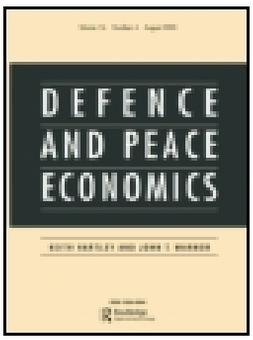

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Resident Terrorist Groups, Military Aid, and Moral Hazard: Further Empirical Analysis

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ABSTRACT

This paper revisits moral hazard associated with military aid given to host countries to eliminate their resident terrorist groups. This conflict aid presents recipient countries with perverse incentives because the aid ends once resident groups are removed. In the case of US aid recipients, the longevity of resident terrorist groups rose dramatically. The current article improves on the empirics of the pioneering article by showing that the moral-hazard concerns extend to other major donors – the United Kingdom, France, and Germany. Additionally, military assistance given by a collective of countries to host countries greatly reduces the moral hazard but does not eliminate it. Moreover, policy alignment or affinity between a major donor and the host aid-recipient country does not generally augment resident terrorist groups' survival, except marginally for the United States, when other sources of military aid are allowed. We introduce other empirical and conceptual innovations for analyzing military-aid-induced moral hazard.

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Introduction

During the last few decades, terrorist groups often reside in countries that are challenged in controlling their territory (e.g. Taliban in Afghanistan, Boko Haram in Nigeria, Abu Sayyaf in the Philippines, al-Shabaab in Somalia, Islamic State in Iraq and Syria [ISIS] in Syria, and al-Qaida in Yemen and Afghanistan). Understandably, these host countries may turn to richer countries for military or conflict assistance to address the destabilizing terrorist threat (Azam and Delacroix 2006; Azam and Thelen 2010; Bandyopadhyay, Sandler, and Younas 2011). Donor countries are often, but not always, those whose interests are targeted by the resident terrorist group at home or abroad (e.g. al-Qaida or ISIS targeting of US, UK, French, and German assets). In other cases, donors may view the resident terrorist groups as posing an existential threat to the host country, with which the donor has economic, political, or strategic interests. Economic interests may involve primary resource supplies, foreign direct investment (FDI), or trade, while political ties may concern similar foreign policy stances or affinity (Bailey, Strezhnev, and Voeten 2017). Past colonial ties or cultural links may also foster political linkages. Strategic interests may stem from military bases or geographical considerations.

In an important contribution, Bapat (2011) puts forward a three-player game that identifies a moral-hazard problem associated with providing conflict or military aid to a host country to rid itself of one or more terrorist groups. Moral hazard arises because the aid-recipient host country is reticent to annihilate the resident terrorist groups for fear of losing the country's flow of military aid.

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Supplementary data can be accessed here.

Consequently, the survival prognosis of the resident groups is bolstered by the very aid, intended to shorten their tenure. Such moral-hazard problems are common to many foreign assistance programs, as shown by Lake (1999) in other contexts. A fascinating insight of Bapat (2011, 315) is his identification of strategic factors that induce the donor to continue its aid despite the recipient's failure to act. Namely, donor countries gain from supplying conflict aid if this assistance keeps the host country from succumbing to the resident terrorists or from reaching an accommodation with them. The aid may also benefit the donor when this aid limits resident terrorists from exporting their attacks abroad. If, moreover, the host country adopts or shares a donor's foreign policy position, then the donor is more willing to excuse the host country's inaction with respect to resident terrorists, thereby further increasing their longevity.

Using a cross-sectional analysis for 1997–2006, Bapat (2011, 315) tests his two moral-hazard hypotheses and finds that US military assistance for host countries raises resident terrorist groups' survival by 59%. For recipients displaying an affinity with US foreign policy positions, resident groups' life span is lifted by 83%. Thus, Bapat (2011) not only quantifies the hypothesized moral hazard, but also explains why the United States, in particular, tolerates this bad behavior without severing aid. An apt illustration is the Musharraf regime in Pakistan following 9/11. Although that regime received substantial US military aid to eradicate resident terrorists, little was done to rid Pakistan of the Taliban or al-Qaida (Bapat 2011, 310). Yemen is another instance of US military aid accomplishing little to eliminate al-Qaida operatives, as aptly illustrated by their bombing of the *Limburg*, a French supertanker, in October 2002.

The primary purpose of the current study is to extend Bapat's (2011) empirical analysis in a number of ways. First, we investigate whether or not aid-induced moral hazard characterizes other major donors of military aid that include the United Kingdom, France, and Germany, all of whose interests have been hit by foreign-based terrorist groups. For each of the four studied donors, we include aggregate military aid received from *all other* countries (denoted by *Other Aid*) by the host countries in order to demonstrate that this aggregate aid pool ameliorates the moral hazard by curbing the influence of host-donor affinity and allowing for military aid not so tied to resident groups' collapse. Despite these attenuating influences on moral hazard, military aid is still shown to have a net effect on extending terrorist groups' tenure. Second, we replace Bapat's (2011) cross-sectional analysis with panel regressions for longer sample periods, some of which run from 1990 to 2013. Third, we utilize an instrument that is not associated with the survival of resident terrorist groups. Bapat's instruments for US military aid are shown to foster terrorist groups' longevity in some subsequent empirical investigations (e.g. Blomberg, Gaibulloev, and Sandler 2011; Gaibulloev and Sandler 2013; Hou, Gaibulloev, and Sandler 2020). Fourth, we calculate moral-hazard effects on resident terrorist groups' survival based on two, instead of one, counterfactuals. Fifth, we include two strategic variables that are shown by past studies (Gaibulloev and Sandler 2013, 2014) to affect terrorist groups' survival, so that we employ a more complete set of controls.

The current study contains some key findings. All four highlighted donor countries' military or conflict aid gives rise to moral hazard on the part of the host countries that augments the average longevity of resident terrorist groups from 30% to 128% or from 61.8% to 109.8% depending on which counterfactual is applied and which donor is considered. This result shows that the pioneering study of Bapat (2011) applies to donors beyond that of the United States. The presence of *Other Aid* attenuates moral hazard as the link between military aid flows and recipients' observed actions is blurred. Moreover, *Other Aid* virtually obliterates the influence that host-donor, foreign-policy alignment has on bolstering the longevity of resident terrorist groups. The current study's findings adhere to a common pattern in the terrorism literature where many counterterrorism tools are seen to have unintended negative consequences (Gaibulloev and Sandler 2019a).

The remainder of the paper has six sections. The next section provides some theoretical background. Our research methods are then indicated in the ensuing section, followed by a description of the data and their sources in the fourth section. Results are presented and discussed in the fifth section, followed by some robustness tests in the sixth section. The final section contains concluding remarks.

Theoretical Background

In the Bapat (2011) game-theoretic model, there is a single round that is repeated until the game ends. During each round, the United States (or donor country) moves first and decides its military aid for the recipient country, hosting the terrorist group. That host country moves second and either negotiates with the terrorists, takes defensive action against them, or initiates an offensive against them. In response to defensive measures, the terrorist may or may not attack the host country's center. If, alternatively, the host country mounts an offensive, then it may or may not defeat the terrorists. Military aid improves the host government's chances in defending against or defeating the resident terrorists. When, instead, the host government negotiates, the terrorists may accept or reject an accommodation. If there is a host-terrorist agreement, the donor country must then decide whether or not to sustain its aid. In either aid scenarios, the terrorist group may or may not attack the host country's center.

The game concludes when there is conflict that destabilizes the host government or that defeats the terrorists. Additionally, the game ends if the host country and the terrorists consummate a settlement. To solve for the Markov Perfect Bayesian (MPB) equilibrium, Bapat (2011) assigns reasonable expected payoffs to the three players for the many outcomes of the game. Those payoffs include the cost of alternative actions (e.g. attacking or defending the center) and probabilities for uncertain outcomes. At the MPB equilibrium, Bapat (2011) demonstrates that US (donor) military aid does not eliminate the resident terrorists, but rather discourages the host government from reaching an accommodation with the terrorists that damages US interests. US aid thus inhibits the recipient country from mounting an offensive against the terrorists or from reaching an agreement with them. The moral-hazard concern stems from the host country failing to annihilate the terrorists, so that aid flows are maintained to the host.

Bapat (2011) goes on to argue that host countries, whose foreign policy position is near to that of the United States, are more inclined to get a pass from the United States when the resident terrorist group is not eliminated. This US policy affinity exacerbates the moral-hazard problem, thereby augmenting still further the resident terrorist group survival. Thus, US military aid and US affinity are anticipated to lengthen the life span of resident terrorist groups in aid-recipient countries.

Of course, Bapat's analysis is portable to other major donors, such as the United Kingdom, France, and Germany. We do not take issue with his insightful theoretical model; rather, we extend his empirical analysis to include panel observations, a more appropriate instrument, additional controls, a longer sample period, more resident terrorist groups, and other aid-donor countries. There is no reason to modify his theoretical treatment because our extension merely affects some of the players' expected payoffs rather than the structure of the game. To modify Bapat's (2011) theoretical treatment to include a fourth player – a collective of other donors – requires much space that is not available given our empirical focus. If we were to add this player, we would make the collective of other donors a passive player that does not react to the strategic choice of others, allowing instead the prime donor to react negatively to these donors' collective military aid. The *influence* of a prime donor on the host country's survival prospect is lessened, given this alternative source of conflict aid from other countries.

Most host countries receive their military aid to address terrorism or other security concerns from a prime contributor and a collective of smaller contributors – e.g. the United States is a prime donor to the Philippines and Kenya; the United Kingdom is a prime donor to Nigeria; France is a prime donor to the Central African Republic; and Germany is a prime donor to the Democratic Republic of the Congo (AidData 2017). Military aid is a public good from the alternative perspectives of the donor and host countries. From the donor's vantage, one country's military aid can substitute for that of another in promoting its security and addressing its resident terrorist threat. Similarly, recipient countries consider such aid from alternative donors as substitutes to a degree depending on tied conditions (Sandler 2004).

We are primarily interested in how a host country responds differently to aid from a major donor and that from a collective of smaller donors, whose aid is denoted by *Other Aid*. In the presence of *Other Aid*, the host country's perceived need to follow a major donor's foreign policy stance is muted because of other sources of funding. There is no aggregate foreign policy agenda that characterizes this collective of other donors. This muting of the major donor's affinity curbs or even eliminates one moral-hazard influence that extends resident terrorist groups' longevity. Of course, this muting is ultimately an empirical question that we investigate.

In contrast to a prime donor's military aid, *Other Aid* to the host country may not be so dependent on eliminating the resident terrorists. This follows because the pool of donors may act at cross-purposes in terms of their perceived threats from resident terrorist groups. That is, individual donors may possess different concerns that blunt the link between their aid contributions and the elimination of the resident terrorists. For instance, not all donor countries view the same resident groups as terrorist threats – e.g. many European countries do not view Hamas as a terrorist group. Some military aid contributors may be motivated by security concerns that have little to do with resident terrorists, such as refugees, resource supply lines, FDI protection, or past colonial interests. In short, the component countries of the collective of other aid givers do not necessarily possess the same security aims. Consequently, the recipient country needs not be so worried about losing *Other Aid* in contrast to prime donor's military aid if the recipient goes ahead and annihilates the resident terrorists. When this is the case, *Other Aid* may encourage the failure of the resident terrorists, thereby limiting the moral hazard associated with a prime donor's military aid. The influence of the prime donor's aid on promoting terrorist groups' survival is likely greater than the influence of *Other Aid* on curbing terrorist groups' survival due to the relative magnitudes of aid involved and the inability of some component donors to monitor recipients' eradication performance. Our hypothesized influence of *Other Aid* on muting incentives to prolong resident terrorist groups' existence is an empirical question that we later test. This is also true for the net effect of prime donor military aid and *Other Aid* on resident terrorist groups' survival.

In summary, we expect that major donors' aid reduces the likelihood of resident terrorist groups' failure in contrast to *Other Aid*, which may increase this likelihood. Only the first expectation is in line with Bapat (2011). In the presence of *Other Aid*, the influence of foreign policy affinity between a major donor and the host country is anticipated to weaken or have no effect on terrorist groups' longevity.

Empirical Model and Methodology

We employ discrete time survival models to examine the effects of military aid from four particular donor countries to recipient countries to achieve the elimination of resident terrorist groups. Throughout, we closely follow the empirical methodologies of Cameron and Trevedi (2005) and Wooldridge (2011, 2015).

Bapat (2011) uses continuous survival models with a Weibull distribution to investigate the impact of US aid on the hazard that resident terrorist groups fail in aid-recipient countries. The US military aid variable is allowed to affect the shape of the hazard rate in his models. Due to the limitation of the model, he could only use the maximum military aid during the group's existence. The empirical models in the current paper allow all variables to change over time for the same terrorist group. For example, a larger amount of military aid in one year may impact the hazard rate more than in another year. The structure of the data is similar to that of panel data.

We use $y_{it} = 1$ to indicate that a terrorist group i ends in period t, and $y_{it} = 0$ to indicate otherwise. Conditional on the group not ending in the previous periods, a binary dependent variable model is used to describe the probability of failure or ending in period t:

$$\text{Prob}\left(y_{it} = 1 | y_{i1} = 0, \ldots, y_{i,t-1} = 0; \mathbf{x}_{it}, \lambda_t\right) = F(\lambda_t + \mathbf{x}'_{it}\boldsymbol{\beta}) \tag{1}$$

where F is a cumulative density function, λ_t is an intercept that can vary over time, $\mathbf{x}_{it}$ is a vector of right-hand-side variables, and $\boldsymbol{\beta}$ is a vector of coefficients. We use a quadratic function of group duration, $\lambda_t = \gamma_1 t + \gamma_2 t^2$, but a cubic function yields very similar results. In this paper, we consider three popular models in the literature: a linear probability model, a Logit model, and a Probit model. The linear probability model, which is reported as the two-stage least squares (2SLS) model in the tables, provides a baseline. Our focus is on the Logit model, but the Probit model results are similar, and available upon request. For the Logit model, if we denote $\text{Prob}(y_{it} = 1)$ by p, an odds ratio representation is given by

$$\ln \frac{p}{1-p} = \lambda_t + \mathbf{x}'_{it}\boldsymbol{\beta} \tag{2}$$

where $\frac{p}{1-p}$ measures the relative probabilities of failure to non-failure.

One issue in this line of research is that military aid can be endogenous. While military aid may affect the likelihood of a terrorist group's collapse, lengthy existence of terrorist groups may prompt a donor country to provide more conflict aid to a recipient country. To deal with the endogeneity problem, we use the government spending of the donor country as an instrumental variable. The donor's government spending is obviously related to the amount of military aid this country can dispense; however, a donor's government spending is not a factor determining the survival of terrorist groups in host countries. The latter holds because a donor's government expenditure primarily goes to domestic income redistribution, domestic welfare programs, infrastructure, and other domestic concerns. Those factors have no influence on the survival of terrorist groups in aid-recipient countries. In the literature on terrorist group survival, donor government spending is never an influence on host countries' resident terrorist groups (e.g. Blomberg, Engel, and Sawyer 2010; Blomberg, Gaibulloev, and Sandler 2011; Gaibulloev and Sandler 2013; Phillips 2014). Moreover, the military aid to any particular host country is a very small portion – about .02% in our sample – of a donor's government spending. We also statistically test the strength of government spending of the donor country as an instrument variable, following Stock and Yogo (2005). Bapat (2011) uses host-country population and regime type as instrumental variables for military aid, however both of these alleged instruments are shown in subsequent studies to influence resident terrorist groups' survival (e.g. Gaibulloev and Sandler 2013).

One complication of the model is that, if the second-stage regression is a nonlinear model such as Logit and Probit, the endogeneity issue is more difficult to solve. Instead of applying traditional 2SLS methods to the nonlinear probability models (in which case identification heavily relies on the functional form assumption), we apply the control function (CF) approach to our models. Wooldridge (2011, 2015) shows that the CF approach works well in nonlinear models with endogeneity. Instead of replacing the right-hand-side endogenous variable with its predicted value in the second-stage regression, the CF approach adds the fitted residuals in the second-stage regression. One advantage of the CF approach is that it provides a convenient endogeneity test equivalent to the Hausman test in a linear model.

For the Logit CF model, we estimate a linear regression model of (logarithm of) the donor's military aid to the host country on all the exogenous variables including the instrumental variable in the first stage. The predicted values of the dependent variable are used in the second stage of the linear probability model, reported as 2SLS in the tables. The residuals are used in the second stage of the Logit CF approach. Bootstrapping is applied to obtain cluster-robust standard errors.

In addition to the odds ratios that show the impact of military aid and other variables on the survival of terrorist groups, we provide some counterfactual simulations to highlight the impact of military aid on the life spans of terrorist groups. After estimating the Logit model, we can estimate the hazard and the survival functions. In each counterfactual simulation, two hypothetical terrorist groups with average characteristics in the sample are created. One set of countries is assigned zero military aid from the donor country to the recipient country in which the group resides. Another set of countries is assigned a different amount of military aid (for example, the mean value of positive

aid). From the estimated hazard/survival functions, we simulate different survival probabilities for the two groups. Based on those probabilities, we estimate the expected life spans of the two groups. The difference in the two life spans provides the impact of military aid that is easy to interpret. In the result section, we also report a second counterfactual exercise dependent on the average observed life span for terrorist groups.

Data

In our empirical survival models, the binary dependent variable is based on the failure or collapse of the resident terrorist groups in the aid-recipient country. The duration, and hence failure, of resident terrorist groups are drawn from the Extended Data on Terrorist Groups (EDTG) (Hou, Gaibulloev, and Sandler 2020), based on the groups' start and end (if relevant). EDTG is tied to terrorist incidents in the Global Terrorism Database (GTD) (START 2018). EDTG contains essential observations – e.g. group size, ideology, main goals, base country, induced casualties, domestic attacks, and transnational attacks – on 760 terrorist groups worldwide for 1970–2016. As such, EDTG is the largest data set on terrorist groups for which extreme care is taken to eliminate repeated names, criminal groups, political parties, and insurgent groups, identified as perpetrators by GTD. There are several alternative ways that EDTG characterizes terrorist groups' endings – i.e. victory, joining the political process, five-year hiatus in attacks, defeat by military or police, and splintering. Consistent with Bapat (2011),[1] we view terrorist groups as failing if they are defeated by the military or police, or if they splinter from within. Splintering may come from external pressures or internal disagreements as goals are not met. Victory or joining the political process implies success rather than failure. A five-year hiatus in attacks does not necessarily indicate failure since group may stop actions on their own accord and later resurface. At the end of the sample period, many terrorist groups continue to operate and have not failed.

Key Independent Variables

For each sample year, the prime donors' military aid values come from AidData (2017) for the United States (1990–2013), the United Kingdom (1992–2013), France (1990–2013), and Germany (1999–2013). AidData (2017) distinguishes several sectors receiving aid (see Tierney et al. 2011 on the construction of AidData). For our application, we only utilize aid that supports conflict prevention and resolution or peace and security, which corresponds to purpose codes 15200–15261 in AidData. This data source lists military aid in 2011 US dollars, which we convert to 2010 US dollars using the price index in World Bank (2019). AidData (2017) is also the source for *Other Aid* for each recipient host country. When identifying *Other Aid*, we subtract a prime donor's military aid from total military aid given to each host country during each sample year. This aid value is converted from 2011 to 2010 US dollars. For his US estimates, Bapat (2011) uses USAID data on nonproliferation, antiterrorism, demining, and other related conflict prevention programs (NADR). Given our broad set of donors, we cannot use NADR data and rely on AidData (2017) on conflict prevention and resolution, which encompasses actions to preserve peace and security including the clearing of land mines. As a robustness check, we later redo our US estimates based on NADR data.

To measure policy affinity between a prime donor and a recipient country, we rely on the *Ideal Points Distance* measure of Bailey, Strezhnev, and Voeten (2017). This measure quantifies the political proximity of two countries based on a single indicator or ideal position of two comparison countries' overall foreign policy agenda during each sample year. The *Ideal Points Distance* is then computed by taking the absolute difference of these two ideal positions. If the two countries' ideal foreign policy stances are more similar, then their *Ideal Points Distance* is smaller and would equal zero for overlapping positions. Unlike earlier affinity measures based on the concordance of the two countries' UN votes in the General Assembly, the new affinity indicator is better equipped to capture dynamic changes in the two countries' foreign policy positions over time – see Bailey, Strezhnev, and Voeten

(2017) and Gaibulloev and Sandler (2019b) for further details. Reduced *Ideal Points Distance* is expected to limit the failure of resident terrorist groups if Bapat's (2011) affinity prediction is correct.

Other Control Variables

Resident terrorist groups' longevity is anticipated to be negatively impacted by the host country's GDP per capita and positively influenced by its population (Gaibulloev and Sandler 2013). Larger GDP per capita is consistent with a more capable host country that may be more equipped to dispose of resident terrorist groups. By contrast, a larger population in the host country may foster terrorist groups' survival through a greater recruitment and camouflage pool. GDP per capita values are drawn in 2010 US dollars from World Bank (2019), which also contains population for our sample years. We use the logged values of these variables. The host country's annual military personnel figures are drawn from World Bank (2019) and are logged. A larger military in the host country is thought to jeopardize resident terrorists' survival, thereby increasing the resident groups' likelihood of failure (Bapat 2011).

We include two strategic variables of terrorist groups that are shown in previous studies (Gaibulloev and Sandler 2013, 2014; Hou, Gaibulloev, and Sandler 2020) to affect their survival. For the first strategic variable, we include terrorist groups' *Share of Transnational Terrorism* attacks, which is the ratio of transnational to the sum of domestic and transnational terrorist attacks. Domestic or homegrown and home-directed terrorist incidents involve perpetrators and victims from the venue country, where the event occurs. Through their perpetrators, victims, or venue, transnational terrorist attacks affect two or more countries (Enders, Sandler, and Gaibulloev 2011). Such attacks are logistically more complex, costly, and risky than domestic attacks as borders may need to be crossed, thereby jeopardizing and utilizing the terrorist groups' assets. Additionally, transnational attacks may anger a strong targeted country that launches a proactive campaign (Carter 2012). Clearly, the four hijackings on 9/11 drew the United States and allies into Afghanistan to eliminate al-Qaida in this host country. Similarly, the ISIS armed attacks and bombings in Paris during November 2015 resulted in French bombings against the group's targets in Syria. As these shares of transnational terrorist attacks increase, the failure likelihood of terrorist groups is expected to elevate. We obtain our panel data on groups' share of transnational terrorist attacks from EDTG.

As a second strategic variable, we include terrorist groups' diversity of attacks, which equals one minus the Hirschman-Herfindahl index of attack types employed in their terror campaigns. There are eight types of attacks that can be utilized – namely, bombings, assassinations, hijackings, kidnappings, barricade missions, armed assaults, unarmed assaults, and facility/infrastructure attacks.[2] As fewer kinds of attacks are utilized, the terrorist groups' *Diversity* index falls in value and equals 0 if just a single type of attacks is used. The panel data for attack diversity throughout the relevant sample years are drawn from EDTG. Reduced attack diversity jeopardizes terrorist groups by making it easier for the host country's authorities to anticipate and stop pending attacks. As more attacks are stopped and the terrorists apprehended, the survival of the group is in greater peril insofar as captured terrorists can compromise the entire group. This is particularly true of tightly linked terrorist groups (Enders and Jindapon 2010; Enders and Su 2007); thus, reduced attack diversity is anticipated to augment terrorist groups' failure.

We also include the resident terrorist group's *Duration* as a control. As a group ages, it may be harder to defeat, given its established recruitment procedures, logistics, safe havens, and accumulated experience. Terrorist groups may become entrenched with age. The group's *Duration squared* is included to allow the aging advantage to eventually end.

EDTG identifies terrorist groups' home base or bases, thus allowing for a match between host countries and their resident terrorist groups. For groups with multiple bases, we take the average value for host countries' variables such as population, military personnel, and GDP per capita, consistent with the literature. In a later robustness round, we drop groups with multiple bases.

Finally, donor countries' government spending is retrieved in 2010 US dollars from the World Bank (2019). This government spending serves as an instrumental variable for a prime donor's military aid.

Table 1. Summary statistics.

	Count	Mean	SD	Min	Max
Collapse of terrorist groups	4974	0.01	0.12	0	1
ln (*US Aid*)	4974	6.77	7.37	0.00	20.22
ln (*UK Aid*)	4705	5.94	6.85	0.00	18.86
ln (*France Aid*)	4974	1.98	4.60	0.00	17.10
ln (*Germany Aid*)	3630	7.91	6.88	0.00	18.58
ln (*US Gov. Spending*)	4974	28.42	0.11	28.24	28.56
ln (*UK Gov. Spending*)	4705	26.85	0.15	26.60	27.00
ln (*France Gov. Spending*)	4974	27.08	0.10	26.85	27.22
ln (*Germany Gov. Spending*)	3630	27.16	0.06	27.07	27.24
ln (*Other Aid except US*)	4974	10.20	7.23	0.00	20.33
ln (*Other Aid except UK*)	4705	11.09	7.11	0.00	20.64
ln (*Other Aid except France*)	4974	10.66	7.33	0.00	20.67
ln (*Other Aid except Germany*)	3630	13.24	5.81	0.00	20.57
Ideal Points Distance (US)	4842	3.24	0.80	0.16	4.79
Ideal Points Distance (UK)	4445	2.29	0.68	0.04	4.06
Ideal Points Distance (France)	4706	2.11	0.63	0.06	3.53
Ideal Points Distance (Germany)	3419	1.66	0.55	0.01	3.02
Shares of Transnational Terrorism	4875	5.81	20.13	0.00	100.00
Diversity	4906	7.23	18.61	0.00	79.02
ln (*Population*)	4972	18.09	1.77	13.46	28.16
ln (*GDP per capita*)	4808	7.54	1.27	5.10	10.89
ln (*military personnel*)	4883	12.73	1.40	7.60	15.23

Shares of Transnational Terrorism are percentage values.

Table 1 presents summary statistics for the dependent variable (Collapse of terrorist groups) and the independent variables in terms of their count, mean, standard deviation (SD), max, and min values. The count for terrorist groups (excluding those with bases in prime donor countries) accounts for the number of groups during the relevant years: there are 487 groups since the start of 1990, 469 groups since the start of 1992, and 431 groups since the start of 1999 (Hou, Gaibulloev, and Sandler 2020). The mean failure (collapse) rate translates into 69 (68.999 = 4,974 × 0.0138731) failed terrorist groups during 1990–2013, where 4,974 is the number of group-year observations or count of terrorist groups and 0.0138731 is the mean failure rate, rounded off to 0.01 in Table 1.

The independent variables are mostly in logarithms. There are a number of things to note. First, each of the four focus donor countries' mean aid is small compared to their mean overall government expenditure. Second, for each of these donors, its aid is smaller than the aggregate aid of other donors to relevant recipient countries. For France, its aid is considerably smaller than that of other donors to recipient countries. Third, the mean of the *Ideal Points Distance* indicates that the affinity of, say, the US foreign policy position with those of its aid-recipient countries is not really close. Thus, most aid recipients do not closely share US foreign policy positions; however, the min value of 0.16 means that one or more recipient foreign policy agenda is near to that of the United States. Fourth, *Shares of Transnational Terrorism* are in percentage terms. On average, terrorist groups engage in transnational terrorist incidents less than 6% of the time because such attacks are more complex and risky than domestic terrorist attacks. Most terrorist groups engage in domestic terrorist attacks (Gaibulloev and Sandler 2019a; Hou, Gaibulloev, and Sandler 2020). The *Diversity* index, which equals one minus the Hirschman-Herfindahl index of attack types, is multiplied by 100, and can vary between 0 and 100. The mean of 7.23 indicates that on average most groups do not diversify their attack types by very much, relying on one or two modes of attack. The max value of 79.02 means that at least one group diversifies its attack types greatly.

Empirical Results

For each of the four highlighted donor countries of military or conflict aid, we estimate three alternative survival models – OLS, 2SLS, and Logit CF – of resident terrorist groups' failure or collapse.

The OLS model is only displayed for comparison purposes and is not the appropriate estimator because it does not correct for the endogeneity between military aid and resident terrorist groups' survival. Although we are interested in military aid increasing the survivability of resident terrorist groups, a reverse causality may apply as countries hosting longer-lived terrorist groups may attract more military aid. As explained earlier, we employ donor countries' overall government spending as an instrument for the donor's military aid. For comparison purposes, we also list the coefficients of the 2SLS model that applies this instrument. In the 2SLS model, the linear probability model is used in the second stage so that the typical criticism of this model applies. While 2SLS produces qualitatively consistent results as those of the Logit CF, we rely on the latter to quantify the effects. We gear our remarks on the Logit CF's – Model 3's – odds ratios, which capture the effects of various controls, including military aid, on the failure odds of resident terrorist groups in the aid-recipient country.

Table 2 indicates the influences on the failure odds of terrorist groups in US aid-supported countries. In Model 3, the log of *US Aid* is associated with a failure odds ratio of 0.849, which is significant at the 0.05 level. To interpret the marginal effect of this failure ratio, we must transform its value by undoing the log transformation. A 10% increase in US Aid decreases the estimated odds of failure by 1.54%, since $\exp\{\ln(0.849) \times \ln(1.1)\} - 1 = -0.0154$, where 0.849 is the odds ratio and $\ln(1.1)$ account for the 10% increase.[3] In the case of US aid, *Other Aid* is not a significant influence on resident terrorist groups' survival in aid-recipient countries. The *Ideal Points Distance* continuous variable is marginally significant so that a one unit increase in this distance, consistent with a recipient country being *less* aligned with the US foreign policy agenda, raises resident terrorist groups' failure odds by 40.4%. Hence, greater affinity between the recipient country and the United States on their foreign policy stance *would augment* resident terrorist groups' *longevity*; but unlike

Table 2. The effects of US conflict aid on the failure of terrorist groups.

	Model 1	Model 2	Model 3	
	OLS	2SLS	Logit CF	
	Coefficient	Coefficient	Coefficient	Odds Ratio
ln *(US Aid)*	-0.000	-0.003**	-0.164**	0.849**
	(0.000)	(0.001)	(0.078)	(0.067)
ln *(Other Aid)*	-0.000	0.001	0.082	1.085
	(0.000)	(0.001)	(0.058)	(0.063)
Ideal Points Distance	0.006	0.005	0.339*	1.404*
	(0.004)	(0.004)	(0.174)	(0.244)
ln *(GDP per capita)*	0.006***	0.007***	0.467***	1.595***
	(0.002)	(0.002)	(0.134)	(0.213)
ln *(Population)*	-0.001	-0.002	-0.152	0.859
	(0.002)	(0.002)	(0.119)	(0.102)
ln *(military personnel)*	-0.000	-0.000	-0.016	0.984
	(0.002)	(0.002)	(0.170)	(0.167)
Shares of Transnational Terrorism	0.000**	0.000**	0.014***	1.014***
	(0.000)	(0.000)	(0.004)	(0.004)
Diversity	-0.000*	-0.000*	-0.011	0.989
	(0.000)	(0.000)	(0.010)	(0.010)
Duration	-0.002	-0.002**	-0.129*	0.879*
	(0.001)	(0.001)	(0.072)	(0.064)
Duration Squared	0.000	0.000**	0.004	1.004
	(0.000)	(0.000)	(0.003)	(0.003)
Constant	-0.019	-0.002	-5.389*	-
	(0.034)	(0.037)	(2.759)	
Residuals (in 2nd stage)	-	-	0.178**	-
Aggregate aid effects	-	-	-	0.921***
N	4,560	4,560	4,560	4,560
First-stage F-statistics on instrument	-	24.33	24.33	-

*indicates $p < 0.1$, **indicates $p < 0.05$, and ***indicates $p < 0.01$. Cluster-robust standard errors are in the parentheses. The standard errors for the Logit CF estimates are based on 1,000 bootstrap repetitions.

Bapat (2011), the affinity influence is only marginally significant. Thus far, our results for the United States are generally consistent with Bapat's (2011) findings.

In Table 2, host country's GDP per capita has a positive and significant effect on the odds of failure as anticipated in which a 10% rise in this income measure increases the likelihood of failure for resident terrorists by 4.55%. Moreover, *military personnel* in the host country has an insignificant impact on resident terrorist groups' survival. These last two findings are not consistent with those in Bapat (2011). The host country's population has no effect on the failure odds of the resident terrorist groups. As the *Shares of Transnational Terrorism* attacks increase by 1%, the estimated odds of failure of resident terrorist groups grow by 1.4%, consistent with our priors. However, contrary to our priors, attack *Diversity* displays an insignificant impact on resident terrorist groups' failure. This is likely due to the rather small average degree of attack diversity for sample groups (see Table 1). For resident terrorist groups, the *Duration* coefficient is negative and marginally significant, thus indicating that as a terrorist group ages it becomes somewhat more resilient to failure. *Duration Squared* is not significant.

In Table 2, the residual in the second stage is significant at the 0.05 level, indicative of endogeneity, which must be addressed. This is done in both 2SLS and Logit CF estimations. Our first-stage *F*-statistics on the instrument are 24.33 in Models 2 and 3, indicative of a strong instrument (Stock and Yogo 2005). Because *US Aid* and *Other Aid* affect the odds ratio in opposite directions, we compute an aid-weighted average of the two influences to generate an aggregate aid effect of 0.921 on the failure odds of resident terrorist groups. If, therefore, both *US Aid* and *Other Aid* increase by 10%, the estimated odds of failure are a net fall of just 0.78%. The relatively small effect is because the two sources of aid have opposing influences on resident groups' longevity. This opposing influence is novel to our study. Despite the opposing effect of *Other Aid*, there is still a net moral-hazard problem associated with military aid that unintendedly supports the tenure of resident terrorist groups, consistent with Bapat's (2011) intuition.

Now, we turn to three important donors, not investigated previously. Some common findings emerge for the United Kingdom, France, and Germany that we emphasize at the outset. First, unlike the United States, donor-recipient foreign policy affinity has no significant influence on resident terrorist groups' survival for any of the three other donors. This means that the potential influence of affinity is donor-specific and generally not a consideration on resident terrorist groups' longevity in marked contrast to Bapat (2011). Second, for Model 3 in Tables 3–5, the prime donor's aid has a negative and significant effect on the odds of failure of resident terrorist groups in aid recipients, while *Other Aid* has a positive and significant impact on the odds of failure of resident terrorist groups in aid recipients. Thus, Bapat's (2011) expectation with respect to *US Aid* promoting resident terrorist groups' longevity extends to at least three other major donors of military aid. However, there is an ameliorating influence on this moral-hazard problem owing to the collective of other military aid sources that may be motivated by diverse security concerns. Third, despite this opposing effect, aggregate military aid results in a net decrease in resident groups' failure odds of 0.91%, 3.73%, and 1.47% in the United Kingdom, France, and Germany, respectively, for a 10% increase in aggregate military aid – see Tables 3–5 and using the earlier mentioned transformation. That is, the main donor's aid influence on the survival of resident terrorist groups overwhelms that of *Other Aid* in all three instances. Fourth, endogeneity of military aid is a concern for all three donors given the significance of the second-stage residuals in Tables 3–5. Fifth, resident terrorist groups' *Duration* negatively affects their failure in countries receiving military aid from the United Kingdom and France. For UK recipients, the duration influence is marginally significant, while for French recipients, the duration effect is significant at the 0.05 level (see Tables 3 and 4). These findings underscore that as resident terrorist groups age, they become more invulnerable. *Duration* is negative, but insignificant, for resident terrorist groups in German aid-recipient countries.

For these three donors, *Population, military personnel*, and attack *Diversity* do not impact the survival prospects of terrorist groups in aid recipients. By contrast, *GDP per capita* and *Shares of Transnational Terrorism* raise the odds of failure for resident terrorist groups in countries receiving

Table 3. The effects of UK conflict aid on the failure of terrorist groups.

	Model 1	Model 2	Model 3	
	OLS	2SLS	Logit CF	
	Coefficient	Coefficient	Coefficient	Odds Ratio
ln *(UK Aid)*	-0.001**	-0.003**	-0.189***	0.828***
	(0.000)	(0.001)	(0.062)	(0.051)
ln *(Other Aid)*	0.000	0.002*	0.093**	1.097**
	(0.000)	(0.001)	(0.041)	(0.045)
Ideal Points Distance	0.001	-0.000	0.149	1.161
	(0.005)	(0.005)	(0.236)	(0.274)
ln *(GDP per capita)*	0.004**	0.003*	0.325*	1.385*
	(0.002)	(0.002)	(0.170)	(0.235)
ln *(Population)*	-0.001	-0.000	-0.019	0.981
	(0.002)	(0.002)	(0.145)	(0.143)
ln *(military personnel)*	0.002	0.002	0.118	1.126
	(0.002)	(0.002)	(0.221)	(0.249)
Shares of Transnational Terrorism	0.000**	0.000**	0.018***	1.018***
	(0.000)	(0.000)	(0.005)	(0.005)
Diversity	-0.000	-0.000	-0.007	0.993
	(0.000)	(0.000)	(0.010)	(0.010)
Duration	-0.001	-0.003**	-0.163*	0.850*
	(0.001)	(0.002)	(0.098)	(0.083)
Duration Squared	0.000	0.000*	0.005	1.005
	(0.000)	(0.000)	(0.005)	(0.005)
Constant	-0.020	-0.017	-7.901**	-
	(0.034)	(0.038)	(3.175)	
Residuals (in 2nd stage)	-	-	0.155**	-
Aggregate aid effects	-	-	-	0.909***
N	4,186	4,186	4,186	4,186
First-stage F-statistics on instrument	-	23.81	23.81	-

*indicates $p < 0.1$, **indicates $p < 0.05$, and ***indicates $p < 0.01$. Cluster-robust standard errors are in the parentheses. The standard errors for the Logit CF estimates are based on 1,000 bootstrap repetitions.

conflict assistance from the United Kingdom or France. In the case of transnational terrorist attacks, a 1% increase in terrorist groups' share of such attacks leads to an increase in the odds of the groups' failure of 1.8% and 1.4% for UK and French military aid recipients, respectively.

In Table 6, we offer two counterfactual exercises in order to quantify the moral-hazard influence of military aid on resident terrorist groups' survival. Our methods differ from Bapat (2011) given our use of panel data and the discrete nature of our exercises. Counterfactual A is described at the end of Section 3 and involves contrasting the longevity of two hypothetical sets of terrorist groups in countries receiving no military aid and those receiving a mean level of military aid. When the differences in the life span of these two hypothetical sets of groups are computed, mean military aid elevates the average longevity of resident terrorist groups by 34.5%, 30.1%, 34.3%, and 128.1% in countries receiving this aid from the United States, the United Kingdom, France, and Germany, respectively. Except for Germany, the moral-hazard impact is quite comparable in value. The only explanation for the German finding is that it gives military aid to recipient countries that are more reticent to jeopardize their aid flow through decisive action against their resident terrorist groups.

Counterfactual B relies on the actual (average) observed life span of terrorist groups in aid recipients rather than building a hypothetical resident terrorist group as if the recipient country received no military aid. We again use the life span for the relevant resident terrorist groups in countries receiving mean aid. The moral hazard increased longevity of resident terrorist groups increase by 91.7%, 83.4%, 109.8%, and 61.8% for these four donor countries. Except for Germany, these increases are larger than for Counterfactual A. Surely, other counterfactuals can be engineered. These two counterfactual exercises show that the magnitude of the moral hazard is affected by the constructed hypothetical; however the direction of the moral hazard is not influenced.

Table 4. The effects of France conflict aid on the failure of terrorist groups.

	Model 1	Model 2	Model 3	
	OLS	2SLS	Logit CF	
	Coefficient	Coefficient	Coefficient	Odds Ratio
ln *(France Aid)*	-0.000	-0.008***	-0.501***	0.606***
	(0.000)	(0.003)	(0.151)	(0.091)
ln *(Other Aid)*	-0.000	0.002**	0.102**	1.108**
	(0.000)	(0.001)	(0.041)	(0.046)
Ideal Points Distance	0.001	0.003	0.337	1.400
	(0.005)	(0.006)	(0.271)	(0.379)
ln *(GDP per capita)*	0.005**	0.006**	0.474***	1.606***
	(0.002)	(0.003)	(0.165)	(0.265)
ln *(Population)*	-0.001	-0.002	-0.081	0.922
	(0.002)	(0.003)	(0.138)	(0.127)
ln *(military personnel)*	0.001	-0.002	-0.126	0.881
	(0.002)	(0.003)	(0.205)	(0.181)
Shares of Transnational Terrorism	0.000**	0.000**	0.014***	1.014***
	(0.000)	(0.000)	(0.005)	(0.005)
Diversity	-0.000*	-0.000	-0.011	0.989
	(0.000)	(0.000)	(0.010)	(0.010)
Duration	-0.002	-0.003**	-0.175**	0.839**
	(0.001)	(0.001)	(0.084)	(0.071)
Duration Squared	0.000	0.000**	0.006	1.006
	(0.000)	(0.000)	(0.004)	(0.004)
Constant	-0.001	0.019	-5.126	-
	(0.035)	(0.050)	(3.164)	
Residuals (in 2nd stage)	-	-	0.483***	-
Aggregate aid effects	-	-	-	0.671***
N	4,438	4,438	4,438	4,438
First-stage F-statistics on instrument	-	10.15	10.14	-

*indicates p < 0.1, **indicates p < 0.05, and ***indicates p < 0.01. Cluster-robust standard errors are in the parentheses. The standard errors for the Logit CF estimates are based on 1,000 bootstrap repetitions.

For the US case, Figure 1 plots the failure ratios for the two hypothetical sets of resident terrorist groups – those in zero-aid-recipient countries (solid line) and those in mean-aid-recipient countries (dotted line). Both of these plots are U-shaped with minimum failure odds at the 17-year campaign mark. The overall hazard ratios with zero aid are greater than those with mean aid for every campaign length. For example, at a campaign of one year, the failure odds are 4.51% and 0.44% without and with aid, respectively. Thus, terrorist groups survive much longer in aid-recipient countries owing to the moral-hazard problem. The flatness of the odds failure plot for aid recipients' resident groups is consistent with little change to the survival of these groups once aid starts flowing. The figures for the other three donors are quite similar and not displayed to conserve space.

Robustness Tests

To facilitate comparisons with results in Tables 2–5, only the odds ratios are reported for the Logit CF models in Table 7. For the four primary donors, ln (*Aid*) represents the corresponding donor's conflict aid to aid-recipient countries.

The first robustness exercise involves using USAID Economic Analysis and Data Services (2017), instead of AidData (2017), for US conflict aid so as to make our estimates more comparable to Bapat (2011) for the United States. This aid starts in 1997 and is converted from constant 2017 US dollars to 2010 US dollars, using the World Bank (2019) price index. For Model 1, *Other Aid* is still drawn from AidData (2017). A comparison of the estimates in the last column of Table 2 with those of Model 1 in Table 7 shows nearly identical results for *Aid, Other Aid*, and *Ideal Points Distance*, except that the latter's significance is now at the .05, rather than at the .10, level. For the other controls, the *Share of Transnational Terrorism* is less significant and *Duration* is no longer marginally significant. The next

Table 5. The effects of Germany conflict aid on the failure of terrorist groups.

	Model 1	Model 2	Model 3	
	OLS	2SLS	Logit CF	
	Coefficient	Coefficient	Coefficient	Odds Ratio
ln *(Germany Aid)*	-0.000	-0.003***	-0.397***	0.672***
	(0.000)	(0.001)	(0.111)	(0.075)
ln *(Other Aid)*	0.000	0.002**	0.242***	1.274***
	(0.000)	(0.001)	(0.079)	(0.100)
Ideal Points Distance	-0.004	-0.003	-0.009	0.991
	(0.005)	(0.006)	(0.456)	(0.452)
ln *(GDP per capita)*	0.002	0.002	0.157	1.170
	(0.002)	(0.002)	(0.247)	(0.289)
ln *(Population)*	-0.002	-0.001	-0.104	0.901
	(0.001)	(0.002)	(0.219)	(0.198)
ln *(military personnel)*	0.001	0.000	-0.018	0.982
	(0.002)	(0.002)	(0.308)	(0.303)
Shares of Transnational Terrorism	0.000	0.000	0.018	1.018
	(0.000)	(0.000)	(0.015)	(0.015)
Diversity	-0.000	-0.000	-0.007	0.993
	(0.000)	(0.000)	(0.013)	(0.013)
Duration	-0.002	-0.002	-0.095	0.910
	(0.002)	(0.002)	(0.297)	(0.270)
Duration Squared	0.000	0.000	0.006	1.006
	(0.000)	(0.000)	(0.031)	(0.031)
Constant	0.029	0.024	-3.958	-
	(0.038)	(0.041)	(4.683)	
Residuals (in 2nd stage)	-	-	0.391***	-
Aggregate aid effects	-	-	-	0.856***
N	3,192	3,192	3,192	3,192
First-stage F-statistics on instrument	-	22.35	22.35	-

*indicates $p < 0.1$, **indicates $p < 0.05$, and ***indicates $p < 0.01$. Cluster-robust standard errors are in the parentheses. The standard errors for the Logit CF estimates are based on 1,000 bootstrap repetitions.

Table 6. Averaging surviving year of terrorist groups based on US, UK, France, and Germany aid.

	Years until terrorist group failure		
Counterfactual A	Aid = 0	Mean (Aid)	% change
US Aid	17.26	23.22	+34.5%
UK Aid	16.52	21.49	+30.1%
France Aid	17.86	23.98	+34.3%
Germany Aid	6.54	14.92	+128.1%
Counterfactual B	Actual Observed life span	Mean (Aid)	% change
US Aid	12.11	23.22	+91.7%
UK Aid	11.72	21.49	+83.4%
France Aid	11.43	23.98	+109.8%
Germany Aid	9.22	14.92	+61.8%

robustness test consists of adding two additional variables to each of the donor's models. These variables affect group survival in an earlier study that did not include donors' military aid considerations (Hou, Gaibulloev, and Sandler 2020). We construct a binary *Democracy* variable based on the Polity index that ranges from – 10 to 10, where negative values correspond to autocracy and larger positive values correspond to strongly democratic governments (Marshall, Jaggers, and Gurr 2018). If the Polity value is 6 or above, our *Democracy* dummy equals 1, otherwise it equals 0. Because there are opposing influences of democracy on group survival (Gaibulloev and Sandler 2019a), we do not hypothesize a particular outcome. The second new control, drawn from EDTG, is the *Number of Kidnappings* performed by resident groups. Hou, Gaibulloev, and Sandler (2020) find that kidnappings limit group failure through ransoms and publicity. Although these two new variables are not significant in Models 2–5 in Table 7, odds ratios on the main aid variables and controls are very close

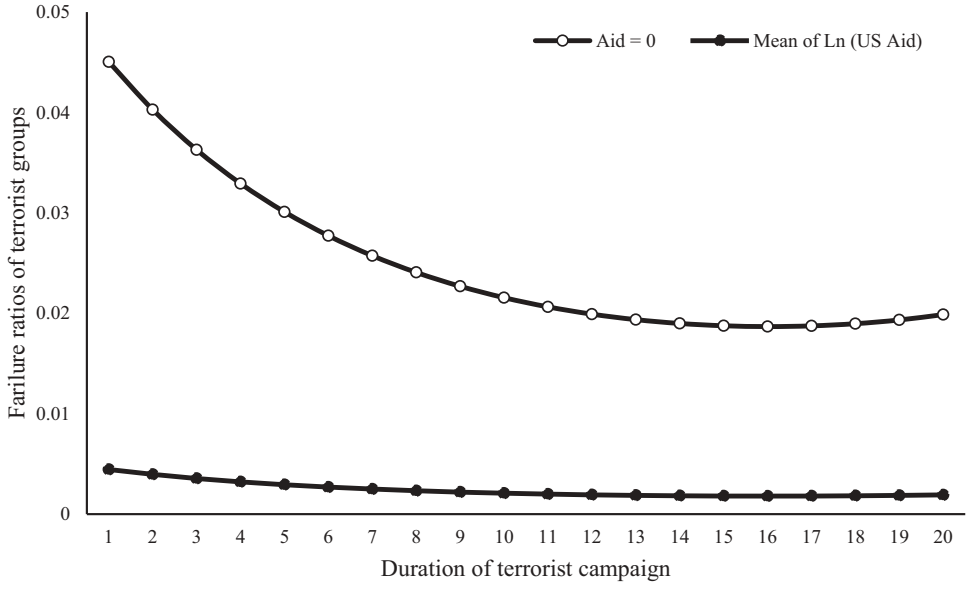

Figure 1. Effect of US conflict aid on the failure ratios of terrorist groups.

Table 7. Robustness check.

	Model 1	Model 2	Model 3	Model 4	Model 5
	US	US	UK	France	Germany
	Logit CF	Logit CF	Logit CF	Logit CF	Logit CF
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
ln *(Aid)*	0.835***	0.855**	0.828***	0.609***	0.666***
	(0.056)	(0.068)	(0.054)	(0.089)	(0.084)
ln *(Other Aid)*	1.068	1.080	1.098**	1.099**	1.272***
	(0.051)	(0.062)	(0.046)	(0.041)	(0.105)
Ideal Points Distance	1.698**	1.566**	1.287	1.438	1.392
	(0.355)	(0.308)	(0.321)	(0.416)	(0.703)
ln *(GDP per capita)*	1.885***	1.578***	1.420**	1.671***	1.154
	(0.393)	(0.201)	(0.236)	(0.275)	(0.290)
ln *(Population)*	0.875	0.836	0.957	0.984	0.901
	(0.147)	(0.106)	(0.134)	(0.153)	(0.187)
ln *(military personnel)*	1.189	0.991	1.126	0.854	0.920
	(0.303)	(0.177)	(0.238)	(0.196)	(0.277)
Shares of Transnational Terrorism	1.013*	1.015***	1.019***	1.016***	1.020***
	(0.007)	(0.004)	(0.005)	(0.005)	(0.007)
Diversity	0.987	0.997	0.998	0.996	0.999
	(0.012)	(0.011)	(0.011)	(0.010)	(0.015)
Duration	1.001	0.898	0.852	0.858*	0.911
	(0.181)	(0.069)	(0.087)	(0.072)	(0.286)
Duration Squared	0.998	1.003	1.005	1.005	1.007
	(0.012)	(0.003)	(0.005)	(0.004)	(0.033)
Number of Kidnappings		0.716	0.761	0.749	0.501
		(0.245)	(0.270)	(0.236)	(0.213)
Democracy		1.428	1.066	0.810	1.759
		(0.434)	(0.382)	(0.309)	(0.879)
Residuals (in 2nd stage)	0.148*	0.178**	0.152*	0.460***	0.407***
Aggregate aid effects	0.892***	0.924***	0.909***	0.670***	0.847***
N	3,599	4,406	4,054	4,296	3,081
First-stage F-statistics on instrument	49.03	23.18	22.12	9.59	22.26

* indicates $p < 0.1$, ** indicates $p < 0.05$, and *** indicates $p < 0.01$. Cluster-robust standard errors are in the parentheses. The standard errors for the Logit CF estimates are based on 1,000 bootstrap repetitions. Residuals are reported in terms of coefficient.

to those in the corresponding last columns in Tables 2–5, supporting robustness. Lastly, we tried to use groups' size, but this addition loses almost 1,500 observations and interferes with our endogeneity assumption with respect to military aid.[4]

In the Online Appendix, we perform three additional robustness checks. In Table A1, we replace our government spending instrument with one consisting of this spending minus military aid. The results for each of the four donors are virtually unchanged. In Table A2, we rerun our original models dropping terrorist groups with multiple bases; there is little change to the results. In response to a reviewer, we add rule of law as a control because it is sometimes associated with less terrorism (e.g. Choi 2010). Our rule of law indicator varies from −2.5 to +2.5, where larger values indicate a greater respect for the justice system, greater enforcement of the laws, and greater adherence to contracts within a country (World Bank 2019). Unfortunately, this World Bank's measure starts in 1996 and is missing observations for 1997, 1999, and 2001, thereby reducing our observations by about a quarter for the United States, the United Kingdom, and France. Nevertheless, aid-induced moral hazard still characterizes the four donors, with *Other Aid* limiting moral hazard in France and Germany in Table A3 in the appendix. However, rule of law is not a significant determinant of terrorist group survival, except for France where it fosters survival. We must, however, point out that the rule of law is not tied to terrorist group survival or failure in the extant literature.

Concluding Remarks

This paper demonstrates that military aid to countries hosting terrorist groups results in a moral-hazard outcome that extends the longevity of resident groups in aid-recipient countries. We show that this finding is not only true for US aid, but is also the case for three other major donors, not previously analyzed. Our empirical investigation differs from the pioneering cross-sectional study of Bapat (2011) by using a more appropriate instrument, performing panel estimation, and including a more complete set of controls (e.g. strategic measures of the terrorist groups). Our sample includes more years and terrorist groups. In so doing, we find that foreign-policy affinity between the donor and host countries do not typically affect the survival of resident terrorist groups, contrary to the pioneering study. Moreover, other sources of military aid have an ameliorating effect on aid-induced moral hazard, given the plethora of security drivers behind the military aid of the associated collective of donors. When computing counterfactual simulations on quantifying the moral hazard, we find that the influence of military aid on the longevity of resident terrorist groups are donor-specific.

A common theme in post-9/11 terrorism research is that counterterrorism may have unintended negative consequences (Gaibulloev and Sandler 2019a). Apparently, providing military aid to countries hosting terrorist groups is another instance of an unintended undesirable consequence that is tolerated if the aid keeps the terrorists from defeating the host government or if the aid inhibits the host government from reaching an accommodation with the terrorists (Bapat 2011). We, however, find that foreign-policy affinity is much less of a driving factor of resident terrorist groups' longevity than previously thought. Moreover, the existence of a collective of other donors with diverse security concerns limits the moral hazard, thereby reducing somewhat the longevity of resident terrorist groups. This then suggests that military aid to host countries is more effective when many donors with alternative security agendas contribute. We also find that as resident terrorist groups get older, they become more resilient up to point. This suggests the need for more intense offensive actions when resident terrorist groups are young and more vulnerable to failure.

Notes

1. Bapat (2011) uses Jones and Libicki (2008) group data, which are not updated beyond 2006.
2. Unknown types of attacks are left out from the diversity calculation.
3. For other logged independent variables, we rely on an identical transformation.
4. A similar interference occurs if we include groups' ideology.

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