

# Terrorism, armed conflict and foreign aid

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# Terrorism, Armed Conflict and Foreign Aid

**Abstract:** Armed conflict, and to a lesser extent terrorism, have detrimental effect on economic and social development through destruction of human and physical capital and ensuing disruption to economic activity. There is also likely to be an indirect effect of political instability through its impact on foreign aid. The net effect is not obvious; violence may discourage aid donors and hence lead to a fall in received aid on the one hand, but it may well lead to an increase in foreign aid as donors offer reimbursement for counterterrorism efforts on the other hand. This paper uses a panel of countries to identify the net effect of armed conflict and terrorism, both domestic and international, on aid receipts. It shows that armed conflict has a negative effect on the amounts of both bilateral and multilateral aid. It also finds that terrorism tends to increase foreign assistance. The effect is stronger for bilateral aid; this is consistent with the expectation that they are likely to use foreign aid to directly or indirectly assist governments fighting terrorism. Nonetheless, these results do not hold for Muslim countries which do not receive increased aid when suffering from terrorism.

**Keywords:** foreign aid, terrorism, armed conflict

**JEL Codes:** C33, D74, F35

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## 1 Introduction

Foreign aid is often claimed to serve as a tool to promote social and economic development, which may be hindered if a country experiences an episode of armed conflict or increased terrorist activity (Blomberg, Hess, and Orphanides 2004; Collier 2006; Gaibulloev and Sandler 2009). In the presence of violence and instability, donors may be deterred from providing foreign aid for a number of reasons. The most obvious one is the destruction of human and physical

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capital which may reduce the recipient's capacity to effectively absorb aid and also affect commercial interests of foreign donors. Internal tensions associated with instability may increase the risk of corruption and misappropriation of aid funds and as such may constitute another deterrent to providing assistance. Furthermore, in the presence of two or more competing groups within a receiving country, foreign donors may be accused of interfering in recipient's internal affairs by providing support to one of those groups. On the one hand, such a situation may discourage donors who are committed to non-interference in other countries' internal affairs, but on the other hand, it may prompt some donors to provide additional assistance if this furthers their strategic interests. The latter is more likely to be true for bilateral donors for whom the impact of aid on development is not necessarily the main concern (Burnside and Dollar 2000). Alesina and Dollar (2000) argue that donors consider a number of other factors such as geopolitics, strategic alliances and colonial history when making their decisions.

Security concerns are likely to be another significant factor in aid allocation decisions. Bandyopadhyay, Sandler, and Younas (2011) suggest that counterterrorism-tied aid exhibits a degree of substitutability with donor's own security efforts. In their opinion, states with global interests should introduce proactive measures by providing aid to countries where international terrorist groups reside. They propose a principal-agent relationship in which the donor (principal) expects the receiving government (agent) to contain terrorism before it spreads to the donor's homeland. Noteworthy, the aid does not have to be a direct reimbursement for counterterrorist efforts. Assistance given to other areas, such as education or healthcare, could help the receiving government to free up more resources for fighting terrorism. Indeed, Azam and Thelen (2008) find evidence that increased aid leads to reduced levels of terrorism originating from the receiving country. Thus, security considerations make terrorism a potential determinant of aid flows.

This paper looks at the impact of conflict and terrorism on foreign aid, using a panel of countries. It distinguishes between bilateral and multilateral assistance because the two types are likely to respond differently to various factors. Multilateral donors are expected to respond to the quality of government and policies in the receiving states, as well as promote reductions in military expenditure. In contrast, bilateral donors are likely to be driven by their commercial interests, strategic alliances, security concerns and historical factors (Boyce and Pastor 1998). Another issue considered in this paper is whether religion plays a role in aid allocation. A large share of terrorism in recent decades has been driven by Muslim fundamentalists (Lis 2011), therefore this paper tries to verify whether the determinants of aid flows to Muslim countries are different.

A number of studies analyzed the impact of instability in receiving states on aid flows. Chauvet (2003) found an “inverted-U” relationship between aid and violent instability. Low levels of instability resulted in increased aid, as donors attempted to safeguard their interests, but as the threat level increased, donors shifted their attention to more stable countries. Boutton and Carter (2014) demonstrated that the United States used foreign aid to fight terrorism by assisting countries within whose borders there was terrorist activity which directly threatened US security. Bandyopadhyay, Sandler, and Younas (2011) used a game theoretic model, which allows aid to be conditioned on the undertaking of certain counterterrorism efforts by the receiving government. They warned that terrorism-tied aid may result in protests in the receiving country and if the regime becomes sufficiently weakened, its ability to fight terrorists may become limited, and the threat to both the donor and recipient may rise.

## 2 Data and method

The empirical analysis is conducted on a panel of 186 countries covering years from 1973 to 2007. Constant-dollar figures on bilateral and multilateral aid are drawn from the Project-Level Aid 1.9.1, available from AidData.org (see Nielson, Powers, and Tierney 2010). Population, real GDP per capita and country openness (exports plus imports as a share of GDP) are drawn from the Penn World Table Version 7.1 (Heston, Summers, and Aten 2012). The Freedom House’s (1972–2009) civil liberties index is used to control for the relationship between aid and recipients’ level of democracy. The index ranks countries on a scale from 1 to 7, with 1 representing the highest degree of freedom and 7 the lowest. The fractionalization dataset (Alesina et al. 2003) is used to identify countries with Muslim majorities. The data on terrorism is taken from Enders, Sandler, and Gaibulloev (2011) who separated the Global Terrorism Database (GTD) into international and domestic components. Their dataset reports 44,487 domestic and 10,564 international terrorist incidents over the analyzed period. Finally, the UCDP/PRIO Armed Conflict Dataset Version 4-2009 (Gleditsch et al. 2002) is a source of data for an indicator variable which takes a value of 1 if a country experienced conflict in a given year, or zero otherwise.

The estimation method is the Heckman two-step selection model, which is broadly used and discussed in the related literature (e.g., Boutton and Carter 2014; Bueno De Mesquita and Smith 2007). In the first “gate-keeping” stage donors choose countries to which aid is given, while in the second “allocation” stage they decide the amount of aid given to selected recipients. A credible identification of

the model requires an introduction of the exclusion restrictions. Following Carter and Signorino (2010) a cubic polynomial in time since a country has received foreign aid is added to the selection equation ( $t, t^2, t^3$ ). This also controls for the duration dependence where a state that received assistance in recent year(s) have a different probability of receiving aid compared to a country which has not received aid for many years (Boutton and Carter 2014). The second stage takes a better advantage of the panel data properties and introduces a lagged dependent variable (LDV) to account for donors' inertia and recipient-specific fixed effects to account for heterogeneity across recipients. The inclusion of LDV in a fixed-effects setting creates a risk of biased estimates. Nonetheless, Judson and Owen (1999) showed that the bias is negligible in models with large  $N$  and  $T$  and in any case it is concentrated in the coefficient on LDV, which is not of interest in this study. Finally, all estimates are based on yearly observations and the explanatory variables are lagged by 1 year to alleviate worries of endogeneity (see Lis 2013). Such an approach has been successfully used by Boutton and Carter (2014) and Lai (2003). The inclusion of the cubic polynomial that measures the number of years since a country received aid enables a probit model to behave like a duration model, and hence removes the distorting effects of temporal dependence in the selection stage. At the same time, the inclusion of LDV in the allocation stage deals with the autocorrelation problems by dynamically modeling the autocorrelation process (Carter and Signorino 2010; Lai 2003).

### 3 Results

Table 1 presents the estimates for the effects of terrorism and armed conflict on aid, with the first panel showing results for bilateral aid and the second panel for multilateral aid. The first two columns in each panel show coefficients for international terrorism, while the remaining columns show estimates for domestic terrorism. The results for the non-violent variables are generally consistent with expectations and the literature. The amount of received aid appears to be larger for countries which were receiving aid in previous years. This could be explained by a number of factors, including the donor inertia or already established and functioning aid links and programmes. States with larger populations seem less likely to become recipients of bilateral aid. This "population bias" could be an outcome of the donors' preference to spend limited resources where the impact of one dollar will be the greatest per person (Trumbull and Wall 1994). Nonetheless, once a country passes the "gate-keeping" stage, the relationship between aid receipts and population size becomes positive. Unsurprisingly, more aid is

Table 1: The effects of armed conflict and terrorism on foreign aid.

	Bilateral aid				Multilateral aid			
	International		Domestic		International		Domestic	
	Selection	Aid amount	Selection	Aid amount	Selection	Aid amount	Selection	Aid amount
$\ln(\text{Aid})_{t-1}$		0.225 <sup>b</sup> (0.00894)		0.222 <sup>b</sup> (0.00871)		0.0993 <sup>b</sup> (0.00678)		0.0994 <sup>b</sup> (0.00675)
$\ln(\text{population})_{t-1}$	-0.115 <sup>b</sup> (0.0228)	1.017 <sup>b</sup> (0.170)	-0.119 <sup>b</sup> (0.0230)	0.985 <sup>b</sup> (0.166)	0.00228 (0.0208)	0.434 <sup>b</sup> (0.133)	-0.0103 (0.0209)	0.424 <sup>b</sup> (0.133)
$\ln(\text{GDP pc})_{t-1}$	-0.623 <sup>b</sup> (0.0410)	-0.546 <sup>b</sup> (0.0913)	-0.625 <sup>b</sup> (0.0410)	-0.548 <sup>b</sup> (0.0888)	-0.497 <sup>b</sup> (0.0362)	-0.215 <sup>b</sup> (0.0712)	-0.512 <sup>b</sup> (0.0364)	-0.216 <sup>b</sup> (0.0712)
$\ln(\text{openness})_{t-1}$	-0.0711 (0.0688)	0.189 <sup>c</sup> (0.0806)	-0.0543 (0.0694)	0.194 <sup>c</sup> (0.0783)	-0.0261 (0.0584)	0.0961 (0.0612)	-0.00794 (0.0587)	0.0944 (0.0611)
Civil liberties <sup>a</sup> <sub>t-1</sub>	0.0504 <sup>c</sup> (0.0199)	-0.0310 (0.0273)	0.0521 <sup>b</sup> (0.0199)	-0.0366 (0.0266)	-0.0598 <sup>b</sup> (0.0197)	-0.0807 <sup>b</sup> (0.0209)	-0.0503 <sup>c</sup> (0.0199)	-0.0808 <sup>b</sup> (0.0209)
$\ln(\text{terrorist attacks})_{t-1}$	0.0483 <sup>c</sup> (0.0238)	0.0570 <sup>b</sup> (0.0196)	0.0566 <sup>b</sup> (0.0210)	0.0797 <sup>b</sup> (0.0156)	0.0188 (0.0220)	0.0148 (0.0148)	0.0571 <sup>b</sup> (0.0188)	0.0106 (0.0120)
Conflict <sub>t-1</sub>	0.324 <sup>c</sup> (0.135)	-0.283 <sup>b</sup> (0.0865)	0.245 <sup>d</sup> (0.140)	-0.352 <sup>b</sup> (0.0855)	-0.428 <sup>b</sup> (0.0936)	-0.257 <sup>b</sup> (0.0642)	-0.519 <sup>b</sup> (0.0973)	-0.259 <sup>b</sup> (0.0654)
Cold War	-0.566 <sup>b</sup> (0.0805)	-0.0158 (0.0807)	-0.544 <sup>b</sup> (0.0801)	0.00655 (0.0785)	-0.727 <sup>b</sup> (0.0746)	0.0964 (0.0631)	-0.718 <sup>b</sup> (0.0748)	0.0949 (0.0630)
$t$	-0.672 <sup>b</sup> (0.0342)		-0.671 <sup>b</sup> (0.0343)		-0.769 <sup>b</sup> (0.0346)		-0.763 <sup>b</sup> (0.0347)	
$r^2$	0.0466 <sup>b</sup> (0.00375)		0.0465 <sup>b</sup> (0.00376)		0.0518 <sup>b</sup> (0.00384)		0.0511 <sup>b</sup> (0.00385)	
$F^2$	-0.001 <sup>b</sup>		-0.001 <sup>b</sup>		-0.001 <sup>b</sup>		-0.001 <sup>b</sup>	

(Table 1: Continued)

Terrorism:	Bilateral aid				Multilateral aid			
	International		Domestic		International		Domestic	
	Selection	Aid amount	Selection	Aid amount	Selection	Aid amount	Selection	Aid amount
Constant	(0.000100) 8.634 <sup>b</sup> (0.587)	7.665 <sup>b</sup> (1.804)	(0.000101) 8.611 <sup>b</sup> (0.584)	8.066 <sup>b</sup> (1.753)	(0.000106) 6.734 <sup>b</sup> (0.484)	13.92 <sup>b</sup> (1.412)	(0.000106) 6.901 <sup>b</sup> (0.482)	14.02 <sup>b</sup> (1.410)
Mills lambda	1.598 <sup>b</sup> (0.123)		1.554 <sup>b</sup> (0.121)		0.196 <sup>d</sup> (0.108)		0.196 <sup>d</sup> (0.107)	
Observations	5545	4604	5545	4604	5545	4222	5545	4222

Standard errors in parentheses. <sup>a</sup>Scale from 1, free, to 7, not free. <sup>b</sup> $p < 0.01$ , <sup>c</sup> $p < 0.05$ , <sup>d</sup> $p < 0.1$ .

granted to states with lower GDP per capita. States with a larger degree of economic openness can count on favourable treatment by bilateral donors at the allocation stage. Bilateral donors also appear to favor less democratic countries at the selection stage. This could be dictated by donors' strategic interests and a relatively lower cost of achieving policy concessions from more dictatorial regimes (Bueno De Mesquita and Smith 2007). In contrast, multilateral donors reward civil liberties at both stages.

The estimates in Table 1 suggest that countries suffering from terrorism are more likely to receive foreign assistance. In addition, the amount received from bilateral donors is likely to be higher in the presence of attacks. Donors may feel compelled to respond not only to the threat of international terrorism but also to domestic terrorism because the two variants are linked with the latter Granger-causing the former (Enders, Sandler, and Gaibullov 2011). This finding is consistent with the principal-agent framework in which aid constitutes support for recipient's efforts to fight terrorism (Bandyopadhyay, Sandler, and Younas 2011). Bilateral donors are likely to perceive foreign aid as a part of their counterterrorism toolkit and means of convincing other states to undertake counterterrorism efforts which would protect donor's political and economic interests. This may be important because an increase in security at donor's home may persuade terrorists to substitute towards softer targets in other countries (Lis 2011), making donor's assets abroad more vulnerable. The donor's aim of reducing terrorism can be achieved even through aid which is not conditioned on counterterrorism. Aid to other areas can free up receiving government's resources which then can be used in fighting terrorists. Furthermore, terrorism and conflict are often linked to the lack of economic opportunities (Berman et al. 2011; Bueno de Mesquita 2005), thus by improving the economy and population's living conditions aid may sufficiently increase the opportunity cost of joining violent groups. As Caruso and Schneider (2013) and Caruso and Gavrilova (2012) show, an increased opportunity cost of terrorism is likely to lead to a reduction in the incidence and brutality of attacks. In a paper looking at the Latin American countries, Meierrieks and Gries (2012) demonstrate that the effect of economic growth is not homogenous across states and it reduces terrorism only in the less developed countries. Since aid seems to be targeted at poorer states, it may have a desirable effect on terrorism, assuming it is also effective in promoting growth. However, promotion of economic growth among the less developed states should not be the only concern. Support for democracy appear to be just as important because countries which have achieved intermediate levels of development but have no strong democratic institutions are more prone to terrorism (Boehmer and Daube 2013).

The two types of donors seem to respond differently to an onset of armed conflict. Multilateral organizations are less likely to give aid to a conflicted country



and when they do so the aid amount is likely to be lower relative to aid given to peaceful states. In contrast, bilateral donors appear willing to assist states experiencing armed conflict, but they also penalize violence by reduced aid flows. This behaviour may stem from bilateral donors' attempts to protect their political and economic interests by assisting a regime considered as useful or friendly. At the same time, multilateral donors are expected to be less politically motivated and more constrained in their actions as they are required to balance interests of their members who often have different geopolitical interests. The donor's conflict aversion may also be motivated by the worries over excessive influence of military strongmen or lack of government accountability in a receiving country (Mallaby 2002). Thus, cutting aid to troubled recipients and giving it to the peaceful states may be intended to show the benefits of good policies and maintaining social peace and stability.

Overall, the evidence suggests that multilateral donors are more averse to armed conflict as well as less influenced by incidence of terrorism when making their aid allocation decisions. As Blomberg, Hess, and Orphanides (2004) and Gaibullov and Sandler (2009) show, violent instability is associated with smaller investment, poor policies and higher risks of resources being misused which altogether amount to a negative effect on economic growth. Such behavior of multilateral donors may be a signal of a larger commitment to the efficient use of aid and promotion of economic and social development, however more evidence is required to make a reliable judgment.

An issue that has not received attention in the aid literature is the treatment of countries with populations that are 50% or more Muslim. This "Islam factor" may be particularly important in the context in which aid is motivated by counterterrorism. Since the late 1970s an increasingly large share of terrorism has been associated with Muslim fundamentalists (Lis 2011). This may have led to a different treatment of those states by aid donors. Table 2 presents the estimation results for the sample of Muslim countries. The coefficients on control variables are fairly similar to those in Table 1 with two exceptions. First, donors do not exhibit the "population bias" and do not appear to respond to economic openness. Second, bilateral donors are less likely to assist Muslim countries with a lower degree of civil liberties. Perhaps, this could be assigned to the fact that the Muslim countries tend to be less free on average. Their mean value of the civil liberties index is 5.24, compared to 3.34 for the rest of the sample. Thus, donors might conclude that the civil liberties in many of those countries are out of the acceptable range that could be explained to donors' electorates.

Both multilateral and bilateral donors appear to be neutral to terrorism occurring in the Muslim countries. This is surprising given the frequent perception that those countries are the source of fundamentalist terrorism which has

Table 2: Muslim countries: the effects of armed conflict and terrorism on foreign aid.

Terrorism:	Bilateral aid			Multilateral aid		
	International		Domestic	International		Domestic
	Selection	Aid amount	Selection	Aid amount	Selection	Aid amount
$\ln(\text{Aid})_{t-1}$	0.161 <sup>b</sup> (0.0238)	0.157 <sup>b</sup> (0.0223)		0.144 <sup>b</sup> (0.0132)		0.144 <sup>b</sup> (0.0132)
$\ln(\text{population})_{t-1}$	0.0630 (0.0928)	0.732 <sup>c</sup> (0.360)	0.0672 (0.0933)	0.193 <sup>b</sup> (0.0566)	0.171 <sup>b</sup> (0.0557)	0.348 (0.257)
$\ln(\text{GDP pc})_{t-1}$	-0.751 <sup>b</sup> (0.118)	-0.690 <sup>b</sup> (0.232)	-0.750 <sup>b</sup> (0.118)	-0.612 <sup>b</sup> (0.0688)	-0.615 <sup>b</sup> (0.0687)	-0.183 (0.157)
$\ln(\text{openness})_{t-1}$	0.0179 (0.211)	0.241 (0.186)	0.0237 (0.211)	0.134 (0.106)	0.129 (0.108)	0.166 (0.118)
Civil liberties <sup>a</sup> <sub>t-1</sub>	-0.227 <sup>d</sup> (0.116)	-0.0795 (0.0700)	-0.232 <sup>c</sup> (0.116)	-0.241 <sup>b</sup> (0.0650)	-0.221 <sup>b</sup> (0.0642)	-0.171 <sup>b</sup> (0.0445)
$\ln(\text{terrorist attacks})_{t-1}$	0.0266 (0.0803)	0.0253 (0.0442)	0.0137 (0.0723)	-0.0277 (0.0453)	0.0268 (0.0415)	0.0394 (0.0236)
Conflict <sub>t-1</sub>	-0.302 (0.319)	-0.140 (0.159)	-0.293 (0.320)	-0.583 <sup>b</sup> (0.188)	-0.643 <sup>b</sup> (0.190)	-0.135 (0.102)
Cold War	-0.922 <sup>b</sup> (0.240)	-0.0703 (0.198)	-0.920 <sup>b</sup> (0.240)	-0.847 <sup>b</sup> (0.153)	-0.827 <sup>b</sup> (0.154)	0.102 (0.135)
$t$	-0.586 <sup>b</sup> (0.180)		-0.590 <sup>b</sup> (0.179)	-0.756 <sup>b</sup> (0.0917)	-0.767 <sup>b</sup> (0.0921)	
$r^2$	0.00121 (0.0355)		0.00175 (0.0354)	0.0768 <sup>b</sup> (0.0149)	0.0783 <sup>b</sup> (0.0149)	
$F^2$	0.00126		0.00124	-0.0022 <sup>b</sup>	-0.0023 <sup>b</sup>	

(Table 2: Continued)

Terrorism:	Bilateral aid				Multilateral aid			
	International		Domestic		International		Domestic	
	Selection	Aid amount	Selection	Aid amount	Selection	Aid amount	Selection	Aid amount
Constant	(0.00143) 9.962 <sup>b</sup> (1.940)	12.58 <sup>b</sup> (3.768)	(0.00143) 9.903 <sup>b</sup> (1.925)	12.64 <sup>b</sup> (3.521)	(0.000575) 6.430 <sup>b</sup> (0.900)	14.05 <sup>b</sup> (2.581)	(0.000574) 6.617 <sup>b</sup> (0.900)	13.96 <sup>b</sup> (2.569)
Mills lambda	1.911 <sup>b</sup> (0.503)		1.789 <sup>b</sup> (0.472)		0.670 <sup>b</sup> (0.245)		0.698 <sup>b</sup> (0.244)	
Observations	1332	1259	1332	1259	1332	1132	1332	1132

Standard errors in parentheses. <sup>a</sup>Scale from 1, free, to 7, not free. <sup>b</sup> $p < 0.01$ , <sup>c</sup> $p < 0.05$ , <sup>d</sup> $p < 0.1$ .

plagued the world for more than three decades. It is possible that donors do not believe that some of the Muslim governments have enough capacity or good will to effectively address the root causes of violent instability and effectively fight terrorism. Multilateral donors appear consistent in their aversion to conflict and are less likely to give aid to a country experiencing an outburst of armed conflict. In contrast, bilateral donors do not seem to react to armed conflict. One cannot rule out that there are other factors at play, such as geopolitical interests, when determining aid to the Muslim countries. Over one-third of those countries are major oil producers and their oil exports may be a dominant factor in foreign aid decisions (Lis 2013). However, a reliable explanation of the donors' behavior will require additional evidence and a less aggregated estimation approach.

## 4 Conclusions

This paper has used a panel of countries to consider the effects of armed conflict and terrorism on the flows of bilateral and multilateral aid. It has shown that armed conflict has a strong negative impact on multilateral aid, while it increases the likelihood of receiving bilateral assistance. This result, although counterintuitive, may be motivated by the bilateral donors' drive towards safeguarding their geopolitical and economic interests in affected countries. The occurrence of either type of terrorism is associated with a higher likelihood of receiving aid and an increased inflow of bilateral aid. This is consistent with the principal-agent model in which recipients receive additional assistance in return for their counterterrorism efforts. Thus, bilateral donors may be using foreign aid as a substitute to defensive homeland efforts. In doing so, they should be aware of the basic lesson from the principal-agent model: the recipient is unlikely to be fully committed to eradicating terrorism as this would mean a loss of aid funds. In extreme situations recipients could encourage more terrorism to increase their aid receipts. The role of such strategic considerations may help to explain why aid is argued to be ineffective in promoting economic and social development.

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