some measurements of political stability may be closely associated with causes of terrorism. Moreover, it is important to balance the narrative with the fact that political stability (a constituent of political governance) is a key independent variable exclusively in the middle columns of Table 2 and Table 6. Therefore, this caveat for the most part does not concern the other nine governance indicators. While the use of GMM has partly addressed the underlying concern of endogeneity, future research can focus on better empirical underpinnings for establishing causality.

Appendices

Appendix 1: Definitions of variables

Variables	Signs	Definitions of variables (Measurement)	Sources
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 (WDI)
Voice & Accountability	VA	"Voice and accountability (estimate): measures the extent to which a country's citizens are able to participate in selecting their government and to enjoy freedom of expression, freedom of association and a free media".	World Bank (WDI)
Political Governance	Polgov	First Principal Component of Political Stability and Voice & Accountability. The process by which those in authority are selected and replaced.	PCA
Government Effectiveness	GE	"Government effectiveness (estimate): measures the quality of public services, the quality and degree of independence from political pressures of the civil service, the quality of policy formulation and implementation, and the credibility of governments' commitments to such policies".	World Bank (WDI)
Regulation Quality	RQ	"Regulation quality (estimate): measured as the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development".	World Bank (WDI)
Economic Governance	Ecogov	"First Principal Component of Government Effectiveness and Regulation Quality. The capacity of government to formulate & implement policies, and to deliver services".	PCA
Rule of Law	RL	"Rule of law (estimate): captures perceptions of the extent to which agents have confidence in and abide by the rules of society and in particular the quality of contract enforcement, property rights, the police, the courts, as well as the likelihood of crime and violence".	World Bank (WDI)
Corruption-Control	CC	"Control of corruption (estimate): captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests".	World Bank (WDI)
Institutional Governance	Instgov	First Principal Component of Rule of Law and Corruption-Control. The respect for citizens and the state of institutions that govern the interactions among them	PCA
General Governance	G.gov	First Principal Component of Political, Economic and Institutional Governances	PCA
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)
Inclusive development	IHDI	Inequality Adjusted Human Development Index	UNDP
Growth	GDPg	Gross Domestic Product (GDP) growth rates (annual %)	World Bank (WDI)
Inflation	Inflation	Consumer Price Index (annual %)	World Bank (WDI)

Military Expense	Milit	Military Expenditure (% of GDP)	World Bank (WDI)
Urbanisation	Urban	Urban Population growth rate (% of annual)	World Bank (WDI)
Population	Popg	Population growth rate (% of annual)	World Bank (WDI)
Foreign aid	NODA	Total Net Official Development Assistance (% of GDP)	World Bank (WDI)
Trade Openness	Trade	Export plus Import of Commodities (% of GDP)	World Bank (WDI)
Financial Openness	FDI	Net Foreign Direct Investment Inflows (% of GDP)	World Bank (WDI)

WDI: World Bank Development Indicators. PCA: Principal Component Analysis. UNDP: United Nations Development Program. Ln: Natural logarithm.

Appendix 2: Summary statistics (1998-2012)

	Mean	SD	Minimum	Maximum	Observations
Political Stability	-0.551	0.929	-3.297	1.087	265
Voice & Accountability	-0.679	0.723	-2.155	1.009	265
Political Governance	0.0008	1.268	-3.304	2.671	265
Government Effectiveness	-0.723	0.620	-2.354	0.823	265
Regulation Quality	-0.695	0.638	-2.630	0.906	265
Economic Governance	0.009	1.354	-3.951	3.511	265
Rule of Law	-0.706	0.660	-2.595	1.032	265
Control of Corruption	-0.602	0.577	-1.848	0.971	265
Institutional Governance	0.003	1.349	-3.490	3.316	265
General Governance	0.008	2.170	-6.208	5.242	265
Domestic terrorism	0.401	0.805	0.000	4.781	265
Transnational terrorism	0.203	0.451	0.000	2.802	265
Unclear terrorism	0.060	0.193	0.000	1.566	265
Total terrorism	0.500	0.885	0.000	4.895	265
Internet penetration	4.766	8.022	0.002	51.174	264
Inclusive development	0.872	4.210	0.161	45.231	220
GDP growth	4.706	4.230	-8.149	32.265	259
Inflation	10.012	25.435	-6.934	275.983	242
Military Expenditure	2.245	2.899	0.151	35.846	231
Urbanisation	3.551	1.556	-0.287	12.984	265
Population	2.283	0.949	-0.220	8.382	265
Foreign aid	10.463	11.425	0.017	95.445	259
Trade Openness	77.976	35.648	24.528	230.414	252
Financial Openness	5.354	8.880	-1.846	96.149	259

S.D: Standard Deviation.

Appendix 3: First correlation matrix (uniform sample size: 197)

Political governance			Economic governance			Institutional governance				Control variables					Terrorism variables				
PS	VA	Polgov	GE	RQ	Ecogov	CC	RL	Instgov	G.gov	Internet	IHDI	GDPg	Inflation	Milit	Domter	Tranter	Unclter	Totter	
1.000	0.629	0.901	0.637	0.623	0.652	0.683	0.770	0.747	0.802	0.236	0.029	-0.033	-0.238	-0.260	-0.535	-0.530	-0.365	-0.596	PS
	1.000	0.903	0.708	0.743	0.749	0.704	0.747	0.747	0.840	0.200	0.204	0.007	-0.136	-0.334	-0.238	-0.266	-0.111	-0.277	VA
		1.000	0.745	0.745	0.776	0.768	0.840	0.828	0.910	0.242	0.129	-0.014	-0.207	-0.329	-0.428	-0.440	-0.263	-0483	Polgov
			1.000	0.870	0.970	0.882	0.903	0.919	0.935	0.384	0.237	0.014	-0.190	-0.156	-0.187	-0.245	-0.121	-0.224	GE
				1.000	0.964	0.790	0.854	0.846	0.908	0.289	0.210	-0.045	-0.245	-0.216	-0.156	-0.216	-0.084	-0.194	RQ
					1.000	0.867	0.910	0.915	0.953	0.350	0.231	-0.014	-0.223	-0.191	-0.178	-0.239	-0.107	-0.217	Ecogov
						1.000	0.885	0.971	0.923	0.309	0.207	-0.050	-0.177	-0.103	-0.246	-0.312	-0.212	-0.297	CC
							1.000	0.970	0.962	0.363	0.134	-0.026	-0.205	-0.175	-0.270	-0.299	-0.181	-0.313	RL
								1.000	0.970	0.346	0.176	-0.040	-0.196	-0.143	-0.266	-0.315	-0.202	-0.314	Instgov
									1.000	0.334	0.191	-0.024	-0.220	-0.227	-0.299	-0.344	-0.197	-0.348	G.gov
										1.000	0.018	-0.023	-0.062	-0.087	0.079	0.052	0.129	0.063	Internet
											1.000	-0.078	-0.016	-0.040	0.090	0.052	-0.031	0.080	IHDI
												1.000	-0.197	-0.052	0.076	0.157	0.060	0.089	GDPg
													1.000	-0.128	0.0002	0.030	0.061	0.027	Inflation
														1.000	0.185	0.107	0.040	0.194	Milit
															1.000	0.661	0.760	0.973	Domter
																1.000	0.641	0.785	Tranter
																	1.000	0.776	Unclter
																		1.000	Totter

PS: Political Stability/Non violence. VA: Voice & Accountability. Polgov: Political Governance. GE: Government Effectiveness. RQ: Regulation Quality. Ecogov: Economic Governance. CC: Corruption-Control. RL: Rule of Law. Instgov: Institutional Governance. G.Gov: General Governance. Internet: Internet Penetration. IHDI: Inequality Adjusted Human Development Index. GDPg: Gross Domestic Product Growth. Milit: Military Expenditure. Domter: Domestic Terrorism. Tranter: Transnational Terrorism. Unclter: Unclear Terrorism. Totter: Total Terrorism.

Appendix 4: Second correlation matrix (uniform sample size: 250)

Political governance			Economic governance			Institutional governance				Control variables					Terrorism variables				
PS	VA	Polgov	GE	RQ	Ecogov	CC	RL	Instgov	G.gov	Urban	Popg	NODA	Trade	FDI	Domter	Tranter	Unclter	Totter	
1.000	0.655	0.905	0.626	0.592	0.631	0.659	0.767	0.737	0.798	-0.245	-0.234	-0.100	0.286	-0.062	-0.530	-0.543	-0.374	-0.589	PS
	1.000	0.913	0.718	0.727	0.749	0.682	0.763	0.747	0.849	-0.086	-0.160	0.057	0.041	-0.070	-0.248	-0.287	-0.141	-0.284	VA
		1.000	0.740	0.727	0.760	0.737	0.814	0.816	0.906	-0.180	-0.216	-0.021	0.177	-0.073	-0.424	-0.287	-0.141	-0.284	Polgov
			1.000	0.861	0.965	0.848	0.895	0.901	0.931	-0.219	-0.364	-0.235	0.060	-0.169	-0.150	-0.225	-0.101	-0.184	GE
				1.000	0.964	0.733	0.835	0.810	0.892	-0.120	-0.231	-0.219	0.014	-0.209	-0.130	-0.206	-0.101	-0.165	RQ
					1.000	0.820	0.897	0.887	0.945	-0.176	-0.309	-0.235	0.038	-0.196	-0.145	-0.223	-0.105	-0.181	Ecogov
						1.000	0.871	0.967	0.900	-0.212	-0.324	-0.072	0.124	-0.113	-0.238	-0.305	-0.222	-0.285	CC
							1.000	0.966	0.963	-0.258	-0.317	-0.168	0.128	-0.156	-0.239	-0.275	-0.172	-0.277	RL
								1.000	0.963	-0.243	-0.331	-0.140	0.119	-0.140	-0.246	-0.300	-0.204	-0.291	Instgov
									1.000	-0.214	-0.308	0.358	-0.330	-0.148	-0.281	-0.338	-0.204	-0.327	G.gov
										1.000	0.768	0.415	-0.295	0.153	0.070	0.060	0.042	0.080	Urban
											1.000	0.415	-0.295	0.153	-0.004	0.053	-0.014	0.011	Popg
												1.000	-0.086	0.259	-0.055	-0.057	-0.116	-0.062	NODA
													1.000	0.407	-0.186	-0.132	-0.109	-0.194	Trade
														1.000	0.022	0.093	0.058	0.037	FDI
															1.000	0.674	0.730	0.976	Domter
																1.000	0.596	0.791	Tranter
																	1.000	0.755	Unclter
																		1.000	Totter

PS: Political Stability/Non violence. VA: Voice & Accountability. Polgov: Political Governance. GE: Government Effectiveness. RQ: Regulation Quality. Ecogov: Economic Governance. CC: Corruption-Control. RL: Rule of Law. Instgov: Institutional Governance. G.Gov: General Governance. Urban; Urbanisation. Popg: Population growth. NODA: Net Official Development Assistance. FDI: Foreign Direct Investment. Domter: Domestic Terrorism. Tranter: Transnational Terrorism. Unclter: Unclear Terrorism. Totter: Total Terrorism.

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