

Does Terrorism Threaten Human Rights? Evidence from Panel Data

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Abstract

Using panel data for 111 countries over the period 1982–2002, we employ two indexes that cover a wide range of human rights to empirically analyze whether and to what extent terrorism affects human rights. According to our results, terrorism significantly, but not dramatically, diminishes governments' respect for basic human rights such as the absence of extrajudicial killings, political imprisonment, and torture. The result is robust to how we measure terrorist attacks, to the method of estimation, and to the choice of countries in our sample. However, we find no effect of terrorism on empowerment rights.

1. Introduction

Governments' respect for human rights has opposing effects on national security. On the positive side, granting inalienable rights such as freedom of speech, freedom of religion, the guarantee of impartial treatment in court, the protection from invasion of privacy, and—even more important—the absence of torture, extrajudicial killings, and political imprisonment enables citizens to live in freedom and safety and to express political critiques nonviolently. On the negative side, having more human rights increases a country's vulnerability to external and internal threats. Consequently, the net effect of human rights on national security is not obvious.

In Western democracies, the majority of leading politicians seem to endorse the negative view of the consequences of human rights, at least concerning the threat of fundamentalist religious terrorism. After terrorist attacks, politicians tend to suggest the restriction of human rights as a means to improve national security. In 2005, U.S. President George W. Bush, for instance, explicitly formulated objections against legislation that would prohibit torture and inhumane

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treatment of detainees anywhere in the world, as this would hamper the ability of U.S. authorities to obtain information, especially in the “war against terror” (Amnesty International 2006). Until the U.S. Supreme Court rendered such practices unconstitutional, prisoners in Guantánamo Bay, Cuba, were treated neither as prisoners of war nor as typical prisoners (*Hamdan v. Rumsfeld*, 548 U.S. 557, 126 S. Ct. 2749 [June 29, 2006]). They were denied all basic human rights as well as fair treatment according to the Geneva Convention. Furthermore, as reported by Risen and Lichtblau (2005), Bush authorized the National Security Agency to eavesdrop on telephone and e-mail communication between people in the United States and those abroad without warrants starting in 2002, and this practice severely violated basic human rights.

In the United Kingdom, the Prevention of Terrorism Act 2005 (c. 2) allows government ministers to issue control orders restricting the liberty, movement, and activities of people purportedly suspected of terrorism-related activity. In Australia, similar legislation has recently been enacted. Thus, anecdotal evidence suggests that countries respond to terrorism and threats to their Western values by diminishing the very rights they wish to protect in the first place.¹

However, although anecdotal evidence abounds, a systematic analysis is lacking.² The question of whether terrorism systematically reduces human rights is yet unsettled. This is the question our article addresses. Specifically, we employ panel data for 111 countries over the period 1982–2002 to analyze whether and to what extent transnational terrorism does, on average, affect human rights. While data restrictions prevent us from focusing on domestic terrorist events in the main analysis, we replicate the analysis and include domestic terrorist events as a test for robustness.

We find that terrorism diminishes governments’ respect for basic human rights such as the absence of extrajudicial killings, political imprisonment, and torture. These results are robust to how we measure terrorist attacks, to the method of estimation, and to the choice of countries in our sample. The restriction of human rights is quantitatively rather small, however. We find no effect of terrorism on empowerment rights such as political participation and freedom of movement or religion.

We continue as follows. The next section presents our hypotheses. Section 3 introduces our measures of human rights and terrorism. In Section 4, we explain our method of estimation. Section 5 presents the results, while we test for the robustness of these results in Section 6. The final section concludes.

¹ Restrictive antiterrorism laws have been passed not just in Western societies. According to Amnesty International (2006), for instance, China and India have recently passed even stricter human-rights-restricting antiterrorism laws.

² See, for example, Brück and Wickström (2004) for a survey of the consequences of terrorism. See Blomberg, Hess, and Orphanides (2004) for an interesting analysis of the consequences of international terrorism on economic growth.

2. Hypotheses

Citizens are arguably willing to make a trade-off between human rights and security. During challenging times such as a war on terror, for example, they may perceive terrorist attacks to be more likely and thus give greater weight to security. They might be willing to accept a lower level of human rights to increase security.

In polls, Bush received approval rates of 60 to 90 percent when his administration “engineered the biggest expansion in executive power since the days of Franklin Roosevelt” with the Patriot Act, comprising, for example, the right to monitor telephone calls without explicit approval from the courts, to read private e-mail messages, to pry into library records, and to establish military tribunals (*Economist* 2006b, p. 22). The threat of terrorism led to a situation in which national security became the major political topic in elections. Similar developments can be observed all over the Western world, although only a few countries, such as Great Britain, acted as strictly as the United States did. Note that this pattern of behavior already existed in the years before September 11, 2001 (hereafter, 9/11): after the 1993 bombings of the World Trade Center and the federal building in Oklahoma City, the Antiterrorism Act of 1996 (Pub. L. No. 104-132, 110 Stat. 1214) was passed. Cole and Dempsey (2002, p. 117) rank the act as “some of the worst assaults on civil liberties” prior to the 2001 antiterrorism measures.

Overall, it thus seems reasonable to expect that terrorism leads to restrictions in human rights. Governments seem to react to an increase in terrorism by constraining the freedom and privileges of their citizens, and this change in constraints is potentially based on the demand for security for the majority of citizens.³ Stricter surveillance and controls make it harder to exchange secret information and ideas. Because stricter controls impair terrorists’ ability to plan attacks, the public is more willing to accept them in times of increased threat. Citizens may correct their subjective probabilities of a terrorist attack in their country upward when the country has experienced an attack. Consequently, they are more willing to accept a decrease in the level of human rights in order to enhance the perceived level of security.⁴ Moreover, terrorists might view successful attacks as an indicator of the government’s weakness, and this opinion would in turn increase their confidence in being able to effectively threaten or even overthrow the government. Consequently, the government has an incentive to decrease human rights in order to be better able to monitor terrorist activity. The illustrative example of Bush initially objecting to a bill prohibiting the torture

³ An earlier version of this article provides a formal political economy model illustrating the argument (Dreher, Gassebner, and Siemers 2007).

⁴ The trade-off relevant for political outcomes is the subjectively perceived link between human rights and terrorism and not necessarily the actual trade-off between respect for human rights and terrorism. In the United States, for instance, not a single terrorist was found by rounding up hundreds of foreigners, most of them Muslims, after 9/11 and holding them without charge, sometimes for months (*Economist* 2006a).

and inhumane treatment of detainees anywhere in the world because it would negatively affect the ability to obtain information (Amnesty International 2006) demonstrates that even fundamental human rights and values are questioned if they are expected to reduce national security. On the basis of this reasoning, we expect terrorist activity to lead to a reduction in the level of human rights.

Although this reasoning appears straightforward, different arguments exist. A priori, it is equally possible that citizens believe that an increase in human rights would improve national security. Terrorist attacks might be perceived as reactions to inadequate human rights.⁵ Hence, citizens would demand greater respect for human rights. Governments, thus, might give in to terrorism that purports to be aimed at improving human rights. Of course, giving in to kidnapping demands and other forms of blackmail may be time inconsistent, as one then becomes vulnerable to later extortive attempts. However, states have given in to kidnapping demands in the past.⁶ In October 1972, for instance, Germany released the three Palestinian survivors of the terrorist attacks at the Olympic Games in Munich after an airplane had been hijacked. In March 1975, Germany released five prisoners from the German left-wing terror scene (Red Army Faction and Movement 2 June) after the politician Peter Lorenz had been kidnapped. Although the German government no longer gives in to such political demands, it is still willing to pay money in exchange for the release of kidnapped citizens, and other countries do the same. Therefore, the probability of states giving in to political demands is greater than zero. Consequently, Krueger and Malecková (2003) find, analyzing a survey conducted by the Palestinian Center for Policy Research in 2001, that a majority of Palestinians living in the West Bank and the Gaza Strip believe that they would not have achieved their current status by negotiations alone. Also consider the threat of terrorism in the context of the Basque or Northern Ireland conflicts, where the Spanish and British governments eventually decided to improve human rights after a period of confrontation because they—or, rather, the majority of voters—realized that what occurred was a vicious circle of violence. These examples suggest that terrorism is a means that might, eventually, improve the level of human rights. Hence, an increase in terrorist activity could lead to an increase in the level of human rights.

Obviously, terrorist activity might increase governments' respect for human rights in some countries and years while decreasing it in other situations, especially if we take into account that every terrorism problem has its own specific origin. While we cannot empirically distinguish between these two directions, what we can do is estimate which of those effects dominates in our sample. In other words, what we estimate is the average net effect potentially resulting from two opposing effects. This net effect is what we turn to below.

⁵ For a discussion of unilateral versus multilateral actions of terrorists and states, see Sandler (2005).

⁶ Atkinson, Sandler, and Tschirhart (1987, p. 1) emphasize that in the 1970s, "the threat of the political terrorist generally emanates . . . from his preparation . . . to take hostages and wait out the dialogue of bargaining."

3. Measuring Human Rights and Terrorism

Our definition of citizens' human rights follows that of Cingranelli and Richards (1999). The Cingranelli-Richards (CIRI) Human Rights Dataset (Cingranelli and Richards 2010) was specifically designed to allow the testing of theories about causes and consequences of human rights violations and is widely used to do so.⁷ It provides quantitative information on governments' respect for various internationally recognized human rights on an annual basis and for almost all countries of the world.

The CIRI data are drawn from two sources, the U.S. Department of State's Country Reports on Human Rights Practices and Amnesty International's annual reports. Both offer detailed descriptions of human rights practices for most countries of the world. They are analyzed by country experts who code the human rights situation in a particular country and year on an ordinal scale. Each country is evaluated by at least two trained experts who follow a very detailed set of instructions.⁸ Note that Cingranelli and Richards focus on actual human-rights-related actions of governments, including all government agents such as the police and the military. In particular, the CIRI data refer to extrajudicial killings, disappearances of people for political reasons, torture, political imprisonment, freedom of speech, freedom of religion, freedom of movement, political participation, and workers' rights. Each variable is coded on an ordinal scale ranging between 0 and 2 or, depending on the variable considered, 0 and 4, for which higher values reflect better ratings on the relevant human rights dimension.⁹

In this article, we focus mainly on two composite indicators provided by Cingranelli and Richards (1999) and Richards, Gelleny, and Sacko (2001).¹⁰ The first composite index refers to physical integrity rights and is the additive of the absence of torture, extrajudicial killings, political imprisonments, and disap-

⁷ See, among many others, Richards (1999), Chan (2002), Foweraker and Krznaric (2003), Finkel, Perez-Linan, and Seligson (2005), Wurth and Seidensticker (2005), Abouharb and Cingranelli (2009), Goodliffe and Hawkins (2006), Landman (2006), United Nations (2006), and Blume and Voigt (2007).

⁸ The detailed coding rules are available at CIRI, CIRI Human Rights Data Project: Documentation (<http://ciri.binghamton.edu/documentation.asp>).

⁹ The scoring of the ordinal indexes rests on events-based criteria. While the exact description of how the individual dimensions are coded is not reproduced here because of space constraints, consider this treatment of political or extrajudicial killings as an example. Killings "practiced frequently"—when more than 50 people have been killed in a particular year and country—are coded as 0. Killings "practiced occasionally"—when between 1 and 49 people have been killed—are coded as 1. When no killings occurred, a value of 2 is assigned. The same scoring categories apply to the other dimensions of the physical integrity index. The empowerment index is calculated in a similar way. As Cingranelli and Richards (1999) and Richards, Gelleny, and Sacko (2001) show with Mokken scale analysis, government decisions to violate individual rights are unidimensional. They can thus be aggregated in overall indexes.

¹⁰ Arguably, the quantitative meaning implied in composite indicators is more difficult to interpret than are, for example, the numbers of human rights violations. However, only composite indicators can capture—and make comparable—the various aspects of the latent variable for human rights in which we are interested.

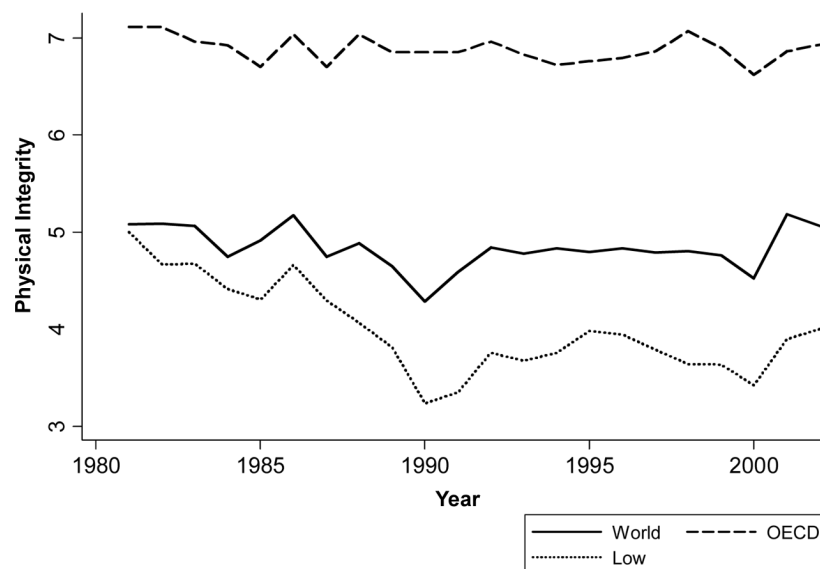


Figure 1. Development of physical integrity rights over time

pearance on a scale from 0 to 8. The second composite refers to empowerment rights and comprises the freedom of movement, freedom of speech, workers' rights, political participation, and freedom of religion, and its scale ranges from 0 to 10.¹¹ Table A1 gives a more detailed description of these components.

The dashed line in Figure 1 shows the time path of the unweighted average of the physical integrity index for Organisation for Economic Co-operation and Development (OECD) countries over the years 1981–2004. The dotted line represents the average for low-income countries,¹² while the unweighted world average is shown by the solid line. The number of countries covered rises from 125 in 1981 to 179 in 2004. The figure shows that the mean of the world index was fairly constant over time at a value of around 5 with, however, a substantial drop around 1990. The average for OECD countries is also rather constant over time, at a higher level of around 7. Figure 1 shows that there is some variation in the physical integrity index for developing countries, with a substantial negative trend. The index of physical integrity peaked in 1981 at 5, fell to a low

¹¹ The correlation between the physical integrity index and the empowerment index is .51. Thus, the two indicators indeed seem to be covering different aspects of human rights. Although all aspects covered by the two composites to some extent refer to political rights, workers' rights might also reflect distributional issues. We therefore replicated the analysis and excluded this dimension. The results did not change.

¹² Countries with low incomes are those with a 2004 gross national income per capita of a maximum of U.S.\$825, according to the definition of World Bank (2006).

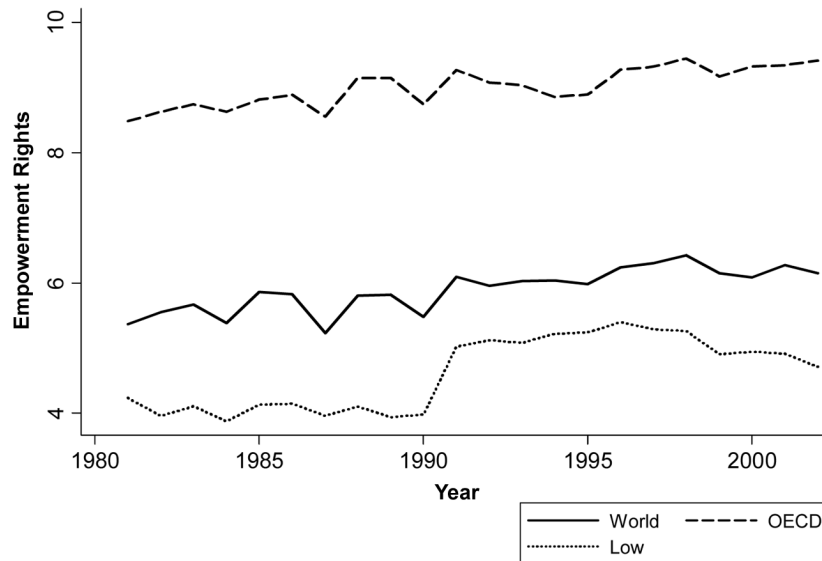


Figure 2. Development of empowerment rights over time

point of 3.2 in 1990, rose to 4 in 1995, and after declining again until 2000 was slightly below 4 in 2004.

Figure 2 shows the development of empowerment rights. As can be seen, the average level of empowerment rose steadily over the period of observation, with similar increases in developing and OECD countries. The most substantial increase in empowerment rights was experienced in 1990, in particular in low-income countries.¹³ The index mean is 4.6 for low-income countries, more than 9 for OECD countries, and 5.9 for the world sample. We observe a negative trend since 1996 in low-income countries. The world sample contains 130 countries in 1981 and 181 in 2004.

For our measure of terrorist activity, we employ data provided in the Memorial Institute for the Prevention of Terrorism (MIPT) Terrorism Knowledge Base.¹⁴ The MIPT Terrorism Knowledge Base integrates data from the RAND Terrorism Chronology and the RAND-MIPT Terrorism Incident databases, the Terrorism Indictment database, and DFI International's research on terrorist organizations.¹⁵

¹³ The apparent increase in low-income countries from 1990 to 1991 is mainly driven by Mali, the Democratic Republic of Congo, and Togo (increases of 4, 5, and 9 points, respectively).

¹⁴ The Memorial Institute for the Prevention of Terrorism (MIPT) Terrorism Knowledge Base ceased operation March 31, 2008. Data used in this paper are available from the authors.

¹⁵ Different sources for terrorism data exist. We chose the MIPT Terrorism Knowledge Base because it combines various sources. For a detailed discussion of the measurement of terrorism, see Frey and Luechinger (2005).

The MIPT Terrorism Knowledge Base defines terrorism as “violence, or the threat of violence, calculated to create an atmosphere of fear and alarm.” The focus of terrorism is to discourage the opposition from acting with free will. The motives for engaging in terrorism are political, while the acts themselves are generally conducted in a way that will achieve maximum publicity. Moreover, terrorist acts are mostly intended to create more than immediate physical damage and instead foster a longtime situation of fear and intimidation (for an extensive summary, see Frey, Luechinger, and Stutzer 2007).

We extract the number of transnational terrorist events for each country and year as our variable of main interest.¹⁶ Transnational terrorism is defined as attacks in which the attacker and/or the target are of foreign nationality. The reason for focusing on this kind of terrorism is data driven: although the definition of and data collection for transnational terrorism are identical for the whole data period, data on domestic terrorism are available in a consistent way only from 1998 onward. We also employ the number of suicide attacks and the number of persons killed in a certain year and country. Suicide attacks are likely to be perceived as particularly threatening. From the terrorists’ point of view, they might be more effective than other actions because it is hard to fight someone who is explicitly willing to die. Suicide attacks might thus provoke particularly harsh reactions by the government concerned (for a summary of studies, see Sandler 2003). The same is likely to be true when the attacks are more severe, such as when more people are killed.

Figure 3 shows how transnational terrorism has evolved over time and plots the average number of attacks per country. The OECD countries experience the highest amount of terrorism, while low-income countries experience the lowest amount (for time-series studies, see Enders and Sandler 2005, 2006). Particularly noteworthy is the negative trend in OECD countries over time, whereas the amount of terrorism in the other two country groups remained rather constant (while increasing in the recent past).

4. Method

We estimate pooled time-series cross-section (panel data) regressions. The data extend to a maximum of 111 countries and cover the years 1982–2002. Since some of the data are not available for all countries or years, the panel data are unbalanced, and the number of observations depends on the choice of explanatory variables.

To test our hypotheses, we estimate equations of the following form:

$$\text{RIGHTS}_{i,t} = \alpha \text{RIGHTS}_{i,t-1} + \beta \text{TERROR}_{i,t} + \gamma \mathbf{Z}_{i,t-1} + \delta_t + u_{i,t}, \quad (1)$$

where $\text{RIGHTS}_{i,t}$ represents our measure of human rights and $\text{TERROR}_{i,t}$ is the

¹⁶ Territories are assigned to the country formally governing the territory. Kashmir and the Persian Gulf are excluded because it is not obvious to which country either one should be assigned.

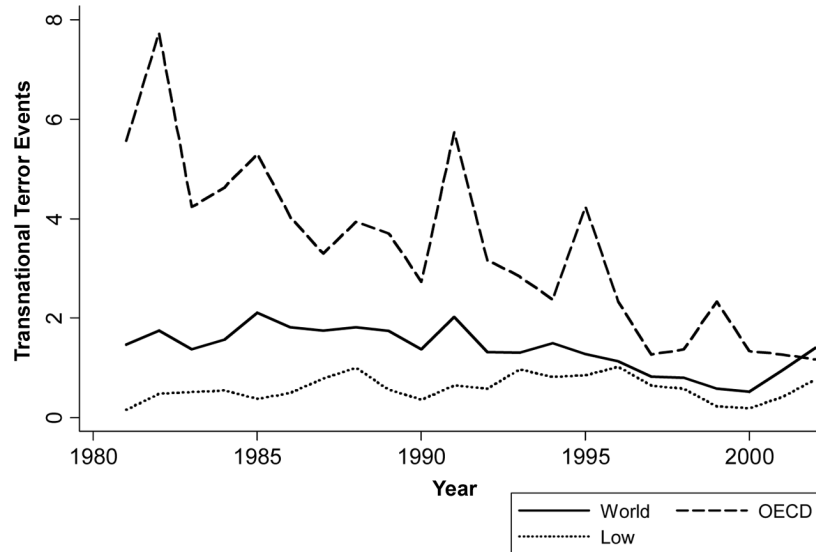


Figure 3. Development of transnational terrorism over time

measure of terrorist attacks in country i at year t (that is, the number of events, the number of suicide attacks, and the number of persons killed). The term Z is a vector of control variables as introduced below. Note that we also include the lagged dependent variable, as human rights develop only slowly over time, and the lagged dependent variable turns out to be highly significant (see, for example, Dreher, Gassebner, and Siemers 2006). Following the previous literature, we estimate our model by employing ordered probit regressions with clustering at the country level and robust standard errors.¹⁷ As a consequence, we cannot control for fixed country effects.¹⁸ All regressions include, however, dummies for each year (δ_t), which are highly significant.

In selecting our control variables, we follow the robustness analysis in our previous work (Dreher, Gassebner, and Siemers 2006). On the basis of a general-to-specific approach and extensive robustness tests employing extreme bounds analysis, we have previously suggested the following variables as robust predictors

¹⁷ The ordered probit model is related to the multinomial probit model but controls for the ordinal nature of the dependent variable. Thus, this estimation technique specifically takes into account that an increase in an ordinal index from 1 to 2, for example, is not necessarily equal to an increase from 4 to 5. Just as in the binomial probit model, a latent dependent variable is assumed to underlie the empirical setup. As we outline below, the cutoff points for the different categories can then be estimated with the coefficients of the model.

¹⁸ The fixed-effects ordered probit model is inconsistent because of the incidental parameter problem. When we include the individual averages of the explanatory variables among the regressors to model their correlation with the fixed effects directly, the results are unchanged (see Mundlak 1978; Wooldridge 2002).

of a country's level of physical integrity rights: the logarithm of a country's population, its degree of democracy, dummies for income, and dummies for legal origin.¹⁹

Our measure of democracy is from the Polity IV database as provided by Gurr, Jagers, and Moore (2003). It represents the difference between a country's democracy score and its autocracy score, which ranges from -10 to 10 , with higher numbers indicating higher levels of democracy.²⁰ Population is taken from the World Bank's (2006) World Development Indicators, legal origin is based on information in Easterly and Sewadeh (2001), and income classification comes from the World Bank (2006). The definitions and sources of all variables are summarized in Table A1, and the corresponding summary statistics are presented in Table A2.

A problem that comes immediately to mind, of course, is reverse causality. When people engage in terrorist activities as a consequence of the human rights situation in their country, low levels of human rights might not be the consequence of terrorism but might instead be its cause. Moreover, democracy could also be endogenous to human rights, as identical and unidentified factors could lead to common cause interdependence. Tests for endogeneity show, however, that the exogeneity of both terrorism and the level of democracy cannot be rejected at conventional levels of statistical significance.²¹ When we lag terrorist events and democracy by 1 year instead of using contemporaneous values, the results remain unchanged. Still, we also report results that were obtained by employing instrumental variable techniques.²²

In choosing instrumental variables for terrorism, we follow the method in our previous work (Dreher and Gassebner 2008), in which we show that countries voting in line with the United States in the United Nations (UN) General Assembly and countries with more fractionalized governments are more frequently the target of transnational terrorist attacks (voting data are from Voeten [2004], whereas government fractionalization data are from Beck et al. [2001]).²³ Moreover, to account for the ideological motives of terrorism, we include religious fractionalization as an additional instrument, taken from Alesina et al. (2003).

¹⁹ Controlling for democracy is important, as it might arguably be related to terrorism and human rights alike. As Li (2005) shows, for example, transnational terrorism diminishes with an increase in the level of democratic participation.

²⁰ The index is based on competitiveness and openness of executive recruitment, competitiveness and regulation of political participation, and constraints on chief executives.

²¹ When we use the instruments described below, the p -values of the Durbin-Wu-Hausman tests are approximately .14 for physical integrity.

²² The instrumental variable models employed assume the dependent variable to be cardinal rather than ordinal. For a discussion of linear instrumental variable techniques versus the ordered probit method, see Heckelman (1999).

²³ Arguably, terrorism might also induce a country to vote in line with the United States in the UN General Assembly and thus give rise to reverse causality. However, in a previous study (Dreher and Gassebner 2008), we did not find evidence in favor of this reverse-causality hypothesis.

Specification tests as reported below clearly do not reject these instruments at conventional levels of statistical significance.²⁴

Given that our estimation setup includes the lagged dependent variable, the two-stage least squares (2SLS) estimations may, however, suffer from dynamic panel bias. Therefore, we employ the generalized method of moments (GMM) estimator, as is suggested by Arellano and Bover (1995) and Blundell and Bond (1998).²⁵ We present results employing the two-step estimator implemented by Roodman (2006) in Stata and include Windmeijer's (2005) finite sample correction. We treat the lagged dependent variable and the terrorism measures as endogenous and the additional covariates as strictly exogenous. As before, we include time dummies in the regressions. We report results of the Sargan-Hansen test on the validity of the instruments used (and this amounts to a test for the exogeneity of the covariates) and the Arellano-Bond test of first- and second-order autocorrelation. Although autocorrelation of the first order has to be present in order for the estimator to be consistent, second-order autocorrelation must be absent. When we use the lags of all variables as instruments (starting from the second lag for endogenous variables and from the first lag for exogenous variables), the number of instruments amounts to 732. This large number results because each instrumenting variable generates one column for each time period and lag available to that time period, so the number of instruments is quadratic in the number of years (Roodman 2006). In order to minimize the number of instruments in the regressions, we collapse the matrix of instruments as suggested in Roodman (2006).²⁶ Rather than generate one column for each year, the instrument set is collapsed into a combined single column. While this approach carries slightly less information, it reduces the number of instruments to a maximum of 85.

5. Results

Table 1 reports the results for the ordered probit estimations. Column 1 focuses on physical integrity rights and includes the number of transnational terrorist events in a particular year and country. According to the results, government respect for human rights is greater with a smaller population and more democracy, and the results are statistically significant at the 1 percent level. The former finding is consistent with the notion that lower surveillance costs, which are possible because of a smaller population, allow the government to allocate

²⁴ Using UN voting as an instrument comes at a disadvantage. This voting shows greater variation across countries than it does over time. Religious fractionalization does not vary over time at all. Hence, the instrument may not address some of the variation in the temporal domain.

²⁵ The system generalized method of moments (GMM) estimator combines equations in first differences (with suitably lagged levels as instruments) and equations in levels (with lagged first differences as instruments).

²⁶ It is necessary to limit the number of instruments because the power of the Sargan-Hansen test is low when many instruments are used (Bowsheer 2002). Moreover, using too many instruments might cause an overfitting of the instrumented variable.

Table 1
 Ordered Probit Analysis of Human Rights and Transnational
 Terrorism for 111 Countries, 1982–2002

	(1)	(2)	(3)	(4)	(5)	(6)
Lagged dependent	.531** (22.98)	.538** (20.60)	.539** (23.63)	.538** (20.55)	.541** (23.59)	.538** (20.57)
Income lower middle	-.028 (.34)	-.062 (.77)	-.036 (.44)	-.067 (.83)	-.034 (.41)	-.067 (.83)
Income upper middle	.257* (2.31)	.017 (.16)	.249* (2.31)	.016 (.15)	.250* (2.32)	.016 (.15)
Income high OECD	1.172** (7.42)	.591** (2.90)	1.102** (6.66)	.581** (2.75)	1.112** (6.66)	.580** (2.74)
Income high	.165 (1.27)	-.335** (2.79)	.057 (.39)	-.382** (3.41)	.036 (.24)	-.378** (3.42)
Legal origin British	-.859** (4.66)	-.345 (1.01)	-.910** (4.79)	-.359 (1.04)	-.899** (4.71)	-.359 (1.04)
Legal origin French	-.929** (4.81)	-.291 (.84)	-1.010** (5.04)	-.316 (.90)	-1.002** (4.98)	-.316 (.90)
Legal origin socialist	-.650** (2.93)	-.452 (1.20)	-.705** (3.07)	-.464 (1.22)	-.699** (3.04)	-.464 (1.22)
Legal origin German	-1.133** (3.68)	-.488 (1.21)	-1.137** (3.71)	-.490 (1.22)	-1.139** (3.72)	-.490 (1.22)
Population (log)	-.195** (8.74)	-.096** (3.66)	-.202** (9.10)	-.101** (4.04)	-.200** (9.03)	-.101** (4.03)
Democracy	.021** (3.61)	.078** (10.86)	.017** (2.92)	.076** (10.21)	.017** (2.82)	.076** (10.29)
Number of terrorist events	-.019** (4.86)	-.006 (1.09)				
Number of suicide attacks			-.031** (3.31)	.006 (.73)		
Number of persons killed					-.001** (4.77)	1.5 x 10 ⁻⁴ (.13)
Pseudo-R ²	.31	.37	.31	.37	.31	.37

Note. The dependent variables are composite indexes referring to physical integrity rights (columns 1, 3, and 5) and empowerment rights (columns 2, 4, and 6). The regressions include dummies for each year; standard errors are clustered at the country level. Robust z-statistics are indicated in parentheses. For physical integrity, the number of observations was 2,217; for empowerment, the number of observations was 2,219. OECD = Organisation for Economic Co-operation and Development.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

more human rights. Moreover, higher levels of democracy reduce the government's ability to increase security by restraining rights.²⁷ Relative to Scandinavian legal origin—the omitted legal origin variable—the level of respect for human rights is lower among all other categories of legal origin and is the lowest in countries with German legal origin. The result is driven by South Korea, which has particularly low values on the physical integrity index. As compared to that in low-income countries (the omitted income category), respect for human rights is greater in countries with upper-middle income levels and in high-income

²⁷ There might be a reporting bias in more democratic countries with greater press freedom, and therefore the coefficient could be biased downward. Li (2005, p. 282) makes the same point regarding the relationship between democracy and terrorism.

OECD countries. The lagged dependent variable is highly statistically significant, with a positive coefficient.

For our variable of main interest, the results show that physical integrity rights are restricted as a consequence of terrorism. The corresponding coefficient is statistically significant at the 1 percent level.

Column 2 shows the results of the analysis for empowerment rights. Population and democracy show the same qualitative effects as were seen for physical integrity, with coefficients again being statistically significant at the 1 percent level. The legal origin variables, however, are jointly not statistically significant. When we turn to income, we see that OECD countries also score the highest on the empowerment index, while high-income non-OECD countries exhibit the lowest outcomes (driven by oil-rich countries like Bahrain, the United Arab Emirates, Saudi Arabia, and Kuwait). Again, the lagged dependent variable is statistically significant at the 1 percent level. Most important, however, the results also show that empowerment rights are not significantly affected by the number of terrorist events.

The results in the remaining columns are in line with those for terrorist events. At the 1 percent level of statistical significance, suicide attacks restrict human rights as measured by the physical integrity index (column 3). Empowerment rights, on the contrary, are not significantly affected by suicide attacks (column 4). For the number of persons killed, we see that there is a highly statistically significant (and negative) impact on physical integrity rights (column 5) but not on empowerment rights (column 6). Our results seem to suggest that it is acceptable to governments to violate physical integrity rights, but not empowerment rights, in the wake of terrorism. Arguably, persons affected by the first type of violation are small minorities, whereas empowerment rights affect almost everyone in society.²⁸ Because the population at large would be affected by restraining the latter type, disagreement about affecting these rights is more likely.

How big is the impact of terrorism on physical integrity rights? Because our dependent variables are ordinal, quantitative interpretation of the results is not straightforward.²⁹ Standard practice in evaluating the magnitude of the effects in ordered probit models is to estimate the latent dependent variable continuously:

$$\text{RIGHTS}_{i,t}^* = \hat{\alpha}\text{RIGHTS}_{i,t-1} + \hat{\beta}\text{TERROR}_{i,t} + \hat{\gamma}\mathbf{Z}_{i,t-1} + \hat{\delta}_t + \hat{u}_{i,t}, \quad (2)$$

where $\text{RIGHTS}_{i,t}^*$ reflects the underlying latent variable. The estimation of the

²⁸ The U.S. Department of Justice informed Congress that intelligence officers may use interrogation methods that would be considered illegal under international law if the goal of the interrogation is to prevent a terrorist attack (Mazzetti 2008). This line of reasoning may be especially acceptable after a successful terrorist attack.

²⁹ As Greene (2003, p. 739) puts it, “[W]ithout a fair amount of extra calculation, it is quite unclear how the coefficients in the ordered probit model should be interpreted.”

model yields the cutoff points defining the range of values of the latent variable that correspond to a specific category of the observed ordinal variable:

$$\text{RIGHTS}_{i,t} = \begin{cases} 0 & \text{if } \text{RIGHTS}_{i,t}^* < m_0, \\ 1 & \text{if } m_0 \leq \text{RIGHTS}_{i,t}^* < m_1, \\ \vdots & \\ 8 & \text{if } \text{RIGHTS}_{i,t}^* \geq m_7. \end{cases} \quad (3)$$

An observable shift in the value of the physical integrity index occurs if the corresponding cutoff point for the relevant category is exceeded.

According to our estimates in column 1, the smallest difference between two cutoff points for the physical rights index is .63, and this represents the difference between the upper and the lower limit of an observed index value of 3 (that is, $\text{RIGHTS}_{i,t} = 3$ if $-3.48 \leq \text{RIGHTS}_{i,t}^* < -2.85$). To quantify the impact of terrorist attacks, assume a 1-standard-deviation increase in terrorist events—the equivalent of 5.62 more events or substituting the number of terror attacks for Spain with those of the Philippines in 2001. This increase would reduce physical rights only slightly—roughly by one-sixth of the difference between the physical integrity index values for Argentina and Mexico in 2001 (with index values of, respectively, 3 and 2) or the difference between the values in 2002 and 2003 for Mexico (an increase from 2 to 3).

To get a better grasp of the magnitude of the effect of terrorism, we calculate the marginal effects for the significant coefficients of the terrorism variables in Table 1 for each value of the dependent variable (at the mean of all independent variables). The results are shown in Table 2.³⁰

The following example illustrates how the data in Table 2 can be interpreted. First, the table reports the observed sample frequency. The data for the probability at the mean represent the estimated probabilities of observing a given index score when all independent variables are assigned their mean values.³¹ Not surprisingly, the model (when evaluated at the mean of all explanatory variables) performs better at values close to the mean and performs worse at the extremes. For instance, the estimated probability of observing an index value of 7 is 14.21 percent (compared with an observed sample frequency of 16.37 percent). An increase in the amount of terrorist attacks by 1 standard deviation would, *ceteris paribus*, result in a reduction of 2.13 percent in the probability of observing that index value. Although this number is far from being negligible, the result also implies that the reduction in human rights due to additional terrorist events is not dramatic. As can be seen from the results, the marginal effects are always statistically significant at the 1 percent level.

³⁰ Because of the assumed normal distribution, the sign of the marginal effect changes from the lowest to the highest category. Specifically, for all index values below the mean, the marginal effect has the opposite sign of the estimated coefficient, while all values above the mean have the same sign. Only for the mean value itself is the effect a priori undetermined.

³¹ The mean value of the other explanatory variables is the same (up to three decimal points) for all three terrorism measures employed.

Table 2
Marginal Effects of Physical Integrity Rights and Transnational Terrorism

Threshold	0	1	2	3	4	5	6	7	8	E[y]
Physical integrity rights:										
Sample frequency	.0438	.0519	.0731	.0902	.1385	.1407	.1398	.1637	.1583	4.98
Probability at the mean	.0003	.0031	.0171	.0582	.1962	.2984	.2678	.1421	.0168	5.22
Number of terrorist events:										
Marginal effect	2.4×10^{-5}	1.7×10^{-4}	.0007	.0018	.0035	.0011	-.0028	-.0038	-.0008	-.0229
p-Value	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
Number of suicide attacks:										
Marginal effect	4.6×10^{-5}	.0003	.0014	.0034	.0065	.0020	-.0052	-.0070	-.0015	-.0430
p-Value	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
Number of persons killed:										
Marginal effect	9.5×10^{-7}	6.8×10^{-6}	2.9×10^{-5}	.0001	.0001	4.2×10^{-5}	-.0001	-.0001	-3.1×10^{-5}	-.0009
p-Value	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00

Note. The marginal effects correspond to the regressions in columns 1, 3, and 5 of Table 1. The sample frequency is the observed sample frequency for each category. The probability at the mean represents the estimated probability of observing a given index score when all independent variables are assigned their mean values. The marginal effects are shown for each category on the 9-point physical integrity rights index.

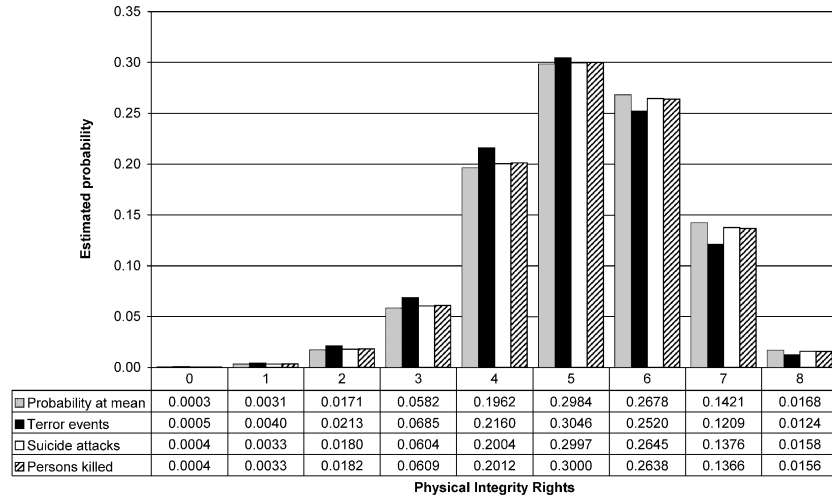


Figure 4. Estimated effects of terrorism

Table 2 also shows the marginal effects of suicide attacks and the number of persons killed. According to the results, the pattern is quite similar to that for the number of terrorist events. As anticipated, the magnitude of the marginal effect of suicide attacks is substantially larger than that of typical terrorist events (it is almost exactly doubled). However, whereas suicide attacks have a higher marginal effect, they are rather infrequent (reflected by their low standard deviation). A 1-standard-deviation increase in suicide attacks (.64) for an index value of 7 reduces the observance probability by .45 percent. Consider a 1-standard-deviation increase in the number of persons killed (37.68), which is equivalent to the increase in the number of persons killed in Pakistan between 1996 and 2002, for example. For an index value of 7, such an increase reduces the observed probability by .55 percent.

We visualize and summarize the effects of terrorism in Figure 4.³² For each value of the ordinal index, we show the estimated probability of being in that category at the mean values of all explanatory variables (light gray bars). Moreover, we show the observed probability for these categories after increasing the relevant measure of terrorism by 1 standard deviation. As can be seen, the index values just above and below the mean (that is, values 3 and 4 as well as 6 and 7) are most strongly affected. The figure shows that the probability of being in

³² In Figure 4, for each index value (0–8), the bar on the left-hand side shows the estimated probability of observing the given value of the physical integrity index at the mean of all explanatory variables. The following three bars depict the probabilities to be observed in these categories after an increase of the relevant terrorism indicator by 1 standard deviation. The corresponding probabilities are given in the table below the figure. Calculations are based on the marginal effects given in Table 2 and the standard deviations reported in Table A2.

Table 3
Two-Stage Least Squares (2SLS) and Generalized Method of Moments (GMM) Analysis of
Physical Integrity Rights and Transnational Terrorism for 111 Countries, 1982–2002

	2SLS (N = 1,846)			GMM (N = 2,217)		
	(1)	(2)	(3)	(4)	(5)	(6)
Lagged dependent	.639 (28.07)**	.663 (37.59)**	.644 (28.72)**	.279 (5.99)**	.256 (4.15)**	.298 (5.54)**
Income lower middle	-.007 (.09)	-.038 (.49)	-.049 (.59)	-.067 (.25)	-.124 (.46)	-.130 (.46)
Income upper middle	.237 (2.54)*	.217 (2.30)*	.219 (2.25)*	.651 (2.11)*	.539 (1.66) ⁺	.596 (1.82) ⁺
Income high OECD	1.028 (7.21)**	.898 (6.89)**	.890 (6.59)**	2.191 (7.45)**	2.121 (6.88)**	2.020 (6.13)**
Income high	.461 (2.08)*	.298 (1.70) ⁺	.387 (1.88) ⁺	.349 (1.10)	.063 (.16)	.005 (.01)
Legal origin British	.058 (.34)	-.026 (.16)	-.005 (.03)	.319 (1.61)	.242 (1.10)	.267 (1.10)
Legal origin French	.075 (.43)	-.079 (.48)	-.098 (.58)	.019 (.09)	-.082 (.39)	-.040 (.20)
Legal origin socialist	.407 (2.08)*	.310 (1.61)	.274 (1.37)	.810 (2.27)*	.733 (2.07)*	.669 (1.84) ⁺
Legal origin German	-.337 (1.39)	-.347 (1.41)	-.402 (1.57)	-.253 (.81)	-.404 (.90)	-.275 (.49)
Population (log)	-.235 (9.62)**	-.247 (10.19)**	-.215 (7.32)**	-.439 (7.19)**	-.481 (6.76)**	-.453 (6.63)**
Democracy	.024 (3.43)**	.016 (3.04)**	.020 (3.23)**	.032 (2.59)*	.034 (2.62)*	.026 (2.07)*
Number of terrorist events	-.044 (2.14)*			-.017 (4.05)**		
Number of suicide attacks		-.226 (1.95) ⁺			-.082 (5.21)**	
Number of persons killed			-.030 (2.01)*			-.001 (1.92) ⁺
R ²	.73	.73	.71			
Sargan-Hansen test	.21	.16	.23	.45	.25	.14
Arellano-Bond first-order test				.00	.00	.00
Arellano-Bond second-order test				.48	.51	.36

Note. The dependent variable is a composite index referring to physical integrity rights. The regressions include dummies for each year. Z-statistics are in parentheses. OECD = Organisation for Economic Co-operation and Development.

⁺ Statistically significant at the 10% level.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

categories representing low levels of human rights increases as a consequence of terrorism, while the probability of being in categories 6–8 is substantially reduced, especially for the number of terrorist attacks.³³ Given the insignificant effect of terrorism on empowerment rights, we hereafter focus on physical integrity rights.

For the results presented in Table 3, the calculations have controls for potential endogeneity. Columns 1–3 show the results of the 2SLS regressions. As noted above, all tests for endogeneity suggest that terrorism is exogenous with respect

³³ Because all bars represent probabilities, the sum for each bar type is 1.

to human rights. Our instruments—voting in line with the United States in the UN General Assembly, government fractionalization, and religious fractionalization—are not rejected by the Sargan-Hansen test at conventional levels of statistical significance. The first-stage F -test indicates the power of these instruments, as they easily pass the threshold of 10 proposed by Staiger and Stock (1997).³⁴

The results in Table 3 show that employing instruments does not change our main findings. The three measures of terrorist attacks remain statistically significant at least at the 10 percent level. Columns 4–6 show the results of the dynamic GMM approach. Both the Sargan-Hansen test and the Arellano-Bond test clearly do not reject the specification. We take these findings as evidence that endogeneity is not an issue here and that our previous results are valid. Again, the three terrorism measures are statistically significant at least at the 10 percent level (the highest p -value for a terror coefficient is .057).³⁵

Because the 2SLS and GMM approaches assume cardinality, the results are much easier to interpret than are those derived from the ordered probit method used above. According to the results, an increase of 1 standard deviation in the number of transnational terrorist events causes a decrease in the physical rights index by .25 points (column 1) and .08 points (column 4). An increase of 1 standard deviation in the number of suicide attacks and in the number of persons killed results in reductions in the index of .14 and 1.13 (columns 2 and 3) and of .05 and .04 (columns 5 and 6).³⁶ There is a significant negative relationship between terrorism and human rights. The magnitude of this effect is small, however.

Table 4, finally, presents the ordered probit regression results for the individual components of physical integrity. Because the individual dimensions vary only from 0 to 2, variation among OECD countries is extremely low. As a consequence, the results for those countries are completely determined in the regressions, and most of the regressions do not converge. We therefore opted to exclude OECD

³⁴ The Anderson canonical correlation likelihood ratio statistic and the Cragg-Donald chi-squared statistic—both tests of whether the equation is identified—also do not reject the specification at conventional levels of statistical significance. Shea's partial R^2 -value—the squared partial correlation between the excluded instruments and the endogenous regressor—shows strongly significant F -statistics and thereby rejects the null hypothesis that there is no correlation between our instrumental variables and the endogenous regressor. The Anderson-Rubin test examining if our results are affected by weak instruments gives additional evidence that we do not have a weak-instrument problem.

³⁵ We also ran the two-stage least squares (2SLS) and GMM setups and instrumented for both terrorism and democracy. Although the results are affected slightly, this process introduces additional inefficiency, as democracy is exogenous according to the statistical tests.

³⁶ We tested what drives the apparent discrepancy for the impact of terrorism fatalities on physical integrity rights by rerunning the GMM regressions on the sample used in the 2SLS regressions. This change in the sample explained only a minor part of the difference, however (the GMM coefficient changed from .001 to .003). Excluding one of the instruments reduced the 2SLS coefficient to a minimum of .009. However, all specification tests indicated that the regression with all three instruments included was preferred. When we compared the result with that obtained through fixed-effects regression (as discussed below), we received strong validity for the GMM result, because the coefficient was virtually identical (also .001).

Table 4
Ordered Probit Analysis of Physical Integrity Rights and Transnational Terrorism for 90 Countries, 1982–2002

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Lagged dependent	1.052** (15.26)	1.105** (17.57)	1.104** (17.31)	906** (15.55)	1.066** (15.09)	1.125** (18.35)	1.127** (17.63)	931** (16.44)	1.065** (15.06)	1.127** (18.49)	1.125** (17.67)	922** (16.13)
Income lower middle	-.056 (.47)	-.082 (.77)	-.083 (.76)	-.078 (.78)	-.051 (.51)	-.049 (.46)	-.103 (.94)	-.123 (1.00)	-.063 (.54)	-.052 (.49)	-.099 (.91)	-.115 (.94)
Income upper middle	.263* (2.17)	.382** (2.75)	.141 (1.23)	.254+ (1.68)	.261* (2.19)	.353** (2.69)	.129 (1.12)	.235 (1.56)	.259* (2.15)	.354** (2.70)	.131 (1.13)	.240 (1.58)
Income high	.226 (1.02)	.693** (4.07)	-.296+ (1.70)	.253 (1.50)	.068 (.33)	.453* (2.03)	-.369* (2.07)	.134 (.73)	.110 (.55)	.411+ (1.93)	-.394* (2.18)	.161 (.94)
Legal origin British		-.195 (1.25)			-.224 (1.41)					-.217 (1.37)	-.287 (1.52)	
Legal origin French	-.178 (1.56)	-.300* (2.10)	-.068 (.69)	-.062 (.59)	-.194+ (1.72)	-.368* (2.54)	-.091 (.91)	-.095 (.89)	-.197+ (1.75)	-.365* (2.55)	-.382* (2.06)	-.104 (.98)
Legal origin socialist	.196 (.94)		.288 (1.52)	-.022 (.13)	.206 (.99)		.294 (1.56)	-.007 (.04)	.200 (.96)			-.029 (.17)
Population (log)	-.169** (5.42)	-.177** (7.01)	-.253** (5.71)	-.200** (6.37)	-.179** (5.88)	-.199** (8.44)	-.262** (5.83)	-.216** (7.08)	-.175** (5.68)	-.195** (8.30)	-.257** (5.76)	-.206** (6.86)
Democracy	-.004 (.55)	-.005 (.74)	.054** (7.49)	.017* (2.37)	-.007 (1.05)	-.011+ (1.71)	.049** (7.35)	.012+ (1.69)	-.007 (.97)	-.012+ (1.77)	.049** (7.35)	.013+ (1.87)
Number of terrorist events	-.013+ (1.87)	-.043** (4.18)	-.022** (2.89)	-.031** (4.35)								
Number of suicide attacks				.155 (1.00)		-.218+ (1.90)	-.162** (4.47)	-.192* (1.73)				
Number of persons killed									-.002 (.69)	-.005+ (1.83)	-.005* (2.00)	-.016** (2.90)
Observations	1,792	1,783	1,787	1,790	1,792	1,783	1,787	1,790	1,792	1,783	1,787	1,790
Pseudo-R ²	.27	.32	.37	.25	.27	.31	.37	.25	.27	.31	.37	.25

Note. The dependent variables are subcomponents of the composite physical integrity rights index: people who have disappeared for political reasons (columns 1, 5, and 9), extrajudicial killings (columns 2, 6, and 10), political imprisonment (columns 3, 7, and 11), and torture (columns 4, 8, and 12). The regressions include dummies for each year; standard errors are clustered at the country level. Robust z-statistics are in parentheses.

+ Statistically significant at the 10% level.

* Statistically significant at the 5% level.

** Statistically significant at 1% level.

countries. As a consequence, the dummy for German legal origin had to be omitted as well.

Which dimensions drive the results? According to the data in Table 4, all individual dimensions of physical integrity rights are negatively affected by terrorism. At least at the 10 percent level of statistical significance, an increase in the number of terrorist events increases the number of persons disappearing, extrajudicial killings, political imprisonment, and torture. Governments restrict physical integrity rights among all dimensions, except disappearances, as a consequence of suicide attacks, also at least at the 10 percent level of statistical significance. Again, the magnitude of the effect is much larger for suicide attacks than it is for the number of terrorist events. Particularly interesting is the fact that imprisonment yields the most substantial result. This finding suggests that governments might react to suicide attacks by locking up potential attackers. An increase in the number of persons killed by terrorists also statistically increases all aspects of human rights violations with the exception of disappearances; however, here the most significant and largest negative coefficient is obtained for torture, and this finding suggests that government retaliation plays a role.³⁷

To summarize, there is clear evidence that, on average, governments respond to terrorism by restricting some of the very rights they want to protect in the first place. In the next section, we test whether the impact of terrorism on physical integrity rights is robust to the method of estimation, the choice of countries, and the sample period. In the interest of space, we restrict the analysis to the number of terrorist events. Note, however, that the results for the other two measures of terrorism are qualitatively similar. These results are available on request.

6. Tests for Robustness

We pursue various strategies to test for the robustness of the impact of the number of terrorist events on physical integrity rights. First, we replicate the regression with a dummy for the occurrence of terrorism in a given country and year in place of the number of terrorist events. Our results might be driven by the linear relationship we impose for the effect of the number of terrorist events on physical integrity rights. By assigning the value of 1 when at least one terrorist event occurred, we circumvent this problem. Moreover, we ensure that our results are not driven by outliers. This assurance comes at the cost of reduced information, however.

As our second test for robustness, we exclude those terrorist events that can be considered to be marginal, that is, all events in which no person was physically harmed. More precisely, we exclude events in which the number of persons killed and the number of persons injured were both zero and/or missing. Of course,

³⁷ The results hold qualitatively when we replicate the analysis with 2SLS and GMM methods. When we replicate the analysis with the individual components of the empowerment rights index, virtually all regressions show statistically insignificant coefficients for the terrorism variables.

it is debatable which threshold constitutes a severe event. We chose the lowest threshold possible. Although this is the most objective threshold from our point of view, we are aware that events in which no one is physically harmed may still have a major impact, such as the effects of the London bombings of July 21, 2005.

Third, we broaden the coverage of our terrorism measure to include domestic events. As described above, we excluded these events from the main analysis because they are generally systematically available only after 1998. However, occasional events of domestic terrorism are included in the data prior to 1998.

As our fourth test for robustness, we investigate whether our results are driven by the extraordinary events of 9/11 and their consequences. We thus replicate our analysis and exclude the years 2001 and 2002.

Fifth, we check whether our results depend on the inclusion of OECD or non-OECD countries. We therefore report results for OECD countries only and also for a sample excluding OECD countries. Figures 1 and 2 showed that OECD countries had the highest respect for human rights and experienced the most cases of transnational terrorism. Arguably, the results might be different for this group of countries.

Finally, while ordered probit is the correct estimation technique in the case of ordinal dependent variables, the interpretation of the results is difficult. We therefore reran all of our regressions and employed a linear panel estimator with fixed country and time effects (allowing for intragroup correlations of the error term).³⁸

With regard to the results of our robustness tests, we see from the data in Table 5 that the impact of terrorism on physical integrity rights is extremely robust as to how terrorist events are measured, and the same is true regarding the choice of sample period or countries included in the sample. In all cases, terrorism reduces governments' respect for human rights at least at the 10 percent level of statistical significance (columns 1–6). In five of the six regressions, the coefficient is statistically significant even at the 1 percent level. Moreover, we see that using the linear panel estimator leaves our findings unchanged (column 7).³⁹ The magnitude of the fixed-effects estimates is very similar to the dynamic GMM result reported above. If human rights are assumed to be cardinal, a 1-standard-deviation increase in the number of terrorist attacks reduces human rights by approximately .1 point.

³⁸ We also tested for the robustness of our results to the inclusion of additional variables by employing extreme-bounds analysis, as we did in a previous study (Dreher, Gassebner, and Siemers 2006). The number of transnational terrorist events in a given country and year easily exceeds the critical threshold for robustness suggested by Sala-i-Martin (1997). At the 5 percent level of significance, the number of terrorist events is significant in 92 percent of 23,000 regressions run. The detailed results are shown in Dreher, Gassebner, and Siemers (2007).

³⁹ Note that we had to exclude the time-invariant variables in the fixed-effects estimations. When we replicated the fixed-effects analysis by employing suicide attacks or the number of persons killed, the results were again unchanged.

Table 5
Test for Robustness of the Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lagged dependent	.531** (23.20)	.534** (23.27)	.536** (23.44)	.521** (22.53)	.627** (5.38)	.522** (22.96)	.453** (12.42)
Income lower middle	-.001 (.01)	-.035 (.41)	-.033 (.39)	-.023 (.26)		-.021 (.24)	
Income upper middle	.283** (2.71)	.245* (2.22)	.256* (2.36)	.243* (2.19)		.275* (2.47)	
Income high OECD	1.179** (7.30)	1.125** (6.90)	1.134** (6.91)	1.205** (7.36)			
Income high	.131 (.90)	.138 (1.09)	.078 (.56)	.156 (1.13)		.164 (1.27)	
Legal origin British	-.895** (4.96)	-.888** (4.72)	-.887** (4.70)	-.741** (3.83)	-.822** (3.40)		
Legal origin French	-.973** (5.09)	-.981** (4.95)	-.979** (4.92)	-.810** (4.04)	-.916** (2.74)	-.068 (.82)	
Legal origin socialist	-.700** (3.21)	-.687** (3.02)	-.682** (3.00)	-.551* (2.34)		.202 (1.60)	
Legal origin German	-1.117** (3.60)	-1.142** (3.72)	-1.141** (3.71)	-1.055** (3.52)	-.928** (3.40)		
Population (log)	-.188** (8.67)	-.197** (8.82)	-.198** (8.99)	-.189** (8.01)	-.203** (3.02)	-.195** (8.56)	-.482 (1.02)

Democracy	.020**	.018**	.150**	.047**
	(3.34)	(3.09)	(3.88)	(4.18)
Terrorist events ^a	-.196**			
	(2.95)			
Number of severe terrorist events	-.031**			
	(4.63)			
Number of terrorist events (including domestic)		-.003**		
		(4.73)		
Number of terrorist events				
Observations	2,217	2,001	441	2,217
Countries	All	All	OECD	All
Years	1982-2002	1982-2000	1982-2002	1982-2002
Pseudo-R ²	.31	.31	.29	.27

Note. The dependent variable is a composite index referring to physical integrity rights. The regressions include dummies for each year; standard errors are clustered at the country level. Robust z-statistics are in parentheses. With the exception of column 6, in which the data are derived by the fixed-effects method, all data are derived from an ordered probit analysis. OECD = Organisation for Economic Co-operation and Development.

^aDummy.

* Statistically significant at the 10% level.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

7. Conclusion

We analyzed the link between terrorism and human rights. Our empirical results indicate that governments' response to terrorism is, on average, to restrict human rights. Our study supports anecdotal evidence suggesting that governments, when under the threat of terrorism, violate some of the very rights they want to protect in the first place.

According to our results, terrorism increases the probability of disappearances, extrajudicial killings, political imprisonment, and torture. However, the magnitude of the effect is not dramatic. Specifically, an increase in the number of transnational terrorist attacks of 1 standard deviation reduces the probability of observing a physical integrity score of 7 (out of 8) by 2.13 percent. The results are extremely robust to how we measure terrorist attacks, to the method of estimation, and to the choice of countries in our sample.

We do, however, find no significant effect of terrorism on empowerment rights such as political participation, freedom of religion, freedom of speech, or freedom of movement. The reason for this finding could be that persons affected by violations of physical rights are likely to be small minorities, while empowerment rights affect almost everyone in society. Because the population at large would be affected by restraining empowerment rights, disagreement about restricting these rights is more likely. Furthermore, a violation of physical integrity rights can be justified by the potential of obtaining information about terrorist attacks through that process. The restriction of empowerment rights, in contrast, is not an adequate tool for this purpose.

What policy conclusions arise from these findings? Clearly, if human rights restrictions really increase security, people might be willing to trade some of their rights for greater security. However, whether and to what extent human rights violations actually increase security is not at all obvious. According to Frey and Luechinger (2003), restricting human rights in reaction to terrorist attacks may reduce the individual opportunity costs of potential terrorists and, thus, increase terrorism. They argue that there may be strategies superior to deterrence in fighting terrorism. The same could hold true for the restriction of human rights as a response to terrorism.

Appendix

Table A1
Definitions and Data Sources

Variable	Description	Source
Number of terrorist events	Number of transnational terrorist events in a particular country and year	MIPT Terrorism Knowledge Base
Number of suicide attacks	Number of transnational suicide attacks in a particular country and year	MIPT Terrorism Knowledge Base
Number of persons killed	Number of people killed by transnational terrorism in a particular country and year	MIPT Terrorism Knowledge Base
Terrorist events	Dummy equal to one if at least one transnational terrorist event occurred in a particular country and year and zero otherwise	MIPT Terrorism Knowledge Base
Number of severe terrorist events	Number of transnational terrorist events in which at least one person was killed or injured in a particular country and year	MIPT Terrorism Knowledge Base
Physical integrity index	Additive of torture, extrajudicial killings, political imprisonments, and disappearance; ranges from 0 to 8	Cingranelli and Richards (2010)
Imprisonment	Incarceration of individuals because of their speech, opposition to government, religion, ethnicity, or race (not including people imprisoned because of violent acts)	Cingranelli and Richards (2010)
Torture	Cruel, inhuman, or degrading (mental or physical) treatment by government officials or by government instigation	Cingranelli and Richards (2010)
Disappearances	Unresolved missing persons cases in which political reasons appear to be at issue; if the body is found, these cases refer to killings, so these two categories are closely related human rights violations	Cingranelli and Richards (2010)
Kills	Killings without due process of law by government officials or by government instigation (including cases of deliberate, illegal, or excessive use of lethal force by official means but excluding combat deaths)	Cingranelli and Richards (2010)
Empowerment index	Additive of freedom of movement, freedom of speech, workers' rights, political participation, and freedom of religion indicators; ranges from 0 to 10	Cingranelli and Richards (2010)
Freedom of movement	Restrictions on domestic and foreign travel	Cingranelli and Richards (2010)
Freedom of speech	Restrictions on freedom of speech and freedom of press, including ownership of media outlets	Cingranelli and Richards (2010)

Table A1 (Continued)

Variable	Description	Source
Freedom of religion	Restrictions on religious practices	Cingranelli and Richards (2010)
Political participation	Measures how limited the political participation rights are	Cingranelli and Richards (2010)
Workers' rights	Restrictions or controls on union activities	Cingranelli and Richards (2010)
Democracy	Measures the general openness of political institutions on a scale from -10 (low) to 10 (high)	Marshall and Jaggers (2000)
Population (log)	Natural logarithm of a country's population	World Bank (2006)
Income	Dummies for income: low (\$825 or less), lower middle (\$826-\$3,255), upper middle (\$3,256-\$10,065), high (OECD; \$10,066 or more)	World Bank (2006)
Legal origin	Dummies for British, French, socialist, and German legal origin	Easterly and Sewadeh (2001)

Note. The Memorial Institute for the Prevention of Terrorism (MIPT) Terrorism Knowledge Base ceased operation March 31, 2008. The relevant data are available from the authors. OECD = Organisation for Economic Co-operation and Development.

Table A2
Descriptive Statistics

Variable	Mean	Min	Max	SD
Number of terrorist events	1.29	.00	247	5.62
Number of suicide attacks	.02	.00	45	.64
Number of people killed	1.90	.00	2,982	37.68
Terrorist events ^a	.24	.00	1.00	.43
Number of severe terrorist events	.44	.00	136	2.56
Physical integrity index	4.86	.00	8.00	2.37
Imprisonment	1.09	.00	2.00	.85
Torture	.80	.00	2.00	.75
Disappearances	1.65	.00	2.00	.65
Kills	1.32	.00	2.00	.78
Empowerment index	5.88	.00	10.00	3.28
Freedom of movement	1.41	.00	2.00	.91
Freedom of speech	1.04	.00	2.00	.74
Freedom of religion	1.34	.00	2.00	.94
Political participation	1.10	.00	2.00	.85
Democracy, index	.22	-10.00	10.00	7.58
Population size (log)	15.15	9.89	20.98	2.10
Lower middle income ^a	.26	.00	1.00	.44
Upper middle income ^a	.19	.00	1.00	.39
High-income OECD ^a	.12	.00	1.00	.32
High income ^a	.15	.00	1.00	.36
Legal origin British ^a	.34	.00	1.00	.47
Legal origin French ^a	.48	.00	1.00	.50
Legal origin socialist ^a	.10	.00	1.00	.30
Legal origin German ^a	.04	.00	1.00	.20

Note. OECD = Organisation for Economic Co-operation and Development.

^aDummy.

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