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Foreign Direct Investment, Aid and Terrorism: Empirical Insight Conditioned on Corruption Control

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AFRICAN GOVERNANCE AND DEVELOPMENT INSTITUTE

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WP/15/007

**Foreign Direct Investment, Aid and Terrorism: Empirical Insight Conditioned on
Corruption Control**

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AGDI Working Paper

Research Department

Foreign Direct Investment, Aid and Terrorism: Empirical Insight Conditioned on Corruption Control

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March 2015

Abstract

This study checks the effect of foreign aid on terrorism and FDI, conditioned on domestic levels of corruption-control (CC). The empirical evidence is based on a sample of 78 countries for the period 1984-2008. The following findings are established: the negative effect of terrorism on FDI is apparent only in higher levels of CC; foreign aid dampens the negative effect of terrorism on FDI only in higher levels of CC; when foreign aid is subdivided into its bilateral and multilateral components, the result is mixed. While our findings are in accordance with the stance that bilateral aid is effective in reducing the adverse impact of transnational terrorism, the position that only multilateral aid is effective at mitigating the adverse impact of domestic terrorism on FDI is not confirmed because multilateral aid also curbs the adverse effect of transnational terrorism on FDI. Moreover, multilateral aid also decreases the adverse effect of unclear and total terrorisms on FDI. Policy implications are discussed.

JEL Classification: D74; F21; F35

Keywords: Foreign investment; Foreign aid; Terrorism

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1. Introduction

The notion that development assistance is required to help curb the adverse effect of terrorism on foreign direct investment (FDI) flow to developing countries is conventionally known. This is following the submissions that many of the terrorism-afflicted countries are poor and lack vital economic resources for counterterrorism (Bandyopadhyay and Younas, 2014). This is even critical when considering that terrorist incidences involve threats and violence by some individuals or subnational groups against non-combatants, and has far-reaching effects; such as, increasing the risk and cost of investment, infrastructural damages, reduction in economic output and savings, trade losses and higher insurance premium (Singh, 2001, 2007; Enders, Sachsida and Sandler, 2006; Abadie and Gardeazabal, 2008; Keefer and Loayza, 2008; Sandler and Enders, 2008; Bandyopadhyay, Sandler and Younas, 2014; Younas, 2015).

Recent evidence for developing countries suggest that a standard deviation increase in domestic and transnational terrorism will reduce foreign investment reaching to between 296 and 736 million US\$ for a developing country with an average GDP of 70 billion US\$ (Bandyopadhyay and Younas, 2014). The main concern with this statistic is that developing countries are reinventing their foreign policy to improve their attractiveness to foreign investment and an increase in terrorist activities will be more detrimental to their effort. Noting this, there is a presumption that foreign aid has a reducing effect on the impact of terrorism on FDI in developing countries. After all, foreign aid bolsters a developing country's proactive counterterrorism effort and provides finance against transnational and domestic terrorism (Bandyopadhyay, Sandler and Younas, 2014; Lee, 2015).

In this study, we propose that this conclusion should not be taken in sacrosanct. As a consequence, the institutional structure (especially corruption control) in the aid recipient country will likely determine the extent of the government's effort targeted towards counterterrorism actions. Economides, Kalyvitis and Philippopoulos (2008) provides a theoretical explanation in the light of the distorting effect of foreign aid on private incentives of recipient country's government. Aid inflow pushes self-interested officials away from productive work to rent-seeking and resource extraction. The implication of this, of course, is that the extent to which foreign aid is effective in tackling encumbrances that confront countries is conditional on the prevailing level of corruption. Therefore, this paper tests this proposition using data from 78 developing countries (1984-2008).

The motivation for this study is tied to two intuitions. On the one hand, rent-seeking behaviour in corrupt countries is seen as winning a ‘contestable prize’ with economic rewards (see Svensson, 2000; Economides, Kalyvitis and Philippopoulos, 2008); therefore, the flow of foreign aid to a ‘corrupt-stricken’ country, with the aim of utilising it for counterterrorism efforts, will only increase the size of the ‘contestable prize’ and will not achieve the purpose for the aid. On the other hand, foreign aid flow to a corrupt government for fighting terrorism will provide competing objectives for the political leader: the need to use the aid for counterterrorism measures in order to gratify the purpose of the aid and remain in the ‘good books’ of the donor. This obviously has a slim chance of being pursued by a corrupt government because of the second objective (and most preferred) of using part of the aid for counterterrorism and the most part for financing their self-interest. Due to low accountability of leaders of corrupt countries (Efobi, 2014; Asongu and Kodila-Tedika, 2016), this second objective has the highest likelihood of being pursued. Thus, the purpose of the aid flow is defeated or at best, not fully accomplished.

Unravelling this issue is relevant for the following reasons. First and principally is to promote aid effectiveness. Since foreign aid has been established as a tool for enhancing the counterterrorism measures of developing countries, there is the need for the consideration of the quality of institutional structures in the recipient country in order to effectively manage the aid for its requisite purpose. This requires empirical justification. Second, substantive policy conclusions that can be applicable for developing countries will be provided. Noting that most developing countries are challenged by prevailing corrupt leadership (Jo-Ansie, 2007; Olken and Pande, 2011; Asongu, 2013a, b; Kim, 2013; Efobi, 2014), therefore, recommending ‘blanket’ foreign aid increase as a remedying tool for anti-terrorism financing may not be sustainable to have a lasting effect. Third, relevant empirical evidence to illustrate how global efforts towards the sustenance of FDI flow to developing countries is required since FDI stands out as a major source of foreign capital flow for developing countries (Asiedu, 2006; Asiedu and Lien, 2011; Boly, Coniglio, Protta and Seric, 2015).

This paper presents marked difference from similar studies (e.g. Bandyopadhyay, Sandler and Younas, 2014; Lee, 2015) based on the following innovations. Methodologically, this paper applies a panel system GMM estimation strategy that employs forward orthogonal deviations in analysing the estimable relationships. Accordingly, preference is given to the Roodman (2009a, b) extension of Arellano and Bover (1995) because in the presence of cross-sectional

dependence, the use of forward orthogonal deviations produces more efficient estimates (Love and Zicchino, 2006; Baltagi, 2008). With regards to the focus of the paper, emphasis was given to the role of foreign aid in dampening the negative effect of terrorism on FDI contingent on domestic corruption-control levels. Emphasis was dissuaded from giving blanket foreign aid for the mitigation of the effect of terrorism on FDI, to the conditioning of the extent of corruption-control (CC) levels and tailored differently across high- and low-cc countries. Therefore, in order to add subtlety to the policy implications, we also assess how ‘unclear terrorism’ play-out in the investigated nexuses. The rest of the paper is organised as follows: data and methodology are discussed and outlined respectively in the second section. The third section presents the empirical analysis and discussion of the results. The fourth section concludes with policy implications.

2. Data and Methodology¹

2.1 Data

The data for this study includes 78 developing countries for the period 1984-2008. The sample size and period are chosen based on data availability for foreign aid and the other variables included in the empirical model. For instance, the institutional variable gathered from the International Country Risk Guide (ICRG) datasets starts from 1984. Also, following the approach of Bandyopadhyay, Sandler and Younas (2014), not all developing countries were included in the sample as some countries that constitute an outlier to terrorist activities were excluded from the sample. Some of these countries include Afghanistan, Iraq, Palestine and western Gaza.

Considering the form of the data, it is in its non-overlapping three-year average form. There are reasons that explain the consideration of this form of data. The principal motivation for this was the need to increase the variability of the dataset across the time span. For instance, contemporary occurrences of terrorism reveal that they are time invariant events. This implies that their occurrences follow a stochastic trend and not predicated on time; therefore the changeability of this form of variable may likely be low. Based on this, considering a non-overlapping average will be suitable in ensuring a symmetric relationship between the variables.

¹This section draws heavily from the work of Bandyopadhyay, Sandler and Younas (2014)

Definition of Variables

The main explained variable is the volume of foreign direct inflow (FDI)² measured as the percentage of the net FDI flows to GDP (FDI/GDP). The variable ‘terrorism’ was categorised into four distinct indicators. The first is total incidence of terrorism, which is the summation of both the domestic, transnational and unclear terrorism. The second is the domestic terrorism, which 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. Third, is transnational 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. Fourth, unclear terrorism, which constitutes incidences of terrorism that can neither be defined as domestic nor transnational terrorism. The terrorism data is an annual event data of terrorist activities, which is domiciled in the Global Terrorism Database (GTD) of the National Consortium for the Study of Terrorism and Responses to Terrorism (START, 2009).

The data for foreign aid are from the online database of the Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development-OECD (2010). From the literature, the effect of aid on FDI is ambiguous (see Caselli and Feyrer, 2007; Kimura and Todo, 2010; Selaya and Sunesen, 2012). We follow the positive side to the argument³ that the effect of foreign aid on FDI is complementary, in the sense that foreign aid provides economic resources for the improvement of complimentary factors – like infrastructural development and human capital like education and health (see Harms and Lutz, 2006; Asiedu, Jin and Nandwa, 2009; Kimura and Todo, 2010; Selaya and Sunesen, 2012). Based on this evidence, aid provides the economic resources for countries to improve the

² According to the 2013 definition by UNCTAD, FDI includes associates and subsidiaries and consist of the net sales of shares and loans (including non-cash acquisitions made against equipment, manufacturing rights, etc.) to the parent company plus the parent firm’s share of the affiliate’s reinvested earnings plus total net intra-company loans (short and long term provided by the parent company. For branches, FDI flows consist of the increase in reinvested earnings plus the net increase in funds received from the foreign direct investor. FDI flows with a negative sign (reverse flows) indicate that at least one of the components in the above definition is negative and not offset by positive amounts of the remaining components (see definition in <http://unctad.org/en/Pages/DIAE/FDI-Flows.aspx>).

³ The underlining reason for this choice is because recent evidences that have considered the estimable relationship between aid, terrorism and FDI have robustly concluded that the injection of foreign aid will provide available resources to the affected nation to avert the cost of terrorist activities. Since we are interested in seeing the effect of the institutional quality in this nexus, we prefer to follow the consensus in order to properly situate this study.

volume of infrastructural provision that may have been affected/ destroyed by terrorist activities. Likewise aid can provide the resources needed to improve the educational and health provision for developing countries and this may, reduce the rate of recruitment of some vulnerable proportion of the population into terrorist sects or may likely reduce the extent of being disgruntled by some faction of the population, which if allowed, may result to domestic terrorism⁴. Also, an injection of aid provides the requisite financial resources for the government's counterterrorism efforts (Bandyopadhyay and Younas, 2014; Bandyopadhyay, Sandler and Younas, 2014; Lee, 2015).

From the foregoing, an imperative variable that is considered is the interactive term between foreign aid and the different classes of terrorist acts being considered in this study. As an advancement in the analysis, the different components of foreign aid – i.e. multilateral and bilateral aid – are included in the interactive term. The reason being that the provision of these types of aid are fragmented along differing motives (see Easterly, 2008). Considering only the aggregate aid will mask a lot of interesting divergences that stem from the behaviour of the disaggregated data. Like Bandyopadhyay, Sandler and Younas (2014) observes, the effect of these types of aid differs because bilateral aid donors have better grip over the aid, therefore the recipient country will invariably use such resource for counter-terrorism effort, leading to improved FDI flow. This is unlike the multilateral aid donors, whose main aim for giving the aid is tied to development policies in the recipient country, thereby pacifying the grievances that might fuel terrorist activities.

Some variables were controlled for following convention and to prevent the omitted variable problems that come with panel data analysis. Guidance was taken from literature (e.g. Asiedu, 2006; Asiedu and Lien, 2011) on the factors explaining the volume of FDI flow. These variables include time variant variables like the GDP growth rate, trade openness, inflation rate and number of telephone users per 100 people.

The justifications for the inclusion of these control variables are: GDP growth rate reflects the income level of the FDI host country and thus shows the extent of the return of investment for the foreign investors. Trade openness measures the extent to which a country's economy is opened to investment and trade of the output of such investment. In essence, some forms of

⁴See Reno (1995); Richards (1996); Bellows and Miguel (2009) on discussions about rebel forces and the instigating factors.

investment, especially those that are export oriented, are favored by an opened economy (Bandyopadhyay, Sandler and Younas, 2014). Inflation rate reflects the specific macroeconomic shocks that are existent in the country; while the number of telephone users per 100 people is an indicator of the extent of infrastructural development in the country. The control variables have been limited to the four above because of over-identification issues. Accordingly, controlling for more macroeconomic factors has resulted in specifications with instruments higher than the number of cross sections.

The last variable (modifying variable) – corruption-control, measures the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, and the extent of state capture by elites and for private interests (Kauffman et al, 2010). This variable is not included directly in the model, but used to condition the relationship between foreign aid, terrorism and FDI. In essence, the relationships between the variables are tested at different corruption thresholds. In this study we use the median of corruption-control as the threshold in order to enable comparative sampled sizes. The modifying variable is obtained from World Governance Indicators. The impact of the modifying variable is interpreted as a marginal effect, consistent with Brambor (2006).

Table 1 provides a clearer presentation of the variables definition and some summary statistics. Some variables are defined in terms of logarithms in the table in order to enhance comparison. Two points are note-worthy: on the one hand, the variables are comparable based on their means and on the other hand, we can be confident to expect that reasonable estimated linkages would emerge based on the degrees of variation represented by the standard deviations.

The pairwise correlation to check the bivariate association between the variables is presented in Table 2. This check is deemed important in order to mitigate issues of over-identification and multicollinearity that could substantially bias estimated results. Most importantly, this is reflected in the strength of association between the explanatory variables. From a preliminary assessment, only the terrorism and foreign aid variables are highly correlated among themselves respectively.

Table 1: Definition and Summary Statistics of Variables

Variables	Identifiers and Definitions	Mean	S.D	Min	Max	Obs.
Foreign Investment	<i>FDI</i> , Foreign Direct Investment, net inflows (% of GDP)	2.494	3.24	-8.875	26.067	612
GDP growth	<i>GDPg</i> , GDP growth rate (annual %)	3.852	3.467	-10.933	17.339	612
Trade Openness	<i>LnTrade</i> , Log of Exports plus Imports of Commodities (% of GDP)	4.118	0.534	2.519	5.546	612
Infrastructure	<i>LnTel</i> , Log of Number of Telephone lines (per 100 people)	1.475	1.017	0.091	4.031	616
Inflation	<i>LnInflation</i> , Log of Consumer Price Index (% of annual)	2.414	1.384	-3.434	9.136	581
Bilateral Aid	<i>LnBilad</i> , Log of Bilateral aid, net disbursement (million USD)	5.181	1.286	0.765	8.362	602
Multilateral Aid	<i>LnMulaid</i> , Log of Multilateral aid, net disbursement (million USD)	4.163	1.518	-1.249	7.105	600
Total Aid	<i>LnTotalaid</i> , Log of Total aid, net disbursement (million USD)	5.550	1.276	0.800	8.495	608
Domestic terrorism	<i>Domter</i> , Number of Domestic terrorism incidents	14.292	45.179	0.000	419.33	624
Transnational terrorism	<i>Tranater</i> , Number of Transnational terrorism incidents	2.316	6.127	0.000	63.000	624
Unclear terrorism	<i>Unclter</i> , Number of terrorism incidents whose category is unclear	1.972	7.479	0.000	86.000	624
Total terrorism	<i>Totter</i> , Total number of terrorism incidents	18.581	55.595	0.000	477.66	624
Corruption _Control	<i>CC</i> , Corruption control	-0.295	0.516	-0.206	1.539	624

Note: S.D: Standard Deviation; Min-Minimum; Max-Maximum; Obs.: Observations.

Table 2: Pairwise Correlation Matrix

Control Variables					Foreign Aid			Terrorism Dynamics					
FDI	GDPg	LnTrade	LnTel	LnInflation	LnBilad	LnMulaid	LnTotalaid	Domter	Tranater	Unclter	Totter	CC	
1.000	0.193	0.430	0.263	-0.113	-0.049	0.001	-0.038	-0.118	-0.093	-0.112	-0.121	-0.011	FDI
	1.000	0.089	0.065	-0.236	0.195	0.178	0.227	-0.058	-0.021	-0.042	-0.055	-0.004	GDPg
		1.000	0.296	-0.230	-0.267	-0.289	-0.282	-0.236	-0.206	-0.240	-0.246	0.027	LnTrade
			1.000	-0.121	-0.376	-0.514	-0.450	0.023	0.072	-0.003	0.026	0.269	LnTel
				1.000	-0.047	-0.023	-0.039	0.171	0.164	0.091	0.169	-0.038	LnInflation
					1.000	0.721	0.970	0.116	0.088	0.093	0.117	-0.172	LnBilaid
						1.000	0.833	0.014	-0.039	0.069	0.016	-0.245	LnMulaid
							1.000	0.093	0.059	0.094	0.094	-0.209	LnTotalaid
								1.000	0.743	0.733	0.993	0.068	Domter
									1.000	0.528	0.785	0.052	Tranater
										1.000	0.789	0.025	Unclter
											1.000	0.065	Totter
												1.000	CC

Note: The identifiers are as earlier defined in Table 1.

2.2 Methodology

The following equations in levels (equation 1) and difference (equation 2) summarize the estimable model.

$$FDI_{i,t} = \sigma_0 + \sigma_1 FDI_{i,t-1} + \sigma_2 A_{i,t} + \sigma_3 T_{i,t} + \sigma_4 AT_{i,t} + \sigma_5 GDPg_{i,t} + \sigma_6 Trade_{i,t} + \sigma_7 Infra_{i,t} + \sigma_8 Infla_{i,t} + \eta_i + \xi_t + \varepsilon_{i,t} \quad (1)$$

$$\begin{aligned}
FDI_{i,t} - FDI_{i,t-1} = & \sigma_1(FDI_{i,t-1} - FDI_{i,t-2}) + \sigma_2(A_{i,t} - A_{i,t-1}) + \sigma_3(T_{i,t} - T_{i,t-1}) + \sigma_4(AT_{i,t} - AT_{i,t-1}) \\
& + \sigma_5(GDPg_{i,t} - GDPg_{i,t-1}) + \sigma_6(Trade_{i,t} - Trade_{i,t-1}) + \sigma_7(Infra_{i,t} - Infra_{i,t-1}) \\
& + \sigma_8(Infla_{i,t} - Infla_{i,t-1}) + (\xi_t - \xi_{t-1}) + (\varepsilon_{i,t} - \varepsilon_{i,t-1}) \quad (2)
\end{aligned}$$

Where the time and country identifiers are represented by ‘t’ and ‘i’, respectively. From the model, *FDI* is Foreign Direct Investment; *A*, Foreign aid; *T*, Terrorism; *AT*, interaction between Foreign aid (*A*) and Terrorism (*T*); *GDPg*, GDP growth; *Trade*, Trade Openness; *Infra*, Infrastructure; *Infla*, Inflation; η_i is a country-specific effect; ξ_t is a time-specific constant and; $\varepsilon_{i,t}$ an error term. The *two-step* procedure is preferred to the *one-step* alternative in the model specification because it corrects issues of heteroscedasticity that may likely arise from the estimable data.

The adopted panel System GMM estimation strategy employs forward orthogonal deviations, instead of first differencing. Accordingly, preference is given to the Roodman (2009a, b) extension of Arellano and Bover (1995) because in the presence of cross-sectional dependence, the use of forward orthogonal deviations produces more efficient estimates (Love and Zicchino, 2006; Baltagi, 2008). All the constitutive variables were included in the specifications. The combined significance of the constitutive terms are interpreted as marginal effects in order for the specifications to have economic meaning, since some range of the modifying variable is needed.

3. Presentation of Empirical Results

Tables 3, 4 and 5 present results corresponding to bilateral aid, multilateral aid and total aid respectively. All tables are structured in two panels. While *Panel A* presents results on domestic and transnational terrorisms, *Panel B* shows the findings corresponding to unclear and total terrorisms. The median of corruption-control is used as the threshold. Hence, three regressions are required for every specification to assess: the baseline effect, impact when corruption-control is lower or equal to the median and the effect when corruption-control is higher than the median. For all tables, panels and terrorism dynamics, the first set (second set) of specifications is without (with) control variables.

The information criteria across panels and specifications broadly confirm the validity of the models. The null hypothesis of the second-order Arellano and Bond autocorrelation test (*AR2*) in difference is rejected for the most part. Likewise, the null hypothesis of the Sargan (Hansen) test for over-identification is also overwhelmingly rejected in the most part. This

confirms the validity of the instruments. It should be noted that while the Sargan over-identifying restrictions (*OIR*) test is not robust and not weakened by instruments, the Hansen *OIR* test is robust and weakened by instruments. We have ensured that in the specifications, the number of instruments is lower than the number of cross-sections, to mitigate instrument proliferation or restrict over-identification. The Difference in Hansen Test (*DHT*) for the exogeneity of instruments confirms the validity of the Hansen *OIR* results. The Fisher tests for joint validity of estimated coefficients are consistently valid across specifications and panels.

We first discuss results that are broadly consistent with all tables before engaging table-specific outcomes. The results are broadly consistent across tables and specifications. The negative effect of terrorism on *FDI* is apparent only in the sample with higher levels of corruption control (*CC*): in the same spirit, the foreign aid flow dampens the negative effect of terrorism on *FDI* only in the sample with higher levels of *CC*. The result is mixed when foreign aid is subdivided into bilateral and multilateral aid. While our findings are in accordance with the stance that bilateral aid is effective in reducing the adverse impact of transnational terrorism (see Right Hand Side (*RHS*) of Panel A in Table 3), the position that only multilateral aid is effective in mitigating the adverse impact of domestic terrorism on *FDI* is not confirmed because multilateral aid also curbs the adverse effect of transnational terrorism on *FDI* (see *RHS* of Panel A in Table 4). This finding agrees with Bandyopadhyay, Sandler and Younas (2014) in some form. Multilateral aid also decreases the adverse effect of unclear and total terrorisms on *FDI* (see Panel B of Table 4). It is interesting to note that, the comparative exercises between the present exposition and the underlying study is only valid for the sub-sample in which *CC* levels are high (or above the median).

In what follows, the tables are discussed in terms of signs and magnitude of estimated coefficients, marginal effects, convergence patterns and control variables. The positive effect of domestic terrorism on *FDI* is higher when *CC* levels are low in specifications without control variables. This tendency is broadly consistent with unclear and total terrorisms in Panel B. The threshold point at which the modifying variable or ‘bilateral aid’ mitigates the adverse effect of transnational terrorism is within range. Accordingly: 6.666 (0.140/0.021) is within the maximum range of 8.362 disclosed in the summary statistics. There is also an overwhelming evidence of convergence across specifications and panels. The maximum rate of convergence is 27.06% per annum: pa (0.812/3) while the minimum rate is 18.46% pa (0.554/3). (ii) With the exceptions of first specifications without control variables for

domestic, transnational and total terrorisms, the convergence rate is slightly slower in countries with higher *CC* levels. It is important to note that the information criterion for the establishment of significance is when the absolute value of the lagged endogenous variable is situated between 0 and 1.

In the computation of the convergence rate, the lagged value is divided by three because we have used 3 year non-overlapping intervals to mitigate short-run or business cycle disturbances. The interested reader can find more information on the computation of convergence rates (in presence of data averages) in recent convergence literature, notably: Asongu (2013c) and Asongu (2014b). Most of the significant control variables have the expected signs. While trade openness and GDP growth intuitively increase FDI, low and stable inflation are significant positive booststo FDI location decisions. It should be noted that the mean of inflation is 2.414.

Table 3: FDI, Bilateral aid, Terrorism and Corruption-Control

Dependent Variable: Foreign Direct Investment Inflows												
Panel A: Domestic and Transnational Terrorisms												
	Domestic Terrorism (Domter)						Transnational Terrorism (Tranater)					
	CC	CC≤M	CC>M	CC	CC≤M	CC>M	CC	CC≤M	CC>M	CC	CC≤M	CC>M
Constant	0.905 (0.384)	-0.709 (0.570)	4.070*** (0.000)	-2.840 (0.338)	6.469 (0.147)	-5.76*** (0.003)	0.382 (0.640)	2.040* (0.074)	2.123* (0.085)	-5.580 (0.039)	5.476* (0.094)	-7.05*** (0.001)
FDI(-1)	0.812*** (0.000)	0.613*** (0.000)	0.670*** (0.000)	0.681*** (0.000)	0.582*** (0.000)	0.554*** (0.000)	0.670*** (0.000)	0.651*** (0.000)	0.676*** (0.000)	0.652*** (0.000)	0.595*** (0.000)	0.574*** (0.000)
Domter	0.022** (0.017)	0.405** (0.010)	-0.006 (0.373)	0.029*** (0.000)	0.252* (0.096)	-0.004 (0.353)	---	---	---	---	---	---
Tranater	---	---	---	---	---	---	0.024 (0.583)	0.146 (0.443)	-0.086 (0.124)	0.052 (0.278)	0.021 (0.887)	-0.140** (0.017)
LnBilaid	0.169 (0.318)	0.358 (0.170)	-0.141 (0.451)	0.337** (0.031)	0.148 (0.514)	0.236* (0.096)	0.031 (0.842)	-0.029 (0.881)	-0.174 (0.396)	0.200 (0.191)	-0.134 (0.468)	0.221 (0.188)
Domter× LnBilaid	-0.004** (0.011)	-0.077** (0.011)	0.001 (0.510)	-0.005*** (0.088)	-0.048 (0.109)	0.001 (0.557)	---	---	---	---	---	---
Tranater× LnBilaid	---	---	---	---	---	---	-0.004 (0.599)	-0.025 (0.472)	0.013 (0.172)	-0.009 (0.349)	-0.003 (0.917)	0.021** (0.035)
GDP growth	---	---	---	0.046 (0.229)	0.001 (0.993)	0.009 (0.809)	---	---	---	0.052 (0.118)	0.001 (0.972)	0.016 (0.562)
LnTrade	---	---	---	0.600 (0.336)	-1.264 (0.231)	1.889*** (0.000)	---	---	---	1.188* (0.051)	-0.881 (0.209)	2.144*** (0.000)
LnInflation	---	---	---	0.241* (0.050)	0.123 (0.422)	-0.041 (0.697)	---	---	---	0.212 (0.079)	0.254** (0.019)	-0.026 (0.797)
LnInfrastructure	---	---	---	-0.084 (0.539)	0.249 (0.279)	0.024 (0.838)	---	---	---	-0.278 (0.088)	0.177 (0.290)	0.014 (0.943)
AR(1)	(0.001)	(0.010)	(0.011)	(0.002)	(0.026)	(0.008)	(0.001)	(0.002)	(0.005)	(0.001)	(0.003)	(0.007)
AR(2)	(0.422)	(0.304)	(0.355)	(0.508)	(0.235)	(0.388)	(0.403)	(0.593)	(0.414)	(0.525)	(0.471)	(0.429)
Sargan OIR	(0.053)	(0.533)	(0.652)	(0.007)	(0.392)	(0.103)	(0.024)	(0.044)	(0.530)	(0.001)	(0.000)	(0.086)
Hansen OIR	(0.214)	(0.834)	(0.736)	(0.232)	(0.875)	(0.434)	(0.271)	(0.446)	(0.622)	(0.384)	(0.477)	(0.492)
DHT for instruments												
(a) Instruments in levels												
H excluding group	(0.494)	(0.628)	(0.561)	(0.612)	(0.923)	(0.252)	(0.524)	(0.405)	(0.878)	(0.443)	(0.585)	(0.470)
Dif(null, H=exogenous)	(0.149)	(0.776)	(0.680)	(0.134)	(0.668)	(0.569)	(0.190)	(0.426)	(0.390)	(0.352)	(0.376)	(0.462)
(b) IV (years, eq(diff))												
H excluding group	(0.342)	(0.578)	(0.903)	(0.260)	(0.932)	(0.586)	(0.070)	(0.167)	(0.692)	(0.240)	(0.390)	(0.483)
Dif(null, H=exogenous)	(0.193)	(0.904)	(0.441)	(0.293)	(0.320)	(0.219)	(0.739)	(0.935)	(0.443)	(0.711)	(0.611)	(0.437)
Fisher	71.51***	22.55***	111.9***	33.60***	22.28***	160.7***	51.50***	25.80***	35.39***	24.18***	27.78***	34.93***
Instruments	21	19	21	37	35	37	21	19	21	37	35	37
Countries	78	68	75	77	67	72	78	68	75	77	67	72
Observations	514	300	214	483	284	199	514	300	214	483	284	199

Panel B: Unclear and Total Terrorisms												
	Unclear Terrorism (Unclter)						Total Terrorism (Totter)					
	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M
Constant	0.438 (0.651)	1.340 (0.117)	3.207** (0.040)	-2.764 (0.218)	2.847 (0.207)	-7.21*** (0.001)	0.748 (0.476)	0.727 (0.535)	2.099* (0.074)	-3.849 (0.160)	5.115 (0.190)	-7.21*** (0.000)
FDI(-1)	0.726*** (0.000)	0.746*** (0.000)	0.710*** (0.000)	0.668*** (0.000)	0.626*** (0.000)	0.602*** (0.000)	0.786*** (0.000)	0.663*** (0.000)	0.675*** (0.000)	0.673*** (0.000)	0.602*** (0.000)	0.561*** (0.000)
Unclter	0.042 (0.363)	0.157** (0.027)	-0.054 (0.270)	0.036 (0.521)	0.059 (0.257)	-0.040 (0.225)	---	---	---	---	---	---
Totter	---	---	---	---	---	---	0.017** (0.018)	0.152** (0.042)	-0.006 (0.267)	0.019*** (0.000)	0.116 (0.194)	-0.005 (0.213)
LnBilaid	0.255* (0.078)	0.087 (0.574)	0.016 (0.914)	0.239 (0.126)	-0.057 (0.704)	0.365** (0.012)	0.211 (0.224)	0.245 (0.300)	-0.149 (0.417)	0.334** (0.033)	0.179 (0.380)	0.226 (0.112)
Unclter × LnBilaid	-0.009 (0.281)	-0.029** (0.018)	0.008 (0.309)	-0.007 (0.470)	-0.013 (0.150)	0.008 (0.176)	---	---	---	---	---	---
Totter× LnBilaid	---	---	---	---	---	---	-0.003** (0.014)	-0.028** (0.047)	0.001 (0.409)	-0.003*** (0.000)	-0.021 (0.211)	0.001 (0.344)
GDP growth	---	---	---	0.066* (0.072)	-0.001 (0.993)	0.012 (0.749)	---	---	---	0.058 (0.123)	-0.006 (0.905)	0.012 (0.739)
LnTrade	---	---	---	0.301 (0.493)	-0.282 (0.508)	1.672*** (0.000)	---	---	---	0.484 (0.457)	-1.002 (0.260)	1.920*** (0.000)
LnInflation	---	---	---	0.313*** (0.006)	0.210* (0.084)	-0.017 (0.864)	---	---	---	0.263** (0.036)	0.072 (0.584)	-0.034 (0.749)
LnInfrastructure	---	---	---	-0.106 (0.430)	0.134 (0.338)	0.202 (0.153)	---	---	---	-0.092 (0.519)	0.234 (0.281)	0.031 (0.798)
AR(1)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.005)	(0.001)	(0.002)	(0.009)	(0.002)	(0.007)	(0.008)
AR(2)	(0.433)	(0.730)	(0.321)	(0.551)	(0.502)	(0.387)	(0.415)	(0.449)	(0.364)	(0.527)	(0.333)	(0.399)
Sargan OIR	(0.070)	(0.102)	(0.600)	(0.005)	(0.000)	(0.067)	(0.051)	(0.300)	(0.642)	(0.006)	(0.128)	(0.098)
Hansen OIR	(0.901)	(0.356)	(0.802)	(0.447)	(0.590)	(0.473)	(0.165)	(0.873)	(0.726)	(0.218)	(0.882)	(0.455)
DHT for instruments												
(a) Instruments in levels												
H excluding group	(0.692)	(0.507)	(0.650)	(0.538)	(0.737)	(0.201)	(0.549)	(0.615)	(0.898)	(0.619)	(0.908)	(0.267)
Dif(null, H=exogenous)	(0.847)	(0.276)	(0.720)	(0.368)	(0.415)	(0.679)	(0.099)	(0.839)	(0.494)	(0.122)	(0.696)	(0.580)
(b) IV (years, eq(diff))												
H excluding group	(0.641)	(0.769)	(0.755)	(0.465)	(0.813)	(0.597)	(0.170)	(0.590)	(0.943)	(0.225)	(0.950)	(0.592)
Dif(null, H=exogenous)	(0.887)	(0.103)	(0.642)	(0.381)	(0.123)	(0.257)	(0.257)	(0.961)	(0.398)	(0.329)	(0.274)	(0.239)
Fisher	101.6***	46.10***	74.38***	34.85***	56.04***	35.64***	68.89***	27.43***	103.7***	32.73***	28.08***	102.8***
Instruments	21	19	41	37	35	37	21	19	21	37	35	37
Countries	78	68	75	77	67	72	78	68	75	72	67	72
Observations	514	300	214	483	284	199	514	300	214	483	284	199

*, **, ***: significance levels of 10%, 5% and 1% respectively. *Bilaid*: Bilateral aid. *CC*: Corruption-Control. *M*: Median of Corruption-Control (-0.1009844). *DHT*: Difference in Hansen Test for Exogeneity of Instruments' Subsets. *Dif*: Difference. *OIR*: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients, Hausman test and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the *AR(1)* and *AR(2)* tests and; b) the validity of the instruments in the Sargan *OIR* test.

The following can be established for Table 4: like in Table 3, the positive effect of domestic terrorism on FDI is higher when *CC* levels are low; especially in specifications without control variables. This tendency is broadly consistent with unclear and total terrorisms in *Panel B* respectively for specifications with and without control variables. Threshold points at which multilateral aid mitigates the adverse effects of terrorism are broadly within range, with the slight exception of domestic terrorism.

Focusing on domestic terrorism, it is 8 (0.008/0.001) and not within range because the maximum in the range is 7.105. With respect to transnational terrorism, 7.1 (0.071/0.010) is just within the limits of the maximum range (or 7.105). For unclear terrorism, 4.73 (0.71/0.15) is within range and 7 (0.007/0.001) is also within range for total terrorism.

Regarding evidences of convergence, we can establish the following: The maximum rate of convergence is 27.36% (0.821/3) *pa* while the minimum rate is 16.76% *pa* (0.503/3). This is only applicable with the exceptions of first specifications without control variables for domestic, unclear and total terrorisms. The convergence rate is slightly slower in countries with higher *CC* levels. Most of the significant control variables have the expected signs.

In addition to the explanations provided for the effects of GDP growth and trade openness already discussed above, two more interesting new patterns are worth discussing. First, trade openness and GDP growth have negative (positive) effects in the sub-sample with low (high) *CC* levels. This is consistent with intuition and the predictions of economic theory. Accordingly, the presence of low levels of corruption-control could potentially dissuade FDI even in the presence of burgeoning economic growth and trade (Musila and Sigué, 2007, 2010). Second, there is a slight exception of infrastructure having a negative effect of FDI in the left hand side (LHS) of *Panel B*. The argument for this effect is not very strong because it is significant at the 10% level. However, a possible explanation may be the use of mobile phone applications for activities that discourage FDI in the sub-sample with high *CC* levels. This interpretation should be treated with caution because the argument is not consistently significant across samples and panels.

Table 4: FDI, Multilateral aid, Terrorism and Corruption-Control

Dependent Variable: Foreign Direct Investment Inflows												
Panel A: Domestic and Transnational Terrorisms												
	Domestic Terrorism (Domter)						Transnational Terrorism (Tranater)					
	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M
Constant	-0.161 (0.800)	-1.567* (0.099)	1.184* (0.092)	-5.061* (0.094)	0.916 (0.678)	-2.043 (0.400)	-0.065 (0.934)	-0.955 (0.292)	4.764*** (0.000)	-4.189 (0.131)	2.858 (0.218)	-1.557 (0.557)
FDI(-1)	0.820*** (0.000)	0.651*** (0.000)	0.779*** (0.000)	0.722*** (0.000)	0.658*** (0.000)	0.581*** (0.000)	0.766*** (0.000)	0.738*** (0.000)	0.608*** (0.000)	0.733*** (0.000)	0.630*** (0.000)	0.503*** (0.000)
Domter	0.006*** (0.000)	0.034** (0.031)	-0.003 (0.197)	0.005** (0.048)	0.014 (0.289)	-0.008*** (0.000)	---	---	---	---	---	---
Tranater	---	---	---	---	---	---	0.031 (0.120)	0.091 (0.159)	-0.035** (0.020)	0.042** (0.031)	0.082 (0.228)	-0.071*** (0.000)
LnMulaid	0.180 (0.248)	0.599*** (0.006)	-0.157 (0.203)	0.249* (0.051)	0.442** (0.027)	-0.185 (0.240)	0.176 (0.247)	0.371 (0.080)	-0.184 (0.284)	0.212* (0.068)	0.543** (0.024)	-0.226 (0.106)
Domter× LnMulaid	-0.001** (0.017)	-0.007 (0.189)	0.001 (0.409)	-0.001* (0.083)	-0.004 (0.337)	0.001*** (0.003)	---	---	---	---	---	---
Tranater× LnMulaid	---	---	---	---	---	---	-0.007 (0.250)	-0.013 (0.544)	0.004 (0.313)	-0.008 (0.188)	-0.027 (0.309)	0.010** (0.014)
GDP growth	---	---	---	0.044 (0.227)	-0.080* (0.056)	0.066* (0.055)	---	---	---	0.036 (0.333)	-0.071 (0.120)	0.039 (0.160)
LnTrade	---	---	---	1.250* (0.065)	-0.601 (0.209)	1.566*** (0.000)	---	---	---	1.086* (0.064)	-1.173** (0.033)	1.508*** (0.005)
LnInflation	---	---	---	0.249* (0.049)	0.193 (0.133)	0.046 (0.665)	---	---	---	0.229* (0.053)	0.293** (0.020)	0.002 (0.983)
LnInfrastructure	---	---	---	-0.122 (0.501)	0.148 (0.405)	-0.354 (0.142)	---	---	---	-0.116 (0.507)	0.252 (0.166)	-0.324 (0.170)
AR(1)	(0.001)	(0.002)	(0.006)	(0.002)	(0.003)	(0.008)	(0.000)	(0.002)	(0.014)	(0.001)	(0.004)	(0.016)
AR(2)	(0.463)	(0.626)	(0.320)	(0.462)	(0.393)	(0.417)	(0.438)	(0.591)	(0.237)	(0.448)	(0.370)	(0.347)
Sargan OIR	(0.529)	(0.639)	(0.574)	(0.009)	(0.045)	(0.032)	(0.346)	(0.659)	(0.554)	(0.003)	(0.036)	(0.038)
Hansen OIR	(0.473)	(0.837)	(0.660)	(0.195)	(0.623)	(0.366)	(0.505)	(0.684)	(0.323)	(0.194)	(0.639)	(0.185)
DHT for instruments												
(a) Instruments in levels												

H excluding group	(0.698)	(0.367)	(0.697)	(0.251)	(0.549)	(0.373)	(0.673)	(0.473)	(0.679)	(0.226)	(0.464)	(0.620)
Dif(null, H=exogenous)	(0.315)	(0.921)	(0.511)	(0.241)	(0.569)	(0.376)	(0.355)	(0.669)	(0.192)	(0.258)	(0.646)	(0.098)
(b) IV (years, eq(diff))												
H excluding group	(0.819)	(0.496)	(0.931)	(0.072)	(0.828)	(0.199)	(0.585)	(0.372)	(0.317)	(0.106)	(0.605)	(0.177)
Dif(null, H=exogenous)	(0.231)	(0.986)	(0.337)	(0.859)	(0.137)	(0.788)	(0.375)	(0.915)	(0.346)	(0.651)	(0.512)	(0.351)
Fisher	40.12***	33.66***	83.52***	57.80***	34.80***	168.7***	32.37***	35.28***	41.07***	33.46***	32.10***	47.18***
Instruments	21	19	21	37	35	37	21	19	21	37	35	37
Countries	78	68	75	77	67	71	78	68	75	77	67	71
Observations	515	305	210	482	287	195	515	305	210	482	287	195

Panel B: Unclear and Total Terrorisms												
	Unclear Terrorism (Unclter)						Total Terrorism (Totter)					
	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M
Constant	1.027 (0.227)	-1.366 (0.113)	3.734*** (0.000)	-5.236** (0.038)	-1.140 (0.601)	-2.512 (0.253)	0.874 (0.351)	-1.773* (0.074)	3.971*** (0.000)	-5.868** (0.021)	0.926 (0.641)	-2.403 (0.332)
FDI(-1)	0.761*** (0.000)	0.702*** (0.000)	0.739*** (0.000)	0.714*** (0.000)	0.661*** (0.000)	0.586*** (0.000)	0.821*** (0.000)	0.671*** (0.000)	0.776*** (0.000)	0.728*** (0.000)	0.651*** (0.000)	0.586*** (0.000)
Unclter	0.018 (0.206)	0.052*** (0.000)	-0.031 (0.102)	0.032** (0.028)	0.013 (0.237)	-0.071*** (0.000)	---	---	---	---	---	---
Totter	---	---	---	---	---	---	0.004*** (0.008)	0.023*** (0.000)	-0.002 (0.164)	0.004** (0.035)	0.012* (0.063)	-0.007*** (0.000)
LnMulaid	0.224 (0.157)	0.516*** (0.008)	-0.074 (0.567)	0.272** (0.025)	0.501*** (0.004)	-0.260 (0.133)	0.178 (0.274)	0.644*** (0.004)	-0.151 (0.191)	0.234* (0.066)	0.510** (0.011)	-0.197 (0.222)
Unclter × LnMulaid	-0.004 (0.104)	-0.009*** (0.000)	0.005 (0.123)	-0.005** (0.030)	-0.004*** (0.005)	0.015*** (0.000)	---	---	---	---	---	---
Totter × LnMulaid	---	---	---	---	---	---	-0.001** (0.024)	-0.004*** (0.008)	0.001 (0.378)	-0.001 (0.111)	-0.004 (0.111)	0.001*** (0.001)
GDP growth	---	---	---	0.047 (0.260)	-0.090** (0.046)	0.048 (0.145)	---	---	---	0.040 (0.290)	-0.074 (0.082)	0.067** (0.045)
LnTrade	---	---	---	1.234** (0.012)	0.163 (0.736)	1.809*** (0.001)	---	---	---	1.214* (0.062)	-0.712* (0.063)	1.686*** (0.000)
LnInflation	---	---	---	0.252** (0.025)	0.224* (0.080)	0.010 (0.921)	---	---	---	0.235* (0.060)	0.234* (0.068)	0.038 (0.728)
LnInfrastructure	---	---	---	-0.069 (0.681)	0.109 (0.491)	-0.508* (0.078)	---	---	---	-0.136 (0.446)	0.186 (0.282)	-0.417 (0.103)
AR(1)	(0.001)	(0.004)	(0.004)	(0.002)	(0.002)	(0.009)	(0.001)	(0.002)	(0.006)	(0.002)	(0.003)	(0.009)
AR(2)	(0.439)	(0.599)	(0.246)	(0.453)	(0.311)	(0.355)	(0.460)	(0.618)	(0.322)	(0.458)	(0.003)	(0.417)
Sargan OIR	(0.627)	(0.397)	(0.606)	(0.011)	(0.015)	(0.028)	(0.508)	(0.620)	(0.570)	(0.007)	(0.033)	(0.033)
Hansen OIR	(0.654)	(0.638)	(0.657)	(0.255)	(0.437)	(0.241)	(0.429)	(0.801)	(0.652)	(0.205)	(0.622)	(0.393)
DHT for instruments												
(a) Instruments in levels												
H excluding group	(0.705)	(0.340)	(0.929)	(0.276)	(0.569)	(0.480)	(0.669)	(0.371)	(0.781)	(0.235)	(0.571)	(0.392)
Dif(null, H=exogenous)	(0.501)	(0.715)	(0.402)	(0.306)	(0.341)	(0.183)	(0.284)	(0.882)	(0.463)	(0.267)	(0.553)	(0.396)
(b) IV (years, eq(diff))												
H excluding group	(0.561)	(0.495)	(0.682)	(0.245)	(0.733)	(0.205)	(0.884)	(0.484)	(0.864)	(0.074)	(0.770)	(0.225)
Dif(null, H=exogenous)	(0.575)	(0.641)	(0.491)	(0.376)	(0.077)	(0.434)	(0.175)	(0.954)	(0.371)	(0.878)	(0.197)	(0.777)
Fisher	78.52***	58.45***	86.59***	73.03***	60.62***	124.4***	39.84***	35.96***	54.35***	54.61***	38.41***	98.47***
Instruments	21	19	21	37	35	37	21	19	21	37	35	37
Countries	78	68	75	77	67	75	78	68	75	77	67	71
Observations	515	305	210	482	287	195	515	305	210	482	287	195

*, **, ***: significance levels of 10%, 5% and 1% respectively. Mulaid: Multilateral aid. CC: Corruption-Control. M: Median of Corruption-Control (-0.1009844). DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients, Hausman test and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

From the Table 6 on total aid, the positive effect of terrorism is higher in the sub-sample with low CC levels, which is consistent with evidence from the preceding tables. While this is the case only in specifications without control variables for unclear terrorism; extended to specifications with control variables for domestic and total terrorisms, it is not the case in either specification for transnational terrorism. With the exception of 'domestic terrorism' for which total aid does not mitigate its adverse effect on FDI, threshold points at which total aid reduces the negative impacts of terrorism are broadly within range. For transnational terrorism,

it is 6.60 (0.152/0.023) which is within the range of between 0.800 and 8.495, while for unclear terrorism, 6 (0.072/0.012) is also within range and 8 (0.008/0.001) is within range for total terrorism.

With regards to the evidence of convergence, the following are observable from the Table 5: the maximum rate of convergence is 28.33% (0.850/3) pa while the minimum rate is 18.46% pa (0.554/3). This is with the exceptions of first specifications without control variables for all dynamics of terrorism; the convergence rate is slightly slower in countries with higher CC levels. Fourth, the discussion relevant to the signs of the significant control variables is consistent with those pertaining to Table 3 and Table 4 on bilateral and multilateral aid respectively.

Table 5: FDI, Total Aid, Terrorism and Corruption-Control

Dependent Variable: Foreign Direct Investment Inflows												
Panel A: Domestic and Transnational Terrorisms												
	Domestic Terrorism (Domter)						Transnational Terrorism (Tranater)					
	CC	CC ≤ M	CC > M	CC	CC ≤ M	CC > M	CC	CC ≤ M	CC > M	CC	CC ≤ M	CC > M
Constant	-0.085 (0.948)	-0.270 (0.848)	2.172 (0.171)	-3.329 (0.295)	3.923 (0.187)	-6.540*** (0.000)	1.138 (0.363)	-0.076 (0.948)	3.431** (0.032)	-4.903 (0.140)	4.622 (0.110)	-6.530*** (0.006)
FDI(-1)	0.850*** (0.000)	0.599*** (0.000)	0.785*** (0.000)	0.690*** (0.000)	0.610*** (0.000)	0.554*** (0.000)	0.673*** (0.000)	0.629*** (0.000)	0.696*** (0.000)	0.676*** (0.000)	0.603*** (0.000)	0.579*** (0.000)
Domter	(0.005)	(0.018)	(0.589)	(0.001)	(0.005)	(0.059)	---	---	---	---	---	---
Tranater	---	---	---	---	---	---	0.038 (0.419)	0.118 (0.519)	-0.119** (0.019)	0.051 (0.260)	0.042 (0.792)	-0.152*** (0.001)
LnTotaaid	0.314 (0.112)	0.180 (0.462)	-0.156 (0.507)	0.407*** (0.009)	0.256 (0.214)	0.201 (0.230)	0.167 (0.402)	0.121 (0.570)	-0.392* (0.087)	0.335** (0.039)	0.025 (0.911)	0.096 (0.589)
Domter × LnTotaaid	-0.004*** (0.004)	-0.029** (0.023)	0.001 (0.705)	-0.004*** (0.001)	-0.035*** (0.007)	0.001 (0.120)	---	---	---	---	---	---
Tranater × LnTotaaid	---	---	---	---	---	---	-0.008 (0.379)	-0.018 (0.595)	0.019** (0.036)	-0.010 (0.257)	-0.007 (0.810)	0.023*** (0.002)
GDP growth	---	---	---	0.048 (0.210)	-0.012 (0.747)	0.015 (0.685)	---	---	---	0.040 (0.235)	-0.014 (0.713)	0.036 (0.197)
LnTrade	---	---	---	0.579 (0.378)	-0.850 (0.218)	2.054*** (0.000)	---	---	---	1.107 (0.104)	-1.060* (0.070)	2.173*** (0.000)
LnInflation	---	---	---	0.177 (0.149)	0.096 (0.485)	-0.059 (0.571)	---	---	---	0.153 (0.225)	0.184 (0.104)	-0.025 (0.808)
LnInfrastructure	---	---	---	-0.011 (0.940)	0.150 (0.305)	0.038 (0.800)	---	---	---	-0.155 (0.370)	0.154 (0.268)	-0.054 (0.777)
AR(1)	(0.001)	(0.005)	(0.013)	(0.002)	(0.005)	(0.008)	(0.002)	(0.004)	(0.009)	(0.002)	(0.005)	(0.007)
AR(2)	(0.429)	(0.426)	(0.332)	(0.542)	(0.234)	(0.399)	(0.414)	(0.693)	(0.334)	(0.559)	(0.522)	(0.425)
Sargan OIR	(0.071)	(0.429)	(0.221)	(0.004)	(0.072)	(0.041)	(0.025)	(0.178)	(0.155)	(0.001)	(0.001)	(0.031)
Hansen OIR	(0.253)	(0.467)	(0.670)	(0.343)	(0.675)	(0.410)	(0.143)	(0.267)	(0.442)	(0.246)	(0.377)	(0.443)
DHT for instruments												
(a) Instruments in levels												
H excluding group	(0.792)	(0.707)	(0.497)	(0.638)	(0.919)	(0.255)	(0.740)	(0.479)	(0.903)	(0.473)	(0.681)	(0.569)
Dif(null, H=exogenous)	(0.199)	(0.306)	(0.636)	(0.218)	(0.388)	(0.534)	(0.062)	(0.201)	(0.225)	(0.190)	(0.232)	(0.348)
(b) IV (years, eq(diff))												
H excluding group	(0.285)	(0.208)	(0.880)	(0.336)	(0.796)	(0.430)	(0.056)	(0.160)	(0.496)	(0.117)	(0.453)	(0.288)
Dif(null, H=exogenous)	(0.278)	(0.865)	(0.381)	(0.391)	(0.233)	(0.367)	(0.483)	(0.556)	(0.360)	(0.778)	(0.249)	(0.725)
Fisher	96.26***	30.91***	132.0***	43.48***	38.31***	163.4***	55.28***	28.23***	44.91***	32.56***	27.13***	41.8***
Instruments	21	19	21	37	35	37	21	19	21	37	35	37
Countries	78	68	75	77	67	72	78	68	75	77	67	72
Observations	520	306	214	487	288	199	520	306	214	487	288	199

Panel B: Unclear and Total Terrorisms												
	Unclear Terrorism (Unclter)						Total Terrorism (Totter)					
	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M	CC	CC ≤M	CC>M
Constant	-0.184 (0.866)	0.958 (0.327)	1.409 (0.361)	-4.271** (0.046)	1.578 (0.484)	-6.77*** (0.003)	-0.235 (0.859)	0.955 (0.499)	2.152 (0.181)	-4.473 (0.122)	3.779 (0.158)	-6.65*** (0.003)
FDI(-1)	0.747*** (0.000)	0.746*** (0.000)	0.750*** (0.000)	0.694*** (0.000)	0.655*** (0.000)	0.597*** (0.000)	0.821** (0.000)	0.617*** (0.000)	0.780*** (0.000)	0.687*** (0.000)	0.618*** (0.000)	0.560*** (0.000)
Unclter	0.045 (0.133)	0.063* (0.086)	-0.054 (0.225)	0.059 (0.131)	0.009 (0.738)	-0.072** (0.050)	---	---	---	---	---	---
Totter	---	---	---	---	---	---	0.019*** (0.005)	0.067** (0.028)	-0.004 (0.477)	0.017*** (0.000)	0.093*** (0.003)	-0.008** (0.024)
LnTotaaid	0.349** (0.028)	0.149 (0.387)	0.001 (0.995)	0.286* (0.056)	0.079 (0.655)	0.260 (0.152)	0.351* (0.083)	0.223 (0.329)	-0.164 (0.500)	0.393** (0.014)	0.260 (0.211)	0.190 (0.257)
Unclter × LnTotaaid	-0.008* (0.089)	-0.011 (0.034)	0.008 (0.261)	-0.009 (0.133)	-0.003 (0.346)	0.012** (0.042)	-0.003*** (0.006)	-0.011** (0.041)	0.001 (0.608)	-0.003*** (0.009)	-0.017*** (0.005)	0.001* (0.056)
Totter× LnTotaaid	---	---	---	0.068* (0.081)	-0.029 (0.479)	0.029 (0.469)	---	---	---	0.054 (0.159)	-0.023 (0.539)	0.017 (0.637)
GDP growth	---	---	---	0.605 (0.130)	-0.047 (0.898)	1.843*** (0.000)	---	---	---	0.550 (0.403)	-0.796 (0.162)	2.084*** (0.000)
LnTrade	---	---	---	0.252** (0.025)	0.156 (0.200)	-0.004 (0.965)	---	---	---	0.191 (0.123)	0.075 (0.545)	-0.052 (0.617)
LnInflation	---	---	---	-0.044 (0.777)	-0.031 (0.802)	0.162 (0.363)	---	---	---	-0.029 (0.855)	0.106 (0.433)	0.044 (0.766)
LnInfrastructure	---	---	---	---	---	---	---	---	---	---	---	---
AR(1)	(0.001)	(0.730)	(0.001)	(0.002)	(0.002)	(0.007)	(0.001)	(0.003)	(0.013)	(0.002)	(0.004)	(0.007)
AR(2)	(0.439)	(0.730)	(0.297)	(0.575)	(0.510)	(0.398)	(0.430)	(0.474)	(0.337)	(0.553)	(0.339)	(0.408)
Sargan OIR	(0.066)	(0.193)	(0.177)	(0.002)	(0.001)	(0.026)	(0.067)	(0.216)	(0.216)	(0.004)	(0.006)	(0.039)
Hansen OIR	(0.700)	(0.647)	(0.755)	(0.437)	(0.473)	(0.417)	(0.198)	(0.266)	(0.660)	(0.316)	(0.462)	(0.426)
DHT for instruments												
(a) Instruments in levels												
H excluding group	(0.929)	(0.457)	(0.677)	(0.466)	(0.636)	(0.222)	(0.849)	(0.592)	(0.823)	(0.644)	(0.791)	(0.276)
Dif(null, H=exogenous)	(0.448)	(0.634)	(0.640)	(0.400)	(0.344)	(0.580)	(0.080)	(0.168)	(0.453)	(0.192)	(0.259)	(0.534)
(b) IV (years, eq(diff))												
H excluding group	(0.592)	(0.675)	(0.475)	(0.514)	(0.933)	(0.300)	(0.168)	(0.172)	(0.957)	(0.313)	(0.544)	(0.447)
Dif(null, H=exogenous)	(0.613)	(0.434)	(0.787)	(0.298)	(0.019)	(0.634)	(0.317)	(0.515)	(0.319)	(0.377)	(0.261)	(0.370)
Fisher	100.4***	53.82***	101.8***	44.04***	67.67***	42.86***	81.02***	28.84***	138.8***	39.78***	43.57***	123.0***
Instruments	21	19	21	37	35	37	21	19	21	37	35	37
Countries	78	68	75	77	67	72	78	68	75	77	67	72
Observations	520	306	214	487	288	199	520	306	214	487	288	199

*, **, ***: significance levels of 10%, 5% and 1% respectively. Totaaid: Total aid. CC: Corruption-Control. M: Median of Corruption-Control (-0.1009844). DHT: Difference in Hansen Test for Exogeneity of Instruments' Subsets. Dif: Difference. OIR: Over-identifying Restrictions Test. The significance of bold values is twofold. 1) The significance of estimated coefficients, Hausman test and the Fisher statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR (1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

4. Concluding implications

We set-out to extend Bandyopadhyay, Sandler and Younas (2014) by conditioning the mitigation effect of foreign aid on corruption-control (CC) levels. We briefly highlight the findings of our study. The negative effect of terrorism on FDI is apparent only in higher levels of CC. Foreign aid dampens the negative effect of terrorism on FDI only in higher levels of CC. The result is mixed when aid is subdivided into its bilateral and multilateral component. While our findings are in accordance with the stance that bilateral aid is effective in reducing the adverse impact of transnational terrorism, the position that only multilateral aid is effective at mitigating the adverse impact of domestic terrorism on FDI is not confirmed because multilateral aid also curbs the adverse effect of transnational terrorism on FDI.

Moreover, multilateral aid also decreases the adverse effect of unclear and total terrorisms on FDI.

On a specific count, we have also noticed the following across dynamics of bilateral aid, multilateral aid and total aid. First, some terrorism dynamics may not deter FDI location decisions especially in countries experiencing low levels of institutional governance in terms of CC. This implies that the prevailing institutional structure may matter more for FDI despite the incidence of terrorism and this is likely tied to the confidence of FDI in the government's ability to protect their interest as well as defeat the prevailing encumbrance.

We have observed that the threshold point at which the modifying foreign aid variables are within their respective ranges, with the slight exception of multilateral aid, decreases the adverse effect of domestic terrorism. A resulting policy implication is that more multilateral aid may be needed to combat the negative effect of domestic terrorism on FDI in countries with CC levels that are above the median. The employment of this range is important in order to provide economic significance to interactive estimated coefficients since overall interpretations are based on marginal effects. Moreover, given that most of the thresholds are just close to the upper limit or maximum of the range, it implies that more development assistance is needed to reap more benefits from the mitigating role of foreign aid. It should be noted that the closeness of the threshold to the upper limit implies that only a few sampled countries enjoy the dampening role of foreign aid in the effect of terrorism dynamics on FDI. Hence, more foreign aid is required to make these benefits more accessible.

The rate of convergence is between 18.46% and 27.06%, 16.76% and 27.36%, and 18.46% and 28.33% per annum in specifications with bilateral aid, multilateral aid and total aid respectively. This implies that corresponding time to full convergence is respectively between 16.25 years (yrs) ($300\%/18.46\%$) and 11.08 yrs ($300\%/27.06\%$), 17.89 yrs ($300\%/16.76\%$) and 10.96 yrs ($300\%/27.36\%$), 16.25 yrs ($300\%/18.46\%$) and 10.58 ($300\%/28.33\%$). The interested reader can find more insights into the computations of full convergence in Asongu (2013c, 2014b).

We have also broadly established that, with the exception of first specifications which do not include control variables, the rate of convergence is slightly lower in countries with higher corruption-control levels. This suggests, that the presence of more variables in the conditioning information set leads to a lower degree of catch-up among countries with higher

levels of *CC*. In other words, changes in cross-country institutional and structural differences on which conditional convergence is based are less apparent in the presence of more control variables for high *CC* countries. This interpretation should be treated with caution because conditional convergence is contingent on the variables we choose and empirically test, which may not necessarily reflect all cross-country institutional and structural difference needed for conditional convergence to occur.

In this study, we have conditioned the analysis only on one dimension of institutional governance (i.e. corruption control). This leaves much room for future lines of inquiry which could be positioned on how the conditionality of other governance dynamics affects the investigated nexuses.

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