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Terror Per Capita

Michael Jetter
David Stadelmann

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Abstract

Usually, studies analyzing terrorism focus on the total number of casualties or attacks in a given county. However, per capita rates of terrorism are more likely to matter for individual welfare. Analyzing 214 countries from 1970 - 2014, we show that three stylized findings are overturned in terms of sign, magnitude, and statistical significance when investigating terror per capita. Democracy, previously associated with more casualties, emerges as a marginally negative predictor of terror per capita. A larger share of Muslims in society is, if anything, associated with less terrorism. Similar conclusions apply to language fractionalization.

JEL-Codes: D740, O570, Z120.

Keywords: terrorism, terror per capita, democracy, Islam, language fractionalization.

*Michael Jetter**
University of Western Australia
35 Stirling Highway
Australia – 6009 Crawley
mjetter7@gmail.com

David Stadelmann
University of Bayreuth
Universitätsstraße 30
Germany – 95447 Bayreuth
david.stadelmann@uni-bayreuth.de

*corresponding author

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1 Introduction

In virtually all analyses, we are ultimately interested in individual utility, often approximated by per capita units or rates.[1] For example, we measure GDP *per capita*, unemployment *rates*, debt *per capita*, and crime *rates*. We correctly tend to consider per capita units closer to measuring individual utility than total units.[2] Interestingly, when it comes to terrorism, the majority of research traditionally measures absolute values, either counting total attacks or total casualties. Thus, our knowledge about what drives terrorism is derived from what can be labeled *total terror* – the absolute number of casualties from terrorism or the absolute number of terrorist attacks.

We show that three stylized findings from the literature change substantially once we focus on terror *per capita*, instead of *total* terror. Democracy, the share of population that identifies as Muslim, and language fractionalization have continuously been identified as correlates of terrorism. Analyzing annual data for 214 countries from 1970 – 2014, we find meaningful and relevant changes in terms of sign, magnitude, as well as statistical significance for all three suggested correlates of terrorism.

A stream of literature discusses the positive link between democracy and terrorism. Somewhat counter-intuitively, democratic nations have been found be vulnerable to terrorism (see Chenoweth, 2013, for a recent summary). We show that once we consider terror *per capita* this correlation disappears.[3] Intuitively, terrorism in large democracies, such as India, have likely been driving the corresponding findings when focusing on total terror, rather than terror per capita.[4] Regarding religion, a common belief relates to the idea that terrorism is more prevalent in Muslim countries.[5] Indeed, when estimating total

[1] A fundamental concept of economics is, indeed, *methodological individualism*.

[2] *Total* GDP is not considered a relevant indicator for individual utility and even in casual conversations large China is not considered richer than tiny Liechtenstein.

[3] Nota bene, when analyzing *total* terror the literature typically controls for population size. But this is, of course, not the same as analyzing terror *per capita*.

[4] India ranks as the 82^{nd} country worldwide in terms of terror *per capita*, but fourth in *total* terror.

[5] For example, consider recent press articles by Withnall (2015) or Farivar (2016), in addition to Gabriel (2002), among many others.

terror, this notion receives strong support. But, here again, as soon as we analyze terror per capita, the result changes entirely. In fact, if anything, a larger share of Muslims in a given population is associated with *less* terrorism. Our third factor of interest considers language fractionalization, a parameter that has been identified as a positive correlate of terrorism (e.g., see Abadie, 2006). After confirming this result for *total* terror, we then move to estimating terror *per capita* and find no relationship.

Overall, our analysis provides two contributions to existing research: First, once terrorism is put in per capita terms, several standard findings in the literature on terrorism change. Clearly, it makes a difference whether we observe 1,000 casualties from terrorism in a given year in India (population of approximately 1,250,000,000) or in Djibouti (population of approximately 880,000). Comparing absolute numbers between countries of vastly different sizes can become meaningless, depending on the research question. This matters not only for academic research, but also for public perception and policymakers.[6]

Second, our findings add to the growing literature on the importance of statistical specifications in cross-country research. In recent years, a number of presumably standard results have been overturned by using marginally different specifications or data sources. For example, the use of different versions of the Penn World Tables has lead to a number of contradicting conclusions regarding economic growth or government size.[7] Our paper shows the importance of measuring the dependent variable in a suitable way.

The paper proceeds with the description of our data and methodology. Section 3 presents our main findings, along with robustness checks. Section 4 concludes.

[6]See Schüller (2016) for the effect of the terror on attitudes towards immigration.

[7]Related to economic growth, we refer to Johnson et al. (2013). Breton (2012) provides a general discussion over different Penn World Table versions, whereas Jetter and Parmeter (2015) focus on trade openness and government size.

2 Data and Methodology

2.1 Data Sources

Our analysis draws on standard data sources in the cross-country literature. For annual information about the number of casualties and terrorist attacks between 1970 – 2014, we access the Global Terrorism Database (GTD from hereon, see LaFree and Dugan, 2007).[8] Our main analysis will distinguish between the absolute number of casualties from terrorism in country i and year t, labeled *total terror*, and the rate of casualties from terrorism per million citizens, labeled *terror per capita*. To convert absolute numbers to per capita figures, we use total population size from the World Development Indicators (World Bank Group, 2012) and derive casualties from terrorism by million citizens.

For information on democracy, we use the common *polity*2 variable from the Polity IV dataset, where values range from -10 (total autocracy) to $+10$ (full democracy). We re-scale this measure to ranging from zero to 20 to facilitate interpretation.[9] For the share of Muslims in a society, we access data from Teorell et al. (2011), initially introduced by La Porta et al. (1999). Information is only available once for every country and we project that value for all years, as is common in the literature. Similarly, Alesina et al. (2003) present one value per country for the fractionalization of ethnicities, religion, and language. We include language fractionalization as well as ethnic fractionalization.

Summary statistics for all these variables and other standard controls with the corresponding sources are referred to Table A1 in the appendix.

[8] As is well known in the literature, the GTD does not feature data for 1993 and all our estimations exclude that year.

[9] For robustness checks, we use a pure democracy index and executive constraints, all of which are closely related concepts that are sometimes used interchangeably in the associated literature.

2.2 Empirical Methodology

Our empirical strategy follows a conventional regression approach. As is common in the literature, we begin by analyzing

$$\left(Total\ terror\right)_{i,t} = \alpha_0 + \alpha_1 Democracy_{i,t} + \alpha_2 Ln(GDP/capita)_{i,t} + \alpha_3 \boldsymbol{X_{i,t}} + \delta_{i,t}, \quad (1)$$

focusing on the degree of democratization in country i and year t (measured with the Polity IV index, variable *polity*2). The dependent variable ranges from zero – a country that has not experienced casualties from terrorism in a given year – to 13,076 (Iraq in 2014). Overall, approximately 75 percent of our country-year observations have not experienced casualties from terrorism, but all our results are robust when focusing on nonzero observations exclusively. Similarly, all findings are consistent when analyzing terror *attacks* instead of casualties (see section 3.2 for both robustness checks).[10]

Our analysis begins with a univariate estimation, before subsequently controlling for GDP per capita – a variable that is likely the most persistent correlate of terrorism – and a comprehensive set of relevant covariates, represented by the vector $X_{i,t}$. In particular, we follow the literature by including a measure for education (primary school enrollment rates), ethnic fractionalization, population size, trade openness (as a percentage of GDP), continental fixed effects, a country's land area in km^2, latitude, and year fixed effects. All of these characteristics have been found to be meaningful correlates of terrorism.[11]

[10] Results are also robust when we account for the count variable nature of *total terror*

[11] For the link between income levels and terrorism, see Krueger and Malečková (2003), Blomberg et al. (2004), Testas (2004), Abadie (2006), Krueger and Laitin (2008), Enders and Hoover (2012), and Enders et al. (2016). For education, we refer to Krueger and Malečková (2003), Testas (2004), and Berrebi (2007). We use primary enrolment rates as our proxy for education, given superior data availability relative to alternative measures (e.g., from Barro and Lee, 2013). Abadie (2006) includes ethnic and linguistic fractionalization, as well as country area into his estimation of terrorism. Dreher and Gassebner (2008) and Krueger and Laitin (2008) include population size. Blomberg et al. (2004) and Burgoon (2006) control for continental fixed effects. Krueger and Laitin (2008) incorporate the share of Muslims in society. See Li and Schaub (2004) and Burgoon (2006) for including trade openness.

After estimating total terror, we then turn to analyzing terror per capita via

$$\left(Terror\ per\ capita\right)_{i,t} = \beta_0 + \beta_1 Democracy_{i,t} + \beta_2 Ln(GDP/capita)_{i,t} + \beta_3 \boldsymbol{X_{i,t}} + \epsilon_{i,t}. \quad (2)$$

After focusing on democracy, we then turn to the share of Muslims and language fractionalization, following the same sequence of regressions.

2.3 Descriptive Statistics

It is not surprising but relevant to note that total terror values differ substantially from terror per capita. Table 1 lists the top five countries when considering total terror in an average year between 1970 and 2014, as well as terror per capita. This basic overview illustrates the fundamental discrepancy between both variables, as only two countries appear in both lists (Iraq and Sri Lanka). Although Iraqis witness over 3 casualties on an average day (1,131 divided by 365), on a per capita basis Nicaraguans are almost twice as likely to fall victim to terrorism. Overall, the correlation between total terror and terror per capita (annual mean of two per million citizens, see Table A1) reaches a value of 0.58. Considering terror *attacks*, that correlation becomes weaker with a value of 0.47.

It may serve to put terror *per capita* in perspective to other forms of violent deaths: The world's highest homicide rate stands at 746 per million inhabitants for Honduras in 2014 (see UNODC, 2016). Worldwide, 24 countries exhibit a homicide rate in 2014 that surpasses the terror per capita rate as reported in Nicaragua, the most lethal country in terms of terror per capita. Another figure to compare these data relates to child mortality. According to the World Bank Group (2012), a child in Nicaragua has a 2.2 percent likelihood of dying before the age of five, which is more than 337 (!) times higher than the chance of dying at the hands of a terrorist in the same country. Table 1 also suggests that populous countries like India and Pakistan, although ranking highly on the list of total terror, are much less affected in per capita terms. India ranks as the 82^{nd} country in terms of terror per capita and Pakistan ranks 27^{th}.

Table 1: Annual averages for the years 1970 – 2014 for the 5 most affected countries. Total terror constitutes the absolute number of casualties from terrorism, whereas terror per capita is defined as casualties divided by population size (in million).

Ranked by total terror				Ranked by terror per capita			
Rank	Country	Total terror	Terror/cap	Rank	Country	Total terror	Terror/cap
1	Iraq	1,131	36.9	1	Nicaragua	241	66.7
2	Afghanistan	473	16.7	2	El Salvador	274	57.2
3	Pakistan	453	2.8	3	Iraq	1,131	36.9
4	India	408	0.4	4	Lebanon	88	31.1
5	Sri Lanka	353	20.1	5	Sri Lanka	353	20.1

To provide a full picture of the global distribution of terrorism, Figure 1 maps country averages for the years 1970 – 2014 for total terror (top map) and terror per capita (bottom). Countries in red represent those affected most in either map. Apparently, more populated countries tend to rank highly when analyzing total terror. But especially East and Southeast Asian countries appear much less terror-prone once we switch to terror per capita. These descriptive statistics are suggestive of a significant difference between exploring total terror and terror per capita. To explore the possibility that correlates of terrorism are systematically biased toward larger countries when analyzing total terror instead of terror per capita, we proceed to the proposed econometric analysis.

3 Empirical Findings

3.1 Main Results

Table 2 displays three panels, where we focus on democracy, the share of Muslims, and language fractionalization. Columns (1) to (3) displays results from estimating total terror, whereas columns (4) to (6) are dedicated to terror per capita. Overall, the findings show a large and systematic discrepancy between the determinants of total terror and terror per capita.

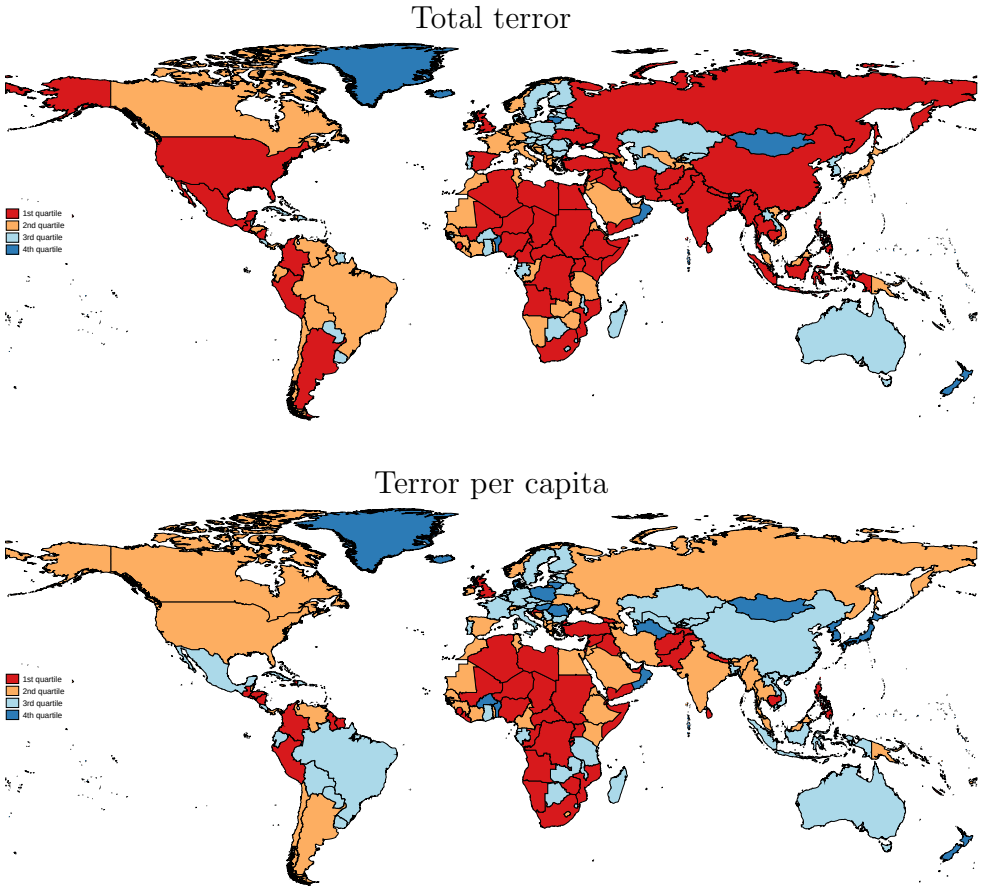

Figure 1: Total terror (top) and terror per capita (bottom) of all countries, showing annual averages from 1970 – 2014. Countries in red (first quartile) represent nations with the most terrorism, whereas countries in blue (fourth quartile) are least affected.

Table 2: Results from OLS regressions, estimating total terror (columns 1 – 3) versus estimating terror per capita (columns 4 – 6).

Dependent variable:	Total terror			Terror per capita		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Considering democracy						
Democracy	1.123	2.473	2.388	-0.048	-0.009	-0.100
	(0.266)	(0.348)	(0.566)	(0.025)	(0.032)	(0.076)
Ln(GDP/capita)		-14.440	-6.000		-0.614	0.069
		(1.737)	(2.644)		(0.107)	(0.141)
Control variables[a]			yes			yes
N	6,479	5,825	3,967	6,479	5,825	3,967
Adjusted R^2	0.001	0.005	0.063	0.000	0.001	0.014
Panel B: Considering % Muslim						
% Muslim	0.843	0.885	0.402	0.016	0.006	-0.021
	(0.192)	(0.238)	(0.154)	(0.008)	(0.010)	(0.012)
Ln(GDP/capita)		-9.437	-6.000		-0.768	0.069
		(1.489)	(2.644)		(0.140)	(0.141)
Control variables[a]			yes			yes
N	6,510	5,719	3,967	6,510	5,719	3,967
Adjusted R^2	0.009	0.012	0.063	0.000	0.002	0.014
Panel C: Considering language fractionalization						
Language fractionalization	33.090	20.051	52.454	-1.191	-2.568	-2.773
	(8.618)	(10.251)	(15.336)	(0.845)	(1.334)	(2.002)
Ln(GDP/capita)		-10.559	-6.000		-0.825	0.069
		(1.362)	(2.644)		(0.179)	(0.141)
Control variables[a]			yes			yes
N	8,358	6,750	3,967	8,358	6,750	3,967
Adjusted R^2	0.001	0.004	0.063	0.000	0.003	0.014

Notes: White robust standard errors are displayed in parentheses. [a]Includes democracy (Polity IV index), primary school enrolment rates (% gross), % Muslims, language fractionalization rate, ethnic fractionalization rate, Ln(population size), trade openness (% of GDP), continental fixed effects, land area in km^2, latitude, and year fixed effects (if not included and displayed in respective column already).

3.1.1 Democracy

Beginning with a simple univariate framework and democracy in *Panel A*, we observe that more democratic countries experience significantly more casualties from terrorism, i.e. higher total terror. This result is consistent with the bulk of the literature and, on average, a one-point increase on the 20-point *polity*2 scale is associated with 1.1 additional terror victims per year. Once we control for GDP per capita in column (2), that number more than doubles. Richer countries are suggested to experience less terrorism – another result in line with previous research (see Chenoweth, 2013 for a summary). These findings remain robust and statistically significant on the one percent level when we control for the remaining covariates in column (3).

Once we change the dependent variable to terror per capita in Column (4), the opposite result emerges: Now, democracy is associated, if anything, with *less* terrorism and the result is statistically significant on the ten percent level. What does this mean? It appears as if those democracies that experience more terrorism are also the most populous nations. India serves here as a good example: With numerous terror casualties, a democracy score varying between 17 and 19, but a relatively intermediate range of GDP per capita, the country fits exactly into the results from columns (1) to (3). The fact that India is the second most populous country on earth then makes the corresponding terrorism numbers far less daunting. Thus, the link between democracy and terrorism may not be so worrisome after all from the view of an individual living in a large democracy like India.

Columns (5) and (6) add control variables and the coefficient of interest turns statistically insignificant on conventional levels, but remains negative. In the most complete estimation, the quantitative interpretation actually surpasses that from the univariate estimation (-0.100 versus -0.048), but the effect remains statistically indistinguishable from zero. Thus, it appears likely that no strong link exists between democracy and terror on a per capita basis. This provides an explanation for the (potentially spurious) finding in the literature which suggests that democracies are more vulnerable to terrorism.

Another interesting result from *Panel A* relates to GDP per capita. Whereas richer countries are firmly related to less total terror (column 3), that link disappears when considering terror per capita (column 6). The fact that the statistical precision diminishes after all remaining covariates are included suggests that one or several of the other factors (education, share of Muslims, language or ethnic fractionalization, population size, trade openness, continental fixed effects, land area, latitude, or year fixed effects) act as omitted variables. In alternative estimations, we find that, for example, the inclusion of an alternative educational variables may render the coefficient of GDP per capita statistically insignificant. The results are generally dependent on which control variables are included, introducing additional doubt into the systematic link between income levels and terrorism. Here as well, analyzing terror per capita leads to fundamentally different conclusions than considering total terror.

3.1.2 Share of Muslims

Panel B of Table 2 focuses on the share of Muslims in society and whether there is a systematic link to terrorism. Similar to the democracy results, columns (1) to (3) imply a strong positive link, meaning that a larger share of Muslims is associated with more terrorism in a given country. In terms of magnitude, a one standard deviation increase in the share of Muslims (35.8 percentage points) relates to approximately 14.4 additional casualties from terrorism in an average year (column 3).

Moving to terror per capita, this positive link is initially confirmed in the univariate framework, but we can already see much less statistical precision. Once GDP per capita is included, that link disappears and, quite surprisingly, turns *negative* and statistically significant once we incorporate the remaining controls. Translating the coefficient of -0.021 to a numerical example implies that a one standard deviation increase in the share of Muslims is associated with a decrease of 0.75 casualties per million citizens in a given year. Although this number does not appear large, the sheer fact that the link turns negative is novel. Intuitively, this indicates that terror-prone countries with a significant

Muslim populace are also larger countries in terms of population size. Especially Iraq, Afghanistan, and Pakistan come to mind here when we recall Table 1.

Another descriptive way of illustrating whether terrorism worldwide is indeed more likely to be related to (in some way or another) the Muslim religious affiliation is to consider the universe of all terrorist attacks since 1970. Following Kis-Katos et al. (2014), who categorize each attack listed in the GTD according to the religious identity of the perpetrators, 11,590 of 113,239 attacks are conducted by a group that identifies as Muslim. This amounts to 10.23 percent of all attacks. However, approximately 23 percent of the world population identifies as Muslim (see Lipka, 2016) – a share that is more than twice as large as the share of respective terrorist attacks. These purely descriptive numbers are suggestive that Muslims, per se, are not more likely to be associated with more terrorism than non-Muslims.

3.1.3 Language Fractionalization

Panel C of Table 2 is dedicated to language fractionalization. Previous results have indicated that a stronger degree of fractionalization can be associated with more social unrest and specifically terrorism (e.g., see Abadie, 2006). This notion finds robust support in columns (1) to (3), where we focus on total terror. But, here again, once we move to terror per capita, the implications change, as the coefficient turns negative and even marginally statistically significant in column (5). At the very least, these specifications are not supportive of a positive association and it appears as if countries with a higher fractionalization are, if anything, less prone to terrorism than other countries.

3.1.4 Summarizing Differences Between Total Terror and Terror Per Capita

Figure 2 visualizes the most complete estimations from columns (3) and (6) of Table 2, respectively, for each variable of interest. We display results using standardized coefficients to facilitate comparability across sub-figures. In all of these, we observe a firm switch in sign from positive to negative, i.e. the associations implied in the literature change when

analyzing terror per capita instead of total terror for the correlates democracy, the share of muslims, and language fractionalization. In all three sub-figures, the corresponding ten percent confidence intervals do not even overlap, which suggests that terror per capita appears to exhibit systematically different determinants than total terror.

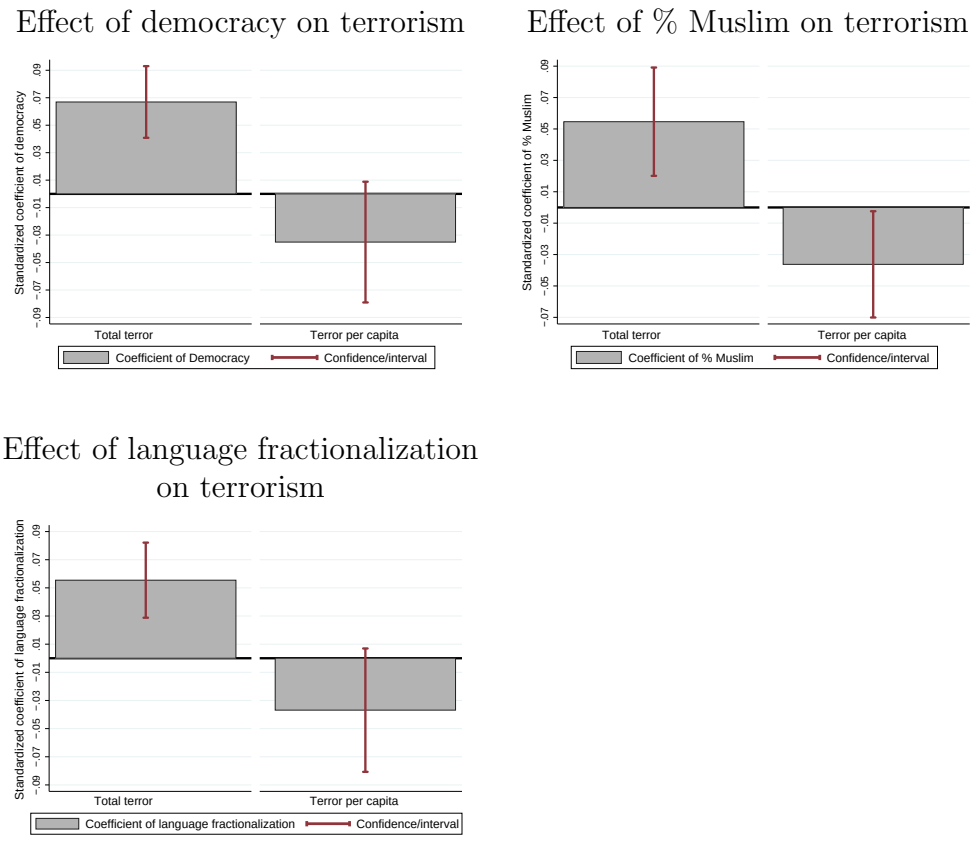

Figure 2: Standardized coefficients from regressions displayed in columns (3) and (6) of Table 2, using total terror (left on each graph) and terror per capita (right) as dependent variables. 10 percent two-sided confidence intervals displayed.

3.2 Robustness Checks

It is important to note that our initial analysis produces other discrepancies when comparing terror per capita to total terror. For example, GDP per capita, as indicated above,

emerges as a much more fragile predictor of terrorism when focusing on per capita terms.[12] For democracy, the share of Muslims, and language fractionalization, relevant and systematic differences emerge in the most consistent way throughout alternative estimations and robustness checks.

Table 3 shows results from several robustness checks, where we follow the most complete estimation from column (6) of Table 2 as our benchmark regression. In this case, columns (1) through (4) estimate total terror and columns (5) through (8) follow the same sequence of regressions to predict terror per capita.

The corresponding estimations first address the distinction between domestic and international terrorism in columns (1) and (5) since the underlying dynamics of transnational terrorism are likely different from those of a domestic conflict situation (e.g., see Enders et al., 2011). Columns (2) and (6) exclude all country-year observations in which nobody died from terrorism, in order to ensure that our findings are not driven by those countries that have remained largely free of terrorism. Columns (3) and (7) switch the dependent variable from the number of casualties to the number of attacks, following a number of studies (e.g., see Blomberg et al., 2004, Dreher and Gassebner, 2008, or Gassebner and Luechinger, 2011). Finally, columns (4) and (8) acknowledge a potential nonlinearity between income levels and terrorism, as previously highlighted by Enders and Hoover (2012) and Enders et al. (2016). In all estimations, our three variables of interest emerge as positive and statistically significant predictors of total terror. However, they are, if anything, *negatively* associated with terror per capita.

Further, related to the measurement of our main variables of interest, little discussion exists about which data to use regarding the share of Muslims in society and language fractionalization. However, it is not always clear which institutional variable to employ if one

[12]The role of education also becomes less clear (coefficients not specifically reported): Higher primary school enrollment indicates more terrorism in absolute terms, but *less* terrorism on a per capita basis. These results are, however, fragile when including different covariates or other measures of education. Considering, for example, secondary school enrolment rates (from World Bank Group, 2012) and schooling measures (from Barro and Lee, 2013), no clear trend emerged and results vary along the lines of dependent variable (total terror or terror per capita) and the exact data source used.

Table 3: Displaying results from various robustness checks, estimating total terror (columns 1 – 4) versus estimating terror per capita (columns 5 – 8).

Dependent variable:	Total terror				Terror per capita			
	(1) Only Domestic Terrorism	(2) At Least 1 Death	(3) Using Terror Attacks	(4) Adding (GDP/capita)^2	(5) Only Domestic Terrorism	(6) At Least 1 Death	(7) Using Terror Attacks	(8) Adding (GDP/capita)^2
Democracy	2.189	3.834	1.499	2.579	-0.115	-0.546	0.013	-0.092
	(0.557)	(1.583)	(0.238)	(0.567)	(0.076)	(0.264)	(0.014)	(0.075)
% Muslim	0.410	0.801	0.203	0.393	-0.019	-0.083	-0.000	-0.019
	(0.153)	(0.419)	(0.065)	(0.151)	(0.012)	(0.040)	(0.002)	(0.012)
Language fractionalization	47.364	89.137	25.308	49.858	-3.118	-8.649	0.528	-2.941
	(15.124)	(41.089)	(6.836)	(15.440)	(1.998)	(5.431)	(0.358)	(2.041)
Ln(GDP/capita)	-5.950	-18.271	0.081		-0.029	0.474	0.159	
	(2.578)	(8.564)	(1.253)		(0.135)	(0.591)	(0.045)	
GDP/capita				-29.578				-0.466
				(5.508)				(0.286)
(GDP/capita)^2				5.071				0.148
				(0.715)				(0.057)
Control variables[a]	yes	yes	yes	yes	yes	yes	yes	yes
N	3,967	1,371	3,967	3,967	3,967	1,371	3,967	3,967
Adjusted R^2	0.060	0.061	0.113	0.065	0.014	0.041	0.081	0.014

Notes: White robust standard errors are displayed in parentheses. [a]Includes primary school enrolment rates (% gross), ethnic fractionalization rate, Ln(population size), trade openness (% of GDP), continental fixed effects, land area in km^2, latitude, and year fixed effects.

wants to capture democratic institutions (see Chenoweth, 2013, for instance). Moreover, democracy as an institutional element may be considered a choice variable, especially in comparison to the share of Muslims and language fractionalization. To analyze the sensitivity of our results with respect to different indicators of democracy we re-estimate our main regressions when using *executive constraints* and the *pure democracy* indicator from the Polity IV index, with the results displayed in Table 4. The corresponding estimates confirm our benchmark findings: Democracy is a positive predictor of total terror, but a marginally *negative* predictor of terror per capita. Thus, democracies may not be more vulnerable to terrorism after all, once we put the numbers in perspective.

We ran numerous additional robustness tests. In particular, we looked at different subsamples, time periods, a reduction of covariates and different educational measures. Analyzing total terror as the dependent variable yields systematically different results in comparison to analyzing terror per capita as the dependent variable. We are fully aware that some of the results presented may be affected by endogeneity concerns, as is generally the case for the literature on terrorism. Our aim is not to highlight any causal relationship. Instead, we intend to raise awareness that a sensible change in the dependent variable to a better proxy for the relevant link between individual welfare and terrorism fully overturns several established associations in the literature.

4 Conclusion

Analyzing terror *per capita* leads to fundamentally different conclusions than analyzing the absolute number of casualties from terrorism, i.e., *total* terror. We focus on three variables that are systematically discussed as drivers of terrorism: Democracy, the share of Muslims in society, and a country's fractionalization along the lines of language.

For all three variables, we first derive a positive relationship with total terror, which is consistent with the bulk of the existing literature. However, for all three variables, we also uncover a *negative* association with terror per capita. This discrepancy is particu-

Table 4: Displaying results from robustness checks with alternative measures for democracy, estimating total terror (columns 1 – 3) versus estimating terror per capita (columns 4 – 6).

Dependent variable:	Total terror		Terror per capita	
	(1)	(2)	(3)	(4)
Executive constraints	7.362		-0.387	
	(1.840)		(0.261)	
Pure Democracy		3.367		-0.384
		(1.162)		(0.201)
Ln(GDP/capita)	-5.654	-6.079	0.121	0.314
	(2.637)	(2.769)	(0.135)	(0.163)
% Muslim	0.407	0.398	-0.021	-0.026
	(0.158)	(0.159)	(0.013)	(0.014)
Language fractionalization	55.680	55.340	-2.535	-2.111
	(15.601)	(15.507)	(2.034)	(1.889)
Control variables[a]	yes	yes	yes	yes
N	3,893	3,893	3,893	3,893
Adjusted R^2	0.063	0.061	0.013	0.015

Notes: White robust standard errors are displayed in parentheses. [a]Includes primary school enrolment rates (% gross), ethnic fractionalization rate, Ln(population size), trade openness (% of GDP), continental fixed effects, land area in km^2, latitude, and year fixed effects.

larly striking in the case of democracy, where a longstanding debate has emerged that investigates why democracies may be more prone to terrorism. Our results show that this stylized fact is simply not true once we measure terror per capita, thereby acknowledging large differences in population size across countries.[13] Arguably, 100 victims from terrorism in the Seychelles (population size in 2014: 91,526) are likely having a much bigger impact on society and individual welfare than 100 victims in India (population size: 1,252,000,000). Exploring drivers of terror per capita, thus, yields entirely different policy conclusions than when looking at the absolute number of terror casualties.

Our results are also meaningful for the continuing debate about the link between Islam and terrorism. We indeed observe a positive and statistically association between the share of Muslims and total terror; however, this link disappears and even turns marginally *negative* when considering terror per capita. Even though our cross-country panel study is not suited to analyze deeper dynamics, this result refutes the idea that individuals in Muslim countries are generally more prone to terrorism as implied by the existing literature and policy debates.

Overall, our results suggest applying far more caution when drawing conclusions from the existing cross-country research on terrorism determinants. Just as with GDP, crime, and a number of quantifiable parameters, we are usually interested in per capita figures and rates, rather than absolute numbers. For the future of research related to terrorism, we suggest doing the same. We highlight that analyzing terror *per capita* may offer a new field of policy-relevant research. Policy implications are also likely to differ systematically when studying terror per capita.

[13] As mentioned before, simply controlling for population size as an additional variable is not the same as analyzing terror *per capita*.

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Appendix Tables

Table A1: Summary statistics for all variables employed.

Variable	Mean	(Std. Dev.)	N	Source[a]	Description
Total terror	34.89	(278.61)	8,358	GTD	# of casualties from terror attacks
Terror per capita	2.02	(19.94)	8,358	GTD & WDI	# of casualties from terror attacks divided by population size (in millions)
Democracy	11.22	(7.42)	6,232	Polity IV	Variable *polity*2, ranging from -10 (autocracy) to +10 (democracy), rescaled to 0 – 20
% Muslim	23.14	(35.92)	6,158	QoG	Percentage of population identifying as Muslim
Language fractionalization	0.39	(0.28)	8,358	Alesina et al.	Higher values indicate more fractionalization; see equation (1) from Alesina et al.
GDP/capita	0.98	(1.59)	6,750	WDI	GDP per capita (constant 2005 US$)
Population size	28.30	(111.01)	8,358	WDI	Total population size in million
Ethnic fractionalization	0.44	(0.26)	7,786	Alesina et al.	Higher values indicate more fractionalization; see equation (1) from Alesina et al.
Land area in km^2	6.93	(18.68)	8,216	WDI	Land area (sq. km)
Education (% primary enrolment)	96.40	(23.61)	6,026	WDI	Gross enrolment ratio primary school, primary, both sexes (%)
Latitude	0.26	(0.18)	6,202	QoG	Latitude
Trade	81.73	(52.24)	6,366	WDI	Trade (% of GDP)
Total terror attacks	16.02	(97.33)	8,358	GTD	# of terror attacks
Terror attacks per capita	0.94	(4.79)	8,358	GTD	# of terror attacks divided by population size (in millions)
Executive constraints	4.28	(2.32)	6,044	Democracy	Executive constraints (decision rules), increasing from 1 to 7
Pure democracy	4.45	(4.18)	6,044	Democracy	Institutionalized democracy, increasing from 0 to 10

Notes: GTD = Global Terrorism Database (LaFree and Dugan, 2007); WDI = World Development Indicators (World Bank Group, 2012); Alesina et al. = Alesina et al. (2003); Democracy = Polity IV project (Marshall and Jaggers, 2002); QoG = Quality of Government Dataset (Teorell et al., 2011).