

Jetter, Michael

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Michael Jetter

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Michael Jetter

*Universidad EAFIT
and IZA*

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IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
E-mail: iza@iza.org

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ABSTRACT

Terrorism and the Media^{*}

This paper systematically analyzes media attention devoted to terrorist attacks worldwide between 1998 and 2012. Several aspects are related to predicting media attention. First, suicide missions receive significantly more coverage, which could explain their increased popularity among terrorist groups. This result is further supported by Oaxaca-Blinder decompositions, suggesting that it is not the particular characteristics of suicide attacks (e.g., more casualties) that are driving heightened media attention. Second, less attention is devoted to attacks in countries located further away from the US. Third, acts of terror in countries governed by leftist administrations draw more coverage. However, this finding is not confirmed for suicide attacks conducted in countries ruled by leftist administrations. Fourth, the more a country trades with the US, the more media coverage an attack in that country receives. Finally, media attention of any terror attack is both predictive of the likelihood of another strike in the affected country within seven days' time and of a reduced interval until the next attack.

NON-TECHNICAL SUMMARY

Media attention devoted to terrorist attacks varies substantially across global conflict zones. This paper systematically analyzes what determines media coverage of terrorist attacks. One of the most important findings relates to suicide attacks: these particularly devastating forms of terrorism receive notably more coverage than non-suicide missions. Given that terrorist organizations are seeking media attention, this finding could explain the exponential rise in suicide missions as of late. In fact, more media attention predicts future attacks, everything else equal. Further, we devote more attention to attacks in countries that are ruled by leftist governments.

JEL Classification: F52, L82, N40, Z12

Keywords: terrorism, media attention, suicide attacks, political orientation

Corresponding author:

Michael Jetter
Universidad EAFIT
Carrera 49 7 Sur-50
Avenida Las Vegas
Medellín
Colombia
E-mail: mjetter@eafit.edu.co

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1 Introduction

Over the last 15 years, the world has experienced a terrifying, exponential increase in the number of terrorist attacks. For 1998, the Global Terrorism Database (GTD, following [LaFree and Dugan, 2007](#)) lists 1,395 attacks – a figure that has since consistently increased, reaching an all-time high of 8,441 in the year 2012. The total number of casualties from terror attacks in those years has nearly tripled from 3,387 to 15,396. Beyond the devastating human consequences, terrorism can hamper growth and alter investment decisions, in addition to carrying negative consequences for tourism, stock prices, and foreign trade.¹ The September 11 attacks alone may have cost the United States US\$200 billion ([Mueller and Stewart, 2014](#)) and the ensuing Global War on Terror is estimated to come with a price tag of up to US\$3.3 or US\$3.7 trillion in its entirety ([Carter and Cox, 2011](#), and [Trotta, 2011](#)), corresponding to over 21 percent of annual GDP.²

Usually, terrorist attacks are carried out to draw attention to a cause, such as promoting a religious agenda (e.g., the Taliban or Al-Qaeda) or pushing for political goals (e.g., the Kurds' fight for an independent state). Catching people's attention is an important mechanism to promote the terrorists' goals. However, international media coverage of terrorist incidents varies dramatically. As an example, consider the ongoing media hype surrounding terrorist strikes by the Boko Haram organization, mostly operating in Nigeria. On the other hand, equally devastating and deadly displays of terrorism in Pakistan, Yemen, or the DR Congo, receive substantially less media attention in the Western world. Within 6 years (from 2009 to 2014), Boko Haram is estimated to have killed around 5,000 civilians (see [Ploch Blanchard, 2014](#), or [Campbell, 2014](#)). Pakistan reports 10,116 victims from terrorism between the years 2007 and 2012. Yemen and the DR Congo combine for 4,339. Adding casualties in Somalia increases that number to 6,944 (all estimates derived from the GTD database). Why do some terrorist attacks draw large international media coverage and others do not?

A common definition of terrorism states that "...[t]errorism's impact has been magnified by the...capability of the media to disseminate news of such attacks instantaneously throughout the

¹See [Blomberg et al. \(2004\)](#) or [Frey et al. \(2007\)](#) for a summary on the costs of terrorism. For political and social consequences one may consider [Gassebner et al., 2008](#), [Dreher et al., 2010](#), or [Gassebner et al., 2011](#).

²Also see [Fund \(2001\)](#) for a discussion of the costs associated with September 11 or [Ito and Lee \(2005\)](#) for an analysis of the impact on the airline industry specifically.

world.”³ Krueger and Malečková (2003) describe terrorism as ”usually intended to influence an audience” and emphasis is put on ”the intention of terrorists to cause fear and terror among a target audience rather than the harm caused to the immediate victims.” Frey and Luechinger (2003) and Frey et al. (2007) point out that terrorists are seeking publicity “in order to make their cause widely known.” Campos and Gassebner (2013) write “[a]s the aim is to raise the profile of the cause, one main objective of terrorism is to maximize media exposure so as to further the atmosphere of fear.” In short, the attention of the public is a fundamental objective and driver of terrorist activities, as the media serves as a platform to promote the terrorists’ agenda.

This paper conducts a fundamental analysis of how much media attention terror attacks receive in the US, specifically in the New York Times (NYT). What exactly do we gain from studying the media response to terrorism? First, and specific to terrorism, understanding which attacks are causing media attention, a major objective of terrorist organizations, can help us to better fight terrorism. If some aspects are related to a more intense coverage, we may be able to better understand terrorist attacks, and particularly some forms of terrorist strikes. For example, are we equally attentive to suicide attacks than non-suicide attacks, everything else equal?⁴ The answer to this question will be no and this exceptional level of attention could be an explanation for the popularity of suicide missions among terrorist organizations lately. Similarly, do we dedicate more attention to terror incidents in rich or poor countries, in democratic nations or dictatorships, and do trade relationships (general, as well as bilateral with the US) matter? As we will see, certain political and economic characteristics are indeed related to the degree of media coverage.

Second, there exists a more general interpretation of the analysis conducted in this article. Analyzing media attention devoted to terrorist attacks can provide us with insights towards our own preferences and concerns. For instance, do we care the same way about a life lost in Mexico as in Cambodia? If we interpret media attention as a proxy for the readers’ concern (or at least of the newspaper editor’s concern), then this analysis can tell us something about which

³See the Merriam Webster dictionary under <http://www.merriam-webster.com/dictionary/terrorism>.

⁴The underlying motivation of suicide attacks has been discussed in numerous articles. Seminal works in this context are Pape (2003) and Atran (2006). Crenshaw (2007) provides an excellent discussion of the topic and summary of the most pondering questions regarding suicide attacks.

countries we care about less and why.

Previous works on analyzing media attention devoted to terrorist attacks have mostly been focusing on specific conflict zones. For example, [Liebes and Kampf \(2007\)](#) analyze the extensive “TV marathons” covering an ongoing series of attacks on Israel. [Gentzkow and Shapiro \(2004\)](#) discuss the relationship between the media and the US’ image in the Muslim world. In a more general context, and closely related to the spirit of this paper, [Rohner and Frey \(2007\)](#) provide a theoretical intuition for how terrorism and the media may be interacting. Their empirical evidence suggests that terrorism Granger causes media attention and vice versa, using monthly data on how often the word “terrorism” appears in the New York Times. The following pages produce a systematic extension to that study, trying to pin down the exact media response to specific terror attacks and enriching the empirical analysis by including a variety of potential characteristics associated with media coverage of an attack. Another extension, related to the systematic analysis of terror attacks by day, lies in the sample size of over 24,500 observations, as opposed to the 87 monthly observations used by [Rohner and Frey \(2007\)](#).

To proxy media attention, I use the daily number of NYT articles mentioning the attacked country. The rationale for this choice is laid out in Section 2.1. Using the GTD database of 45,320 individual terrorist attacks in non-US countries between 1998 and 2012 provides a comprehensive sample of terrorist attacks. I then use the relative change of the number of country references from the day *before* attacks to the day *after* to proxy media attention devoted to attacks.⁵ Although this measurement of the attention dedicated to terrorist attacks can be noisy and at times confounded by other news about the country, it provides a generalized, consistent, and comparable measurement across time and countries.

The derived results provide several insights. First, suicide attacks receive significantly more media attention than non-suicide attacks, everything else equal. This could be one reason why suicide attacks have gained popularity amongst terrorist groups, confirming [Hoffman \(2003\)](#), who states that “[t]hey [suicide bombings] guarantee media coverage.” In fact, media coverage of an attack appears as a positive and statistically significant predictor of future incidents, even after including numerous control variables. It seems as if terrorists, just like any other humans,

⁵In terms of the technical methodology to assess the media response rate to exogenous shocks, [Baker and Bloom \(2013\)](#) are closest to my methodology in using the media response to natural disasters as an indicator for the unexpected nature of these disasters.

respond to incentives, which in this case translates to increased media attention.

Second, the NYT devotes *less* attention to terrorist incidents occurring further away from the US, but also to attacks in more religious, richer, smaller, and more democratic economies. Further, attacks in countries that trade more with the US receive more attention, as well as countries where natural resources play a stronger role. Finally, the political orientation of the ruling government in the attacked country matters. Specifically, the NYT reports significantly more when the attacked nation is currently run by a leftist government. Somewhat surprisingly, this finding is not confirmed for suicide missions conducted in countries ruled by leftist administration.

The paper is organized as follows. Section 2 introduces the methodology and sample data, whereas Section 3 presents the main empirical results from predicting media coverage. Section 4 focuses on the role of suicide attacks and the political orientation of the ruling national government. Section 5 attempts to predict future terror attacks. Finally, Section 6 provides a brief discussion of the findings.

2 Data And Methodology

The number of terrorist attacks has increased exponentially over the past two decades, as illustrated in Figure 1. From the 1970s until the early 1990s, we observe a clear upward trend in the number of terror attacks. From the mid 1990s until the early 2000s this trend then reverses, only to take off again from 2004 onwards. 2012, the latest available year at this moment, experienced over 8,400 terrorist attacks worldwide – an alarming record high.⁶ The right graph of Figure 1 shows a comparable trend when plotting the number of casualties and the correlation between both statistics returns a coefficient of 0.85. Section 2.7 provides details of the data.

2.1 Media Attention Of Terrorist Attacks

Given that the online search mechanism for specific websites by Google starts on January 1, 1998, and the GTD data is currently available until the end of 2012, this paper focuses on the

⁶For potential explanations for the roots and conditions under which terrorism can thrive, see Krueger and Malečková (2003), Abadie (2006), Piazza (2008), Krueger and Laitin (2008), Gassebner and Luechinger (2011), or Campos and Gassebner (2013). Nemeth et al. (2014) analyze the causes of terrorism on a sub-national level.

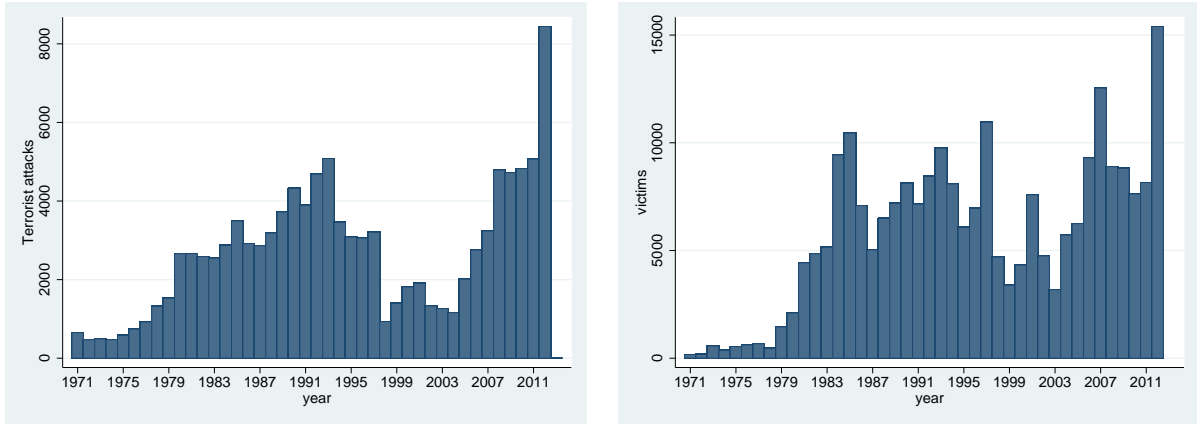


Figure 1: Total number of terrorist attacks from 1970 – 2011 (left) and the total number of casualties (right). The correlation of annual data between the number of attacks and the number of casualties is 0.85. Numbers from the Global Terrorism Database (GTD).

period from 1998 to 2012. In order to derive a proxy for the degree of attention a terrorist attack receives, I first collect the number of New York Times (NYT) articles mentioning the attacked country on the day before attacks and the day after.⁷ I then use the relative change in the number of articles from the day before to the day after as a proxy for media attention devoted specifically to the attack. In general, this methodology assumes that the frequency with which a country appears in the media proxies revealed interest of the readers or at least of the newspaper. Section 2.2 provides an in-depth discussion. The question remains then whether the news coverage of the NYT represents preferences of the actual readers or the paper’s editors. In this context, [Gentzkow and Shapiro \(2010\)](#) have shown that newspapers tend to cater to their customers, similar to other competitive markets.⁸ Similarly, [Gentzkow et al. \(2012\)](#) find no historic evidence for a significant press influence of political parties in the US, although [Chomsky and Herman \(2010\)](#) suggest otherwise in a detailed collection of anecdotal evidence.

The methodology applied here differs from the one used by [Rohner and Frey \(2007\)](#), who

⁷In fact, we built a data scraper that is able to extract this information from the Google search mechanism. Using the www.nytimes.com website as a source, the scraper is able to produce the number of hits by a certain search word for any specific date. As the search word, we used the country name in the English language. If the country can be referred to under partial names, such as Bosnia and Herzegovina, we searched for both terms separately and added the number of articles, in this case a search for Bosnia and another for Herzegovina.

⁸[Mankiw \(2014\)](#) provides a nice, non-technical summary of their findings.

measure the number of times the word “terrorism” appears over a given time period. However, it is not clear per se that the word terrorism would be used in an article mentioning the incident. For example, some incidents may only be identified as terrorist strikes days or weeks after the attack. In addition, other words could be used, such as “terrorist attack,” which would not be picked up by the search for a single word. Further, and specifically related to my methodology described above, it would be difficult to establish a reference point to the number of articles mentioning the word “terrorism.” Yet most importantly, it would be difficult to identify coverage of a particular attack in, say, Afghanistan on a given day by searching for the word “terrorism” and attributing that article specifically to the country Afghanistan. Thus, to keep a common framework that is able to best identify coverage of an attack in a particular country, I choose the number of articles mentioning a country’s name.

I choose the NYT for several reasons. First, the NYT has the highest circulation among daily newspapers in the US (1,250,000 according to [Times, 2014](#)) after the Wall Street Journal (see [Lulofs, 2013](#)). Contrary to the Wall Street Journal, however, the NYT is considered a general interest newspaper and not a business newspaper. Second, the NYT is a *national* newspaper that is much more evenly distributed all around the US than other national daily newspapers, such as the Los Angeles Times or the New York Post. In this context, [George and Waldfogel \(2006, pages 436 and 437\)](#) and [Rohner and Frey \(2007, page 138\)](#) provide a good summary of why the NYT is the most suitable candidate for a representative daily newspaper that operates on a national basis within the US. [George and Waldfogel \(2006\)](#) also point out that the NYT “targets readers with tastes for cultural and international coverage,” which proves to be important in the context of this paper, as I consider terrorist attacks carried out all over the world. [Rohner and Frey \(2007\)](#) provide a similar reasoning and their findings are closely replicated when using another internationally recognized newspaper, the Neue Zürcher Zeitung. Third, the NYT has been ranked as the world’s highest-quality newspaper by leaders in business, politics, science, and culture (see [Rohner and Frey, 2007](#), and [Merrill, 1999](#)). Similarly, the international search engine 4imn ranks the NYT as number one in their Newspaper Web Ranking ([4IMN, 2014](#)). In summary, the NYT appears to be the natural and representative choice in the context of analyzing the response of the US media to terrorist attacks.

Regarding comprehensive information on terrorist attacks, the GTD provides an excellent

database, listing the country and date of every individual attack, among other characteristics, which are discussed below. I proxy media attention devoted to the terrorist attack by the relative change of the number of articles from the day before the attack to the day after. For an attack a in country i on day t , I choose the formula

$$(NYT\ response)_{a,i,t} = \frac{(\#ofhits)_{i,t+1} - (\#ofhits)_{i,t-1}}{1 + (\#ofhits)_{i,t-1}} \quad (1)$$

to derive the relative change in media attention related to the attack from the day before ($t - 1$) to the day after ($t + 1$). For example, if the word "Albania" is mentioned four times on the day before an attack in Albania and seven times on the day after the attack, then the relative change in media attention here would be $\frac{7-4}{1+4} = 0.6$.

2.2 Alternative Measurements

There are several reasons for choosing this proxy of media attention. First, purely taking the country hits on the day after the attack, without considering the attention received on the day before, can skew the variable towards those countries that generally receive better media coverage by the NYT. Thus, we would not observe a proxy for the media impact caused by the terrorist attack exclusively, as this variable can be confounded by the general NYT media coverage of the country. Using the relative change in coverage from the day before the attacks to the day after provides a measurement relative to the common number of articles of a country. Implicitly, I assume that the day before the incident is an average day in terms of how much the NYT reports on the country. Of course, this assumption is not necessarily always correct and the measurement is bound to be noisy. However, there is no reason to expect any systematic bias, especially when introducing country fixed effects, in addition to numerous country and time specific characteristics.

Second, I do not take the basic percentage change, but rather divide the difference between the hits by $1 + (\#ofhits)_{t-1}$. The reasons here are rather practical, ensuring that countries with zero articles on the day before the attack are not discarded from the sample. Thus, the derived measurement is not an actual percentage change in news coverage, but a slightly modified version of the percentage change. However, the derived results are robust to using different estimation

techniques for media response, as displayed in Table 3. Specifically, the results are virtually unchanged when using a pure percentage change or when adding a one to the numerator as well.

Third, the validity of this measurement rests on the assumption that the NYT would mention the country name in a report about the attack. This assumption is strong and may be violated in some cases. For example, a terrorist attack in Chicago would not lead the NYT to report on an attack in the “United States,” but rather in “Chicago.” Similar reasoning applies not only to US locations, but also to major cities in Europe (e.g., the Madrid bombings in 2004 or the London bombings in 2005) or generally countries and cities that are better known amongst readers of the NYT. There are several ways to cope with that. Most importantly, I exclude attacks in the United States and the analysis incorporates country fixed effects as a robustness check.

Fourth, proxying media attention this way assumes that the attack is an isolated incident around which nothing else out of the ordinary happens. For instance, if there was an attack in Liberia on August 17, 2004, but another attack in the same country on August 19, 2004, then the day *after* the first attack coincides with the day *before* the second attack. Thus, the chosen measurement can be noisy. I cope with this problem in two ways. First, the empirical section does not consider the sample by terrorist attack, but rather by terrorist attack *day*. This means that I group terrorist attacks in the same country on the same day together. For example, Algeria experienced three isolated terrorist attacks on January 10, 1998, and all attack variables reflect the combined characteristics of these three attacks.⁹ Section 2.7 provides details. Second, all analyses include four binary variables capturing if there was another attack in the same country in the one and two day(s) before and after the attack day. All derived results are robust to only using “isolated” attack days, meaning that no other terrorist attacks in the two days before or after the considered attack day occurred in that country (see Table 3). Further, the results are robust to including variables measuring the total number of global terrorist attacks on the same day, the day before, and the day after the attack.

Finally, in order to rule out the effect of outliers, I eliminate all observations where the relative change in media attention lies more than two standard deviations above the mean. Here

⁹The GTD codebook provides a detailed explanation of how they distinguish between isolated and combined attacks on pages 8 and 9. The codebook is available under <http://www.start.umd.edu/gtd/downloads/Codebook.pdf>.

again, all results are robust to using the entire data set (see Table 3).

In alternative specifications (available upon request), I also conducted analyses using the deviation from the average coverage of three days before the event to the three days thereafter. However, given the high frequency of attack days in some countries, the data produces a high number of overlapping observations, i.e. the day(s) before an attack coincide with the day(s) after the previous attack. This makes the derived measurement for media attention rather noisy. However, the derived results are closely replicated when using this measurement. A main difference lies precisely in elevated standard errors of the respective coefficients, indicating a larger degree of statistical noise.

But, even when using the relative change in coverage from the one day before the attack to the one day after, the measurement remains subject to noise if, for example, one of the days (either before or after attacks) is marked by major events, such as domestic elections, sports events, or religious holidays. In this case, a more detailed search terminology can be of advantage, for instance using the name of the organization claiming the attack. However, this would complicate an international and intertemporal comparison, as it is not always clear which name of the organization to use (e.g., Al-Qaeda versus Al-Qaida), let alone if an internationally recognized name exists at all. In addition, the act of publicly taking responsibility for an attack sometimes occurs days or weeks after the attack, which would further complicate the derivation of a consistent measurement of media attention. Thus, using the country name as the search term seems to be the most suitable indicator to derive a consistent and comparable measurement.

2.3 Potential Determinants Of Media Attention

Which kind of characteristics could be associated with the NYT response rate to terrorist attacks? The following description focuses on the variables included in the baseline estimations. Extensions then include additional variables, which are mentioned in section 2.4 and discussed in more detail as they are added. The reason for referring variables to the main estimation or the extensions either goes back to data availability or the generality of some variables versus more specific characteristics.

First, I include the features of the attack day, namely the attack form (suicide attack, among others), the number of deaths, the number of attacks on that day, and the numerous types of

weapons (e.g., firearms, explosives) and targets (e.g., government, business). Most naturally, one may assume that attacks demanding more casualties would cause a larger rate of media response, as indicated by [Rohner and Frey \(2007\)](#). Similarly, if a country experiences several terrorist strikes on one day, coverage may react correspondingly. The remaining attack features are intended as control variables and are not discussed in detail. In alternative estimations (not displayed), I also incorporated the number of people that were wounded in the attack, but this variable never produced statistical significance on conventional levels and the derived results remain virtually unchanged.

Second, the analysis adds the societal aspects of the attacked nation, such as the size of the population and the religious composition. Regarding population size, one may suspect that incidents in bigger countries could be subject to more intense reporting, as potentially more people would be affected by the attack and its consequences. As for the religious composition, the agenda of many terrorist organizations contains religious motives and thus reporting may be affected by how religious a country is. The connection between religious motives and terrorism has long been established (for some recent evidence see [Gassebner and Luechinger, 2011](#)). Unfortunately, it is not possible to derive a consistent measurement for whether the attack itself was conducted out of religious motivations. Nevertheless, the attacked country's religious composition may be an indicator.

Third, I add geographic characteristics of the attacked country to the list of potential determinants, specifically continental fixed effects and the closest border-to-border distance to the US. For instance, [Tavares \(2003\)](#) implies that the distance to donor countries can matter in determining foreign aid. Similarly, [Duque et al. \(2014\)](#) show that decisions regarding military interventions by the United Nations can be influenced by the distance to the US, one of the major influential powers in the United Nations Security Council. [Perkins and Neumayer \(2008\)](#) show geographical proximity to matter for military decisions in general. One possible explanation of this finding is that we simply care more about events that happen closer to us. Thus, the NYT coverage of a terrorist attack may also be driven by the attack's geographical distance to the NYT's core readers: US Americans.

Fourth, variables related to time are added, namely fixed effects for the weekday, month, and year of the attack. A priori, there is no reason to expect that all weekdays, months, or years

are equal in terms of the media impact of terrorism. For instance, after 9/11 the US radar for terrorism has certainly been sharper. Regarding weekday fixed effects, one may argue that not all days in news coverage are the same. For example, a day during the week may generally be covered differently by the NYT, as opposed to a day on the weekend. Additional estimations also take into account country specific time trends.

Fifth, I include economic aspects of the attacked nation, both in general (e.g., income levels), but also in relation to the US (such as bilateral trade relationships). Numerous papers have shown that terrorism can be related to income levels or overall relationships with other countries, such as the extent of international trade. In this context, one may consider, for example, [Abadie \(2006\)](#) or [Enders and Hoover \(2012\)](#). By incorporating these variables into the analysis, I test whether these aspects are also related to the coverage of terrorist attacks. For instance, including the bilateral trade relationship with the US marks closer economic ties and US readers of the NYT may naturally be more interested in any terrorist strikes occurring there. Similar arguments can be made for foreign direct investment levels. In addition, the empirical section considers the importance of natural resources and oil in the attacked country.

Finally, the empirical framework considers political characteristics. Here again, I am including both individual features of the attacked nation, such as the regime form and the political orientation of the ruling government, as well as the relationship with the US (e.g., voting affinity in the United Nations with the US). Previously, [Chomsky and Herman \(2010\)](#) have suggested that the US media may report differently from countries around the world, stating that the political relationship to the US could play a role. The following empirical framework will be able to test these claims on a large number of observations and across a large number of countries (161).

2.4 Main Estimation Method And Variables

The empirical strategy first employs a standard OLS framework to estimate the factors associated with the change in media attention (NYT response). If one accepts that statistical noise, i.e., country specific news unrelated to attacks on the day before or after, is mitigated by a large number of observations, then the coefficient on the characteristics included in a regression estimating the change in news coverage can be interpreted as being directly related to the NYT

response. If measurement error does occur, we would have no reasons to suspect a systematic upward or downward bias. In other words, I can not think of a systematic upward or downward bias in either the number of articles on the day before the attack or on the day after. Thus, if anything, standard errors can be inflated, but the derived coefficients should be unbiased. In additional estimations, I incorporate country fixed effects to further mitigate a potential country-specific differences in the NYT response rate. In particular, the basic regression framework of estimating the NYT response to attack day a in country i and year t takes the following form:

$$(NYT\ response)_{a,i,t} = \alpha_0 + \alpha_1\mathbf{\Gamma}_a + \alpha_2\mathbf{\Theta}_{i,t} + \alpha_3\mathbf{\Pi}_i + \alpha_4\mathbf{\Phi}_t + \alpha_5\mathbf{\Omega}_{i,t} + \epsilon_{a,i,t}. \quad (2)$$

To capture any factors that can potentially affect the media reaction by the New York Times, I distinguish between five categories of variables:

- Attack features ($\mathbf{\Gamma}_a$), including a binary variable for suicide attacks and variables measuring (i) the number of victims on the attack day, (ii) the number of attacks on this day, (iii) a binary variable whether at least one attack was successful, (iv) 9 different attack types, (v) 22 target types, (vi) 9 weapon types, and (vii) dummy variables for whether the country experienced attacks one or two days before (and after) this attack day.¹⁰ All results are robust to including a variable measuring the number of attacks in the same country in the preceding seven days.
- Societal characteristics ($\mathbf{\Theta}_{i,t}$), including population size and the fractions of Catholic, Muslim, and Protestants in society.
- Geographical characteristics ($\mathbf{\Pi}_i$), adding the geographical distance (closest border-to-border) from the attacked country to the US and continental fixed effects. Further estimations use regional or country fixed effects, but also country specific time trends, extending $\mathbf{\Pi}_i$ to $\mathbf{\Pi}_{i,t}$.

¹⁰The attack types include assassination, hijacking, kidnapping, barricade incident, bombing/explosion, unknown, armed assault, unarmed assault, and facility/infrastructure attack. The target types contain business, government (general), police, military, abortion related, airports & aircraft, government (diplomatic), educational institution, food or water supply, journalists & media, maritime, NGO, other, private citizen & property, religious figures/institutions, telecommunication, terrorists/non-state militias, tourists, transportation (other than aviation), unknown, utilities, and violent political parties. Weapon types include biological, chemical, nuclear, firearms, explosives/bombs/dynamite, incendiary, melee, vehicle, and sabotage equipment. Naturally, one of each group is automatically excluded as the reference variable.

- Time characteristics (Φ_t), specifically year, month, and weekday fixed effects.
- Economic and political characteristics ($\Omega_{i,t}$), including GDP per capita, the political regime form, and press freedom of the attacked country. Extensions to the main results also consider contemporaneous conflicts in the attacked country, the a priori assessed political terror risk, trade relationships (general and bilateral between the attacked nation and the US), natural resources, and foreign direct investment. Finally, I include binary variables for countries ruled by leftist and rightist administrations, with centrist governments and undefined administrations forming the omitted category.

The empirical estimations will highlight the role of suicide missions, distance to the US, and the political orientation of the attacked country. However, the findings related to the additional characteristics listed above are also discussed.

2.5 Suicide Missions Versus Common Attacks And Political Orientation

Additional estimations then focus on the exceptional role of suicide attacks. In this context, I use the Oaxaca-Blinder decomposition to analyze suicide versus non-suicide attacks.¹¹ The methodology was introduced by [Blinder \(1973\)](#) and is mostly employed in wage regressions to investigate gender or race differentials (e.g., see [Grove et al., 2011](#)). However, the methodology in itself is not limited to analyzing labor markets. In general, the strategy allows the econometric model to produce different coefficients of all variables for one group of observations versus another, such as females versus males in wage regressions. This allows the researcher to distinguish between an “explained” portion of the difference in outcomes (labeled endowments) and an “unexplained” portion owed to different returns to explanatory variables (labeled coefficients).

Applied to gender differences in wages, this means that some attributes may be valued differently for females than for males, allowing for a more fine-grained explanation of the origins of gender wage differences. Applied to this paper, the Oaxaca-Blinder decomposition allows for tracing out differences in media response owed to endowments and coefficients, for example distinguishing between suicide and non-suicide attacks. In other words, the methodology is able to distinguish whether any differences in media attention between suicide and non-suicide attacks

¹¹See [Jann \(2008\)](#) for the related Stata commands.

can be traced back to differences in the explanatory variables from equation 2 (e.g., number of casualties) or the coefficients (e.g., casualties from suicide attacks are receiving different attention than casualties from non-suicide attacks). The decomposition first carries out two individual estimations, using suicide (S) and non-suicide attacks (NS) as separate samples. For ease of exposition, the following equations omit superscripts (a, i, t) and summarize all explanatory variables depicted in equation 2 into \mathbf{X}^S for suicide attacks and \mathbf{X}^{NS} for non-suicide attacks. The individual estimations then become

$$(\text{NYT response})^S = \beta^S \mathbf{X}^S + \delta^S \quad (3)$$

and

$$(\text{NYT response})^{NS} = \beta^{NS} \mathbf{X}^{NS} + \delta^{NS}, \quad (4)$$

where δ^S and δ^{NS} relate to the respective error terms. As a next step, the mechanism decomposes any differences in the outcome variable (the NYT response rate) into differences in the mean from observed characteristics (different endowments) and differences in the mean of the returns to these characteristics (different coefficients). Denoting means with upper bars, the decomposition can be written as

$$\overline{(\text{NYT response})^S} - \overline{(\text{NYT response})^{NS}} = \overline{(\mathbf{X}^S - \mathbf{X}^{NS})} \beta^{NS} + \overline{\mathbf{X}^{NS}} (\beta^{NS} - \beta^S). \quad (5)$$

The first term on the right-hand side corresponds to the differences in endowments (e.g., more casualties from suicide than from non-suicide attacks). The second term isolates differences in coefficients (e.g., the number of casualties from suicide attacks draws a different NYT response than from non-suicide attacks). In this case, equation 5 uses non-suicide attacks as the baseline, given that they constitute the vast majority of terrorist attacks (92 percent).

A similar analysis is then also carried out when distinguishing between attacks occurring in countries ruled by leftist administrations versus non-leftist administrations, as the political orientation of the ruling government turns out to produce interesting differences in the NYT response rate.

2.6 Methodology To Predict Future Attacks

In Section 5, the analysis then proceeds to predicting future attacks. Previously, Rohner and Frey (2007) have indicated that media attention may itself Granger cause terrorist incidents. So, is media coverage of an attack in any way predictive of a future attack, even after controlling for other observable characteristics? First, I conduct logit regressions, estimating the likelihood of another terror attack in the same country within seven days' time. Similarly, I use a negative binomial regression framework to regress the number of days until the next day of terror attacks in the same country on a subset of the variables derived in equation 2 and other, previously suggested determinants of terror attacks. Given that the outcome variable here is countable, but highly dispersed, I employ a negative binomial regression framework (see Long and Freese, 2006, or Cameron and Trivedi, 2009).

In particular, I include the attack characteristics (attack type, target, and weapons used), month and weekday fixed effects, and regional fixed effects. The reason for including regional fixed effects, as opposed to country fixed effects, is simply that the dependent variable (probability of another attack in seven days) does not show enough variation for a variety of countries. In terms of additional controls, previous literature has produced several persistent correlates of terrorist attacks. For the set of control variables, I follow Krueger and Malečková (2003) by incorporating population size, income levels, and proxies for civil liberties and education. Further, I follow Abadie (2006) who finds that linguistic fractionalization in a country can foster terrorist activities. In order to account for the importance of religious motives for a variety of terrorist organizations, the regressions also control for religious fractions of the Catholic, Muslim, and Protestant population. Finally, I also incorporate binary variables whether the country is currently experiencing an armed conflict.

2.7 Sample Data

Focusing on days with terror attacks by country since 1998, Figure 2 shows their geographical distribution. The majority of attacks have occurred in the Middle East, but also in Russia, Western Europe, Colombia, and several African nations. Figure 3 provides an overview of the average NYT response rate for each sample country. Beyond some Western European countries like Germany and Italy, Brazil, Russia, some Middle Eastern countries, and Northern

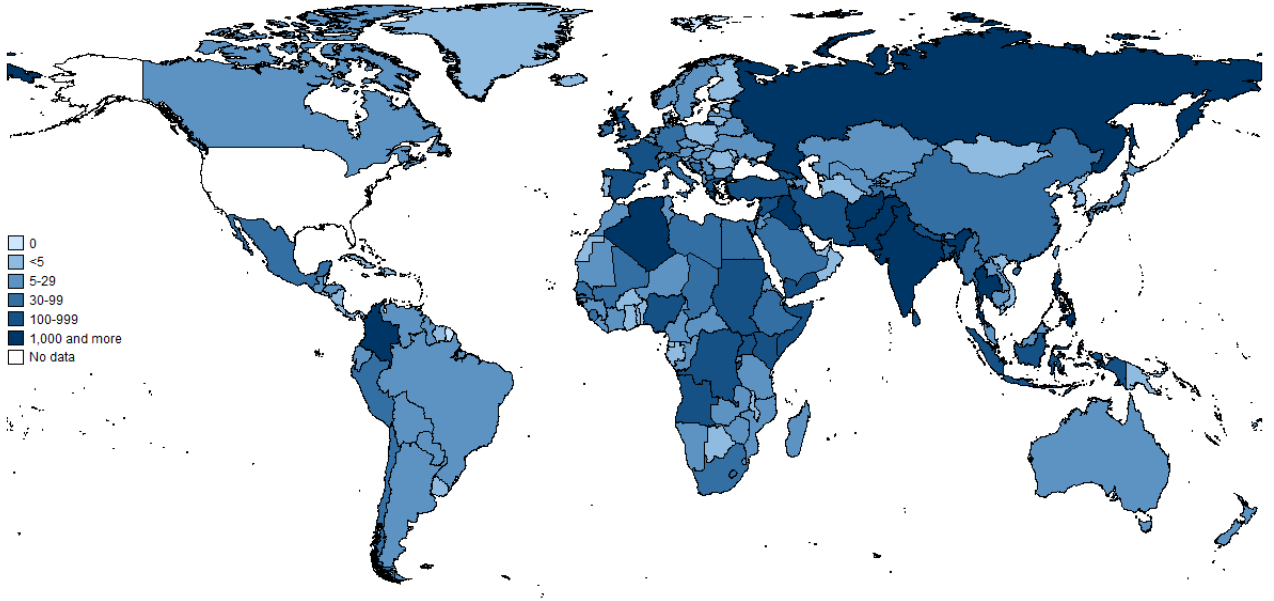


Figure 2: # of terror attacks between 1998 and 2012

Africa appears to receive more attention than, for example, countries in the center of Africa. In addition, terrorist attacks in countries adjoining the US are receiving substantially more coverage. Surprisingly, attacks in Iran and Saudi Arabia seem to draw less attention than attacks in their neighboring countries. Notice that 56 attacks could not be assigned an exact date in the GTD database and are therefore omitted from the analysis, explaining no information in Figure 3 for countries like Botswana, Mongolia, or Oman. The complete list of sample countries with their number of attack days, the percentage of days with suicide missions, and the average NYT response rate is displayed in Table A1.

Table 1 displays all variables used in the analysis, including their descriptive statistics and sources. After removing outliers in terms of the change in NYT news (any NYT response more than two standard deviations beyond the mean), the sample consists of 24,464 observations. On average, the NYT response rate $(\frac{\#ofhits_{t+1}-\#ofhits_{t-1}}{1+\#ofhits_{t-1}})$ lies around 1.98 with a standard deviation of about 9.31.

Within these attack days, about eight percent were marked by at least one suicide attack, a particularly terrifying form of terrorism. Suicide attacks have experienced a strong rise over the past decades, as shown in Figure 4. In fact, suicide attacks have not only increased in absolute

Table 1: Summary statistics

Variable	Mean	(Std. Dev.)	Min.	Max.	N	Source & Definition ^a (if applicable)
NYT response	1.98	(9.31)	-1	78.90	24,464	Google search within www.nytimes.com , formula $\frac{(\#ofhits)_{i,t+1} - (\#ofhits)_{i,t-1}}{1 + (\#ofhits)_{i,t-1}}$ for attack days t
Suicide attack	0.08	(0.27)	0	1	24,464	GTD, = 1 if suicide attack happened that day in that country
# of deaths	4.34	(12.99)	0	518	24,464	GTD, # of combined victims in this country from all terrorist attacks on that day
# of attacks	1.82	(1.80)	1	56	24,464	GTD, # of attacks by day and country
At least 1 attack successful	0.92	(0.28)	0	1	24,464	GTD, = 1 if at least 1 attack successful
Population size (in million)	164.17	(326.2)	0.16	1,350.70	24,367	WB, applying Ln(population size)
% Catholic	15.92	(31.21)	0	96.90	23,691	QoG, % Catholics in country (1980)
% Muslim	48.61	(44.33)	0	99.90	23,691	QoG, % Muslims in country (1980)
% Protestant	2.44	(6.87)	0	97.8	23,687	QoG, % Protestants in country (1980)
Distance from US in 1,000 km	8.46	(2.79)	0	14.02	24,462	own calculation, closest border-to-border distance
Africa	0.17	(0.38)	0	1	24,367	= 1 if attacked country in Africa
Asia	0.69	(0.46)	0	1	24,367	= 1 if attacked country in Asia
Europe	0.08	(0.28)	0	1	24,367	= 1 if attacked country in Europe
North America	0.01	(0.07)	0	1	24,367	= 1 if attacked country in North America
South & Central America	0.05	(0.22)	0	1	24,367	= 1 if attacked country in South or Central America
Oceania	0	(0.04)	0	1	24,367	= 1 if attacked country in Oceania
GDP per capita	4,421.04	(8,265.44)	118.64	66,739.18	23,029	WB, applying Ln(GDP per capita)
Polity IV index	5.39	(2.61)	0	10	23,434	Polity IV & Freedom House, ranging from 0 (totally autocratic) to +10 (totally democratic)
Absence of press freedom	57.35	(17.82)	0	100	20,382	Freedom House, 0-30: Free; 31-60: Partly Free; 61-100: Not Free
Political terror scale	3.93	(0.96)	1	5	20,131	US State Department, ranging from 1 to 5, where higher values indicate higher risk of terror
Voting affinity to US	0.27	(0.14)	0	0.94	23,523	Affinity of Nations, voting affinity index between 0 and 1 for voting in line with US
Leftist govt	0.25	(0.43)	0	1	24,464	Database of Political Institutions (WB), = 1 if current government leftist
Rightist govt	0.13	(0.34)	0	1	24,464	Database of Political Institutions (WB), = 1 if current government rightist
Interstate conflict	0.07	(0.26)	0	1	24,464	UCDP, = 1 if attacked country is in an interstate armed conflict
Internal conflict	0.75	(0.43)	0	1	24,464	UCDP, = 1 if attacked country is in an internal armed conflict
Internationalized conflict	0.37	(0.48)	0	1	24,464	= 1 if attacked country is in an internationalized internal armed conflict
Trade (% of GDP)	65.59	(30.71)	0.31	407.38	22,593	WB
Bilateral exports to US	2,902.3	(12,737.03)	0	292,650.53	24,464	US Census, applying Ln(1+ \$ value)
Bilateral imports from US	4,863.32	(16,537.12)	0	339,491.44	24,464	US Census, applying Ln(1+ \$ value)
Natural resource rents (% of GDP)	18.13	(28.34)	0	218.89	20,058	WB
Foreign direct investment, net inflows (% of GDP)	2.18	(3.18)	-0.99	91.01	24,127	WB, applying Ln(1+ % of GDP)
Probability of another attack within 7 days	0.77	(0.42)	0	1	24,464	GTD - own calculation, = 1 if another attack in same country within 7 days
# of days until next attack	10.52	(28.46)	1	280	23,902	GTD - own calculation, # of days until next attack in same country
Years of primary schooling	5.46	(0.74)	3	8	23,594	WB, primary education, duration (years)
Absence of civil liberties	4.39	(1.44)	1	7	23,434	QoG, civil liberties, decreasing from 1 to 7
Language fractionalization	0.49	(0.28)	0	0.92	23,669	Alesina et al. (2003)
Oil rents (% of GDP)	11.35	17.93	0	75.71	20,169	WB, $\text{Ln}(1 + \frac{GDP \times \text{oil rents}}{100})$
Fuel exports (% of merchandise exports)	31.38	(36.9)	0	99.74	18,256	WB
Urbanization rate	48.64	(21.62)	7.83	100	24,230	WB

Notes: ^aGTD: Global Terrorism Database; QoG: Quality of Governance; US Census: <https://www.census.gov/foreign-trade/balance/>; UCDP: Uppsala Conflict Data Program; WB: World Bank (Group, 2012).

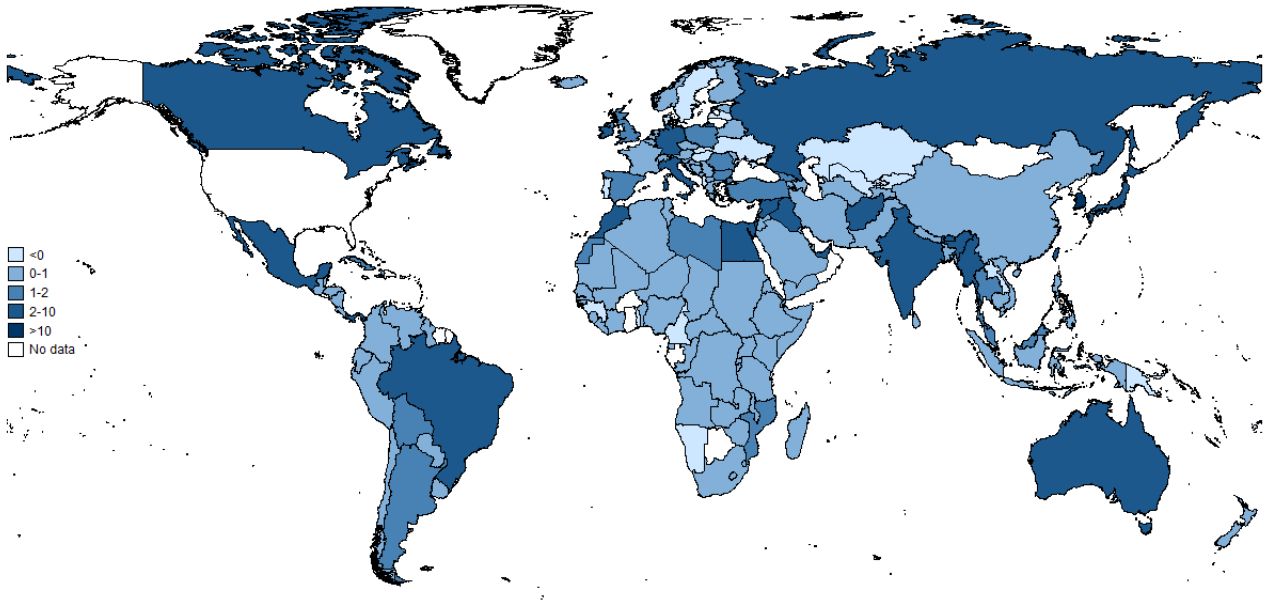


Figure 3: Average NYT response rate to terror attacks between 1998 and 2012

terms, but also when considered as a fraction of overall terrorist attacks with their height coming in 2007, where over 11 percent of all terrorist attack days involved a suicide mission. In this context, [Arce and Siqueira \(2013\)](#) provide a theoretical intuition why terrorists might resume to suicide attacks over conventional attack forms. [Figure 5](#) shows the geographical distribution and especially Afghanistan, Iraq, Pakistan, and Russia have been subject to suicide attacks since 1998.

The average day of terrorist attacks in a country has led to more than four deaths and over 92 percent of the attack days have seen at least one mission conducted successfully. The country of attacks are predominantly characterized by a strong Muslim population (average percentage of Muslim belief almost 49 percent) and GDP per capita of the average target country turns out to be around US\$4,400 in constant 2005 US\$. Thus, attacks are more likely in poorer countries, but rich countries are not exempt from terrorism, as the richest nations in the GTD database are Qatar, Norway, and Switzerland. The Polity index ranges from 0 (completely autocratic) to 10 (total democracy) and the average sample country reaches a score of 5.39 on that scale. The initial data here is provided by the Polity IV project ([Marshall and Jaggers, 2002](#)) and enhanced by Freedom House ([FreedomHouse, 2014](#)).

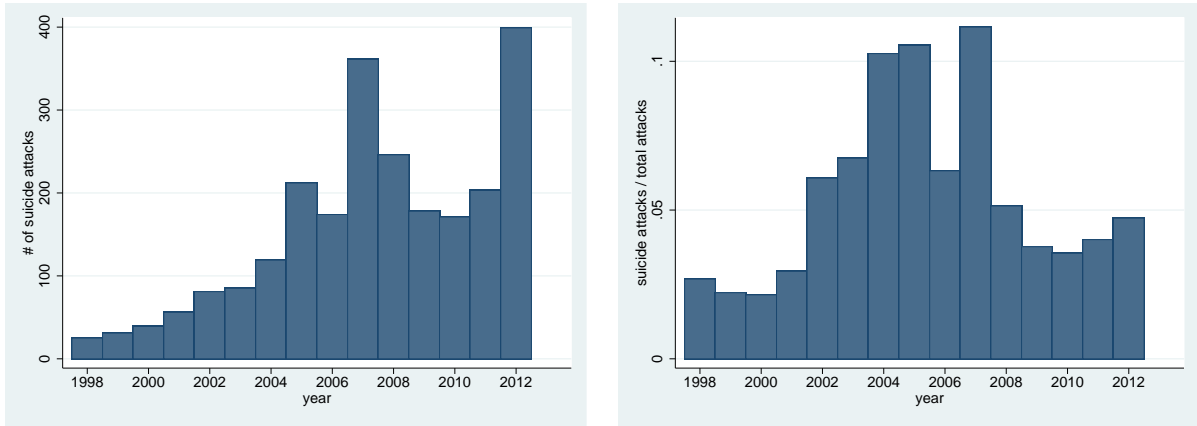


Figure 4: Total suicide attacks from 1998 – 2012 (left) and as a fraction of total terrorist attacks (right). Numbers from the Global Terrorism Database (GTD).

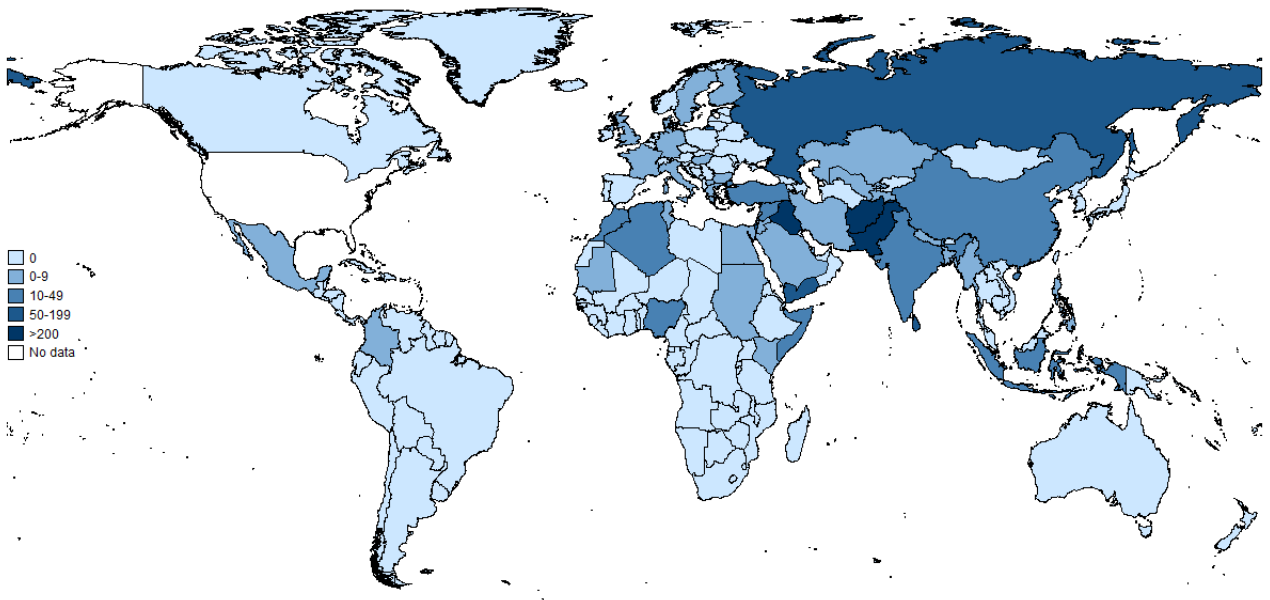


Figure 5: # of suicide attacks between 1998 and 2012.

Finally, Table 1 also reveals that once a country is subject to terrorism, the probability of future attacks is high. On average, the likelihood of another attack within the next seven days is 77 percent and the gap until the next attack comes out to be just over 10.5 days after removing observations, where the number of days until the next attack lies more than two standard deviations above the mean.

3 Empirical Findings: What Is Drawing Attention?

3.1 Main Results

Table 2 shows the results from estimating equation 2. Columns (1) through (6) focus on including additional explanatory variables, whereas columns (7) and (8) move to a fixed effects framework, controlling for any country-specific unobservables. All results are virtually unchanged when using only observations for which all variables employed in the full specification of column (6) are available.

Column (1) displays results from a univariate regression framework to evaluate whether suicide attacks are treated differently by the NYT. Indeed, the derived coefficient suggests that suicide missions receive substantially more attention in the NYT than conventional attacks. The statistical importance of this finding then prevails after controlling for other attack features, but also when adding societal, geographical, time, economic, and political characteristics. In fact, the magnitude remains rather consistent throughout different estimations and eventually settles for a coefficient of around 0.84 in column (6).

If we assume that terrorist organizations are seeking the attention of the public, then these regressions suggest that suicide attacks could be more attractive, as they increase media coverage. Notice that this finding is consistent even after controlling for the religious composition of a country, income levels, and the political regime form. In addition, the results are closely replicated when using only attacks with at least one casualty (results available upon request).¹²

For example, consider a non-suicide attack, where on the day before the attack the NYT mentions the country three times, like an attack in Pakistan on January 18, 2012. On the day

¹²Frey et al. (2007) note that some papers analyzing terrorism attacks only focus on attacks leading to casualties.

Table 2: OLS results predicting the NYT response to terrorist attacks.

Dependent variable: NYT response (mean= 1.98)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Attack Features</i>								
Suicide attack	1.130*** (0.276)	0.811*** (0.289)	1.153*** (0.297)	1.006*** (0.297)	0.967*** (0.292)	0.842*** (0.320)	0.800*** (0.287)	0.520* (0.288)
# of deaths		-0.002 (0.004)	-0.001 (0.005)	0.000 (0.005)	0.005 (0.005)	0.003 (0.005)	0.002 (0.005)	0.001 (0.005)
# of attacks		-0.101* (0.058)	-0.079 (0.058)	-0.095 (0.058)	-0.114** (0.058)	-0.106 (0.084)	-0.103* (0.058)	-0.047 (0.058)
At least 1 attack successful		-0.579** (0.249)	-0.504** (0.255)	-0.337 (0.257)	-0.237 (0.253)	-0.234 (0.266)	-0.136 (0.247)	-0.015 (0.247)
Attack, target, and weapon type fixed effects ^a		yes	yes	yes	yes	yes	yes	yes
<i>Societal Characteristics</i>								
Population size			0.439*** (0.052)	0.350*** (0.057)	0.365*** (0.056)	0.352*** (0.056)		
% Catholic			-0.018*** (0.002)	-0.016*** (0.002)	-0.015*** (0.002)	-0.015*** (0.002)		
% Muslim			-0.013*** (0.002)	-0.014*** (0.002)	-0.017*** (0.002)	-0.023*** (0.002)		
% Protestant			-0.038*** (0.007)	-0.022*** (0.008)	-0.023*** (0.008)	-0.010 (0.008)		
<i>Geographical Characteristics</i>								
Distance from US in 1,000 km				-0.355*** (0.044)	-0.412*** (0.044)	-0.444*** (0.046)		
Continental fixed effects				yes	yes	yes		
Country fixed effects							yes	yes
Country specific time trends								yes
<i>Time Characteristics</i>								
Year, month & weekday fixed effects ^b					yes	yes	yes	yes
<i>Economic & Political Characteristics</i>								
GDP per capita						-0.241*** (0.070)		
Polity IV index						-0.478*** (0.052)		
Absence of press freedom						-0.050*** (0.009)		
<i>N</i>	24,464	24,462	23,680	23,680	23,680	19,343	24,462	24,462
# of countries	161	161	147	147	147	138	161	161
<i>R</i> ²	0.001	0.012	0.022	0.028	0.061	0.065	0.081	0.106

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
^aIncludes dummies for 9 attack types, 22 target types, 9 weapon types, and 4 dummies for whether there was a terrorist attack in this country 2 days before, the day before, the day after, and 2 days after the attack.

after, the country appeared four times in the NYT, thus making the NYT response variable equal to $0.25 \left(\frac{4-3}{1+3}\right)$. Everything else equal, had the attack been a suicide mission, the projected number of articles in the NYT on the day after would have been 7.4 instead of four (using the coefficient derived in column 6, Table 2).¹³

Regarding the remaining attack characteristics, it is interesting to see that the actual number of casualties does not matter for media attention, contrary to findings by Rohner and Frey (2007) who use monthly reports on the word “terrorism” for the timeframe 1998 to 2005. In fact, including a squared term or using the natural logarithm to account for potential nonlinearities does not change this result. In additional estimations, I also included the number of US casualties, but this variable never reaches conventional levels of statistical significance. Further, the number of attacks in a given day and whether the attack is carried out successfully remain statistically insignificant once the remaining control variables are included. Somewhat surprisingly, the results in column (3) and thereafter suggest that attacks in religious countries – Catholic, Muslim, and Protestant – are receiving *less* attention. However, the NYT dedicates more attention to attacks in bigger, poorer, and less democratic nations. As expected, if a country exhibits less press freedom, the response rate to terrorist attacks is lower. The conclusions regarding these economic and political variables remain remarkably stable throughout the entire analysis and their coefficients are omitted in the upcoming tables.

Finally, the geographical distance to the US seems to play an important role, even after a variety of control variables are included. Countries located further away from the US are receiving less coverage. The difference between the attention devoted to an attack in a country adjoining the US, like Canada or Mexico, to a country far away, such as Sri Lanka (13,372 kilometers of distance to the US), corresponds to an increase of about two thirds of a standard deviation in media attention ($-0.444 \times 13.372 = 5.9$, with a standard deviation of the NYT response of 9.31). Figure 6 graphs the predicted response rate from the regression displayed in column (6) of Table 2, relative to the distance to the US and using the mean value of all remaining variables. As an example, consider the discussed attack carried out in Pakistan on January 18, 2012, where NYT coverage jumped from three articles on the day before the attack

¹³Calculation: the actual NYT response (0.25) plus the suggested change of column (6), Table 2 (0.84) set equal to the definition of the NYT response variable. In this case, $0.25 + 0.84 = \frac{x-3}{1+3}$. Isolating x then gives the projected number of articles related to Pakistan on January 19, 2012.

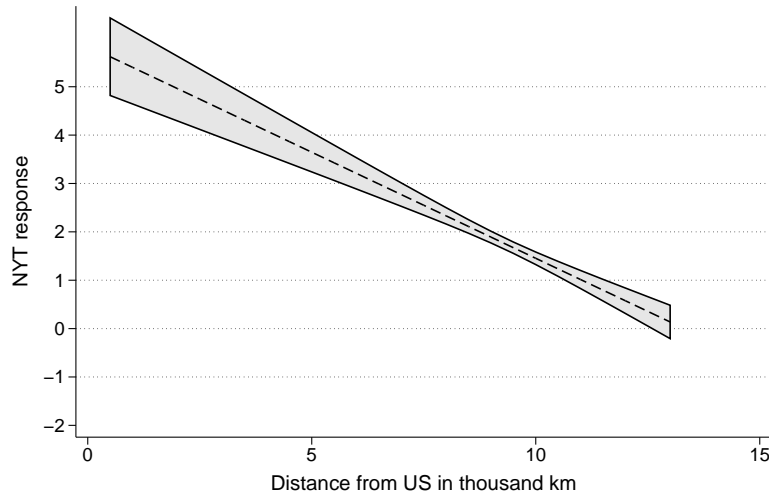


Figure 6: Predicted NYT response rate, depending on distance to the US and using the mean of all control variables from column (6), Table 2.

to four articles on the day after. The closest border-to-border distance from Pakistan to the US is 10,174 kilometers. Now assume the attack had been carried out in a country just about 1,000 kilometers closer to the US like the Republic of the Congo (9,078 kilometers distance to the US). In this case, the projected number of NYT articles on Pakistan would have increased from four to 5.66. For a country adjoining the US, like Canada or Mexico, the projected number of articles would have been about 20.7.

The results in Table 2 also allow for a detailed distinction between characteristics associated with the NYT response rate. For instance, consider the estimates associated with the geographical distance to the US and the Polity IV index. Previously, Rohner and Frey (2007) have found that terror attacks in *Western democracies* receive more media attention, both by the New York Times and the Neue Zürcher Zeitung. However, Rohner and Frey (2007) test for Granger causality absent other control variables. The findings in Table 2 are able to distinguish between those two aspects (democracy and Western nations), showing that this previous result could have been driven by the geographical proximity of Western nations to the US. In fact, Table 2 shows that attacks in democracies are receiving *less* media attention.

Concluding Table 2, columns (7) and (8) move to including country fixed effects and then also country specific time trends to account for any country-specific developments. This proves

to be especially important, since each country is marked by its own historical, geographical, and societal features – aspects that the employed control variables cannot cover completely. All previously employed variables that do not vary over time within a country (potentially also due to the unavailability of data, e.g., for religious fractions) are omitted from this regression as the fixed effects would soak up their statistical variation.

Column (8) then further adds country specific time trends, allowing each country its own development in terms of the coverage of terrorist attacks. For instance, Afghanistan or Iraq have clearly moved into the international terrorism spotlight after the 9/11 attacks and the subsequent persecution of Al-Qaeda. This trend may not necessarily apply to the coverage of terrorist attacks in other countries. Notice that including country dummies produces an econometric framework that is substantially more restrictive. However, the coefficient on suicide attacks decreases only marginally from column (6) to column (7). The coefficient remains statistically significant on the ten percent level even when allowing each country its own trend over the 15-year time span from 1998 to 2012. However, the magnitude decreases to 0.52 in this statistically confined estimation. The results are robust to including the set of explanatory variables used in column (6) and controlling for 13 regional fixed effects instead of continental dummies.

3.2 Results From Alternative Estimations

Revisiting the discussion about the dependent variable in Section 2.2, Table 3 re-estimates the baseline regression of column (6) in Table 2 for various robustness checks and alternative measurements of the NYT response rate. First, column (1) excludes the three countries with the most observations in the sample to check whether the derived results could be driven by just a couple of countries with a large number of observations. India, Iraq, and Pakistan combine for almost 31 percent of the sample. Column (2) uses the entire sample, not excluding outliers in terms of the NYT response (more than two standard deviations beyond the mean). Columns (3) and (4) address potential issues from attacks that occurred within two days of each other, only incorporating “isolated attack days” in a country. Column (5) then uses the pure percentage change of NYT news coverage $[(NYT\ response)_{a,i} = \frac{(\#of\ hits)_{i,t+1} - (\#of\ hits)_{i,t-1}}{(\#of\ hits)_{i,t-1}}]$. Finally, column (6) only uses the number of articles after the attack day in a fixed effects framework, not incorporating the number of articles before attacks. Thus, the country fixed effects are intended

to capture the average media coverage of the country.

Throughout the Table, we note that the coefficients related to suicide attacks and geographical distance to the US remain consistent in terms of statistical significance on conventional levels. The estimates related to the remaining control variables are also generally confirming the initial findings of Table 2. Thus, the results deducted from Table 2 do not seem to depend on the particular way of measuring the NYT response. In fact, all results derived in the upcoming Sections are also robust to using these alternative measurements.

Table 3: Alternative specifications, building on column (6) of Table 2.

Dependent variable: NYT response (different measurements ^b)						
	(1)	(2)	(3)	(4)	(5)	(6)
Suicide attack	1.076** (0.428)	1.448** (0.707)	1.866** (0.794)	1.951* (1.033)	1.069** (0.479)	10.321** (4.961)
Distance from US in 1,000 km	-0.409*** (0.046)	-1.905*** (0.424)	-0.498*** (0.093)	-0.288*** (0.096)	-0.828*** (0.083)	
Control variables from Table 2, column (6)	yes	yes	yes	yes	yes	yes
Country fixed effects						yes
<i>N</i>	13,384	19,532	4,622	2,934	12,863	24,462
<i>R</i> ²	0.069	0.006	0.089	0.087	0.070	0.339

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

^bColumn (1): Excluding the 3 countries with most terrorist attacks: India, Iraq, and Pakistan.

(2): Using all observations, not restricting dependent variable to within 2 standard deviations.

(3): Only using attack days with no other attacks the day before or after the attack day.

(4): Only using attack days with no other attacks the 2 days before or after the attack day

(5): Using pure percentage change as dependent variable: $\frac{(\#ofhits)_{t+1} - (\#ofhits)_{t-1}}{(\#ofhits)_{t-1}}$

(losing 6,480 observations).

(6): Using pure number of articles on the day after the attack (not relative to previous day)

as dependent variable. Controls here include: attack, target, and weapon type;

number of deaths, number of attacks, whether at least one attack was conducted successfully,

weekday, month, and year fixed effects.

Of course, other factors that have not been considered so far could be driving these findings.

For instance, we could think of additional political and economic characteristics of the attacked country that may influence media coverage in the US, such as bilateral trade flows, political relationships with the US, or ongoing armed conflicts. The following sections provide more detailed analyses in this direction. As the baseline and most complete estimation, all specifications are based on the regression displayed in column (6) of Table 2.

3.3 Economic Aspects

In terms of economic aspects, the baseline analysis only considers income levels. However, it may well be possible that more detailed characteristics describing the economic environment in the country of attack are related to international media attention devoted to terrorist attacks. Table 4 considers trade relationships (both general and bilateral with the US), the role of natural resources and oil, but also foreign direct investment.

Beginning with total trade flows as a share of the country's GDP, column (1) shows that general openness is unrelated to media responsiveness to an attack. However, bilateral trade flows with the US [measured as $\text{Ln}(1 + \text{trade in US\$})$] are highly predictive. This result emerges for exports to the US, as well as imports from the US (columns 2 and 3). Thus, readers of the NYT are more interested to be informed about terrorism in countries with which they foster intense trade relationships. The results are robust to using exports and imports as a share of domestic GDP. In addition, the NYT increases its coverage when countries with a high share of natural resources in their GDP are concerned. Somewhat surprisingly, oil does not seem to matter in this context. Finally, the general level of foreign direct investment in a country is associated with more media coverage.

Overall, the estimations displayed in Table 4 confirm the initial findings regarding suicide attacks and the geographical distance to the US. Although several economic variables are statistically significant, neither of them is capable of explaining the statistically significant effects of suicide missions and geographical distance on the media response rate by the NYT. The following section now focuses on political aspects of the attacked country, both in general and in relation to the US.

Table 4: Economic aspects.

Dependent variable: NYT response (mean= 1.98)						
	(1)	(2)	(3)	(4)	(5)	(6)
Suicide attack	0.850*** (0.321)	0.803** (0.320)	0.789** (0.321)	0.791** (0.320)	0.762** (0.337)	0.860*** (0.322)
Distance to US in 1,000 km	-0.442*** (0.044)	-0.437*** (0.046)	-0.440*** (0.046)	-0.436*** (0.046)	-0.363*** (0.045)	-0.440*** (0.046)
Trade (% of GDP)	0.001 (0.002)					
Exports to US		0.105*** (0.030)				
Imports from US			0.104*** (0.027)			
Natural resource rents (% of GDP)				0.009*** (0.003)		
Oil rents (% of GDP)					-0.014 (0.010)	
Foreign direct investment						0.200** (0.088)
Attack features ^a	yes	yes	yes	yes	yes	yes
Societal, Time, Economic & Political Characteristics ^b	yes	yes	yes	yes	yes	yes
Continental fixed effects	yes	yes	yes	yes	yes	yes
<i>N</i>	19,235	19,343	19,343	19,281	17,165	19,006
# of countries	138	138	138	137	113	138
<i>R</i> ²	0.065	0.065	0.065	0.065	0.069	0.065

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

^aIncludes # of deaths, # of attacks, at least one attack successful, dummies for 9 attack types, 22 target types, 9 weapon types, and 4 dummies for whether there was a terrorist attack in this country 2 days before, the day before, the day after, and 2 days after the attack. ^bIncludes population size and fractions of Catholics, Muslims, and Protestants; includes fixed effects for years, months, and weekdays; includes GDP per capita, the Polity IV index, and the absence of press freedom.

3.4 Political Aspects

Table 5 shows a variety of additional estimations, focusing on the political environment of the attacked country. Given the fundamental role of 9/11 in the world of terrorism and especially for the US, columns (1) and (2) distinguish between attacks before that date and thereafter. The remaining regressions then incorporate ongoing conflicts in the attacked country, the overall terror risk in the country, the voting affinity of the attacked nation with the US in the United Nations, and the political orientation of the ruling government.

Starting with pre- and post-9/11, we can notice an interesting particularity. Suicide effects did receive more coverage than non-suicide attacks before September 11, 2001, but the quantitative interpretation of this coefficient is only about one third of the initial coefficient found in Table 2, column (6). Further, the role of geographical distance seems to matter only after 9/11, whereas before media coverage of terrorist strikes was not associated with distance to the US. Thus, media attention devoted to terrorist attacks may have changed systematically after the devastating incidents destroying the World Trade Center in New York, as the NYT is more alert about terrorism closer to the US.

Another characteristic that may well affect coverage of terrorism relates to conflicts in the country of attack. If a country is already experiencing systematic fighting and casualties, then the NYT may cover terrorism differently. A priori, one could think of two opposite intuitions. A terrorist attack may draw less attention with the conflict overshadowing terrorist activities or the international community may be paying extra attention to terrorist activity in a conflict zone. Empirically, the results in column (3) suggest that the answer depends on the conflict form.¹⁴ Experiencing an interstate armed conflict lowers media attention devoted to terrorist attacks, whereas an internal or an internationalized conflict raises coverage of terrorism.

Beyond armed conflicts, countries are categorized regarding their contemporaneous risk of terror by the US State Department. A terrorist attack may well receive more media attention if the a priori risk of attacks has been high in the first place. This is not particularly surprising, as one could argue that the attack has been expected to some degree, which could mean that reporters have already been on site, awaiting a potential story. In fact, including a variable

¹⁴Data source: the Uppsala Conflict Data Program, building on [Gleditsch et al. \(2002\)](#). Specifically, I use the UCDP/PRIO Armed Conflict Dataset v.4-2014, 1946 – 2013, where the variables *StartDate* and *EpEndDate* allow for an exact framing of each conflict by their start day and end day.

Table 5: Political aspects.

Dependent variable: NYT response (mean= 1.98)						
	(1)	(2)	(3)	(4)	(5)	(6)
Suicide attack	0.299** (0.118)	0.839** (0.353)	0.660** (0.320)	0.685** (0.323)	0.795** (0.320)	0.862*** (0.320)
Distance to US in 1,000 km	-0.009 (0.008)	-0.691*** (0.062)	-0.282*** (0.048)	-0.435*** (0.046)	-0.429*** (0.047)	-0.468*** (0.046)
Interstate armed conflict			-1.806*** (0.232)			
Internal armed conflict			0.317** (0.132)			
Internationalized conflict			1.306*** (0.148)			
Political terror scale				0.612*** (0.090)		
Voting affinity to US					0.935 (0.673)	
Leftist government						0.694*** (0.126)
Rightist government						-0.129 (0.138)
Attack features ^a	yes	yes	yes	yes	yes	yes
Societal & Time, Economic & Political Characteristics ^b	yes	yes	yes	yes	yes	yes
Continental fixed effects	yes	yes	yes	yes	yes	yes
<i>N</i>	3,566	15,773	19,343	19,343	19,174	19,343
# of countries	128	149	138	138	137	138
<i>R</i> ²	0.123	0.068	0.069	0.066	0.065	0.065

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

^aIncludes # of deaths, # of attacks, dummies for at least one attack successful, 9 attack types, 22 target types, 9 weapon types, and 4 dummies for whether there was a terrorist attack in this country 2 days before, the day before, the day after, and 2 days after the attack. ^bIncludes population size and fractions of

Catholics, Muslims, and Protestants;

includes fixed effects for years, months, and weekdays;

includes GDP per capita, the polity index, and the absence of press freedom.

measuring the risk of terror attacks may constitute an example of a “bad control” (Angrist and Pischke, 2008), as the variable in itself measures an outcome and therefore a potential combination of the other control variables, such as religious distributions or income levels. As expected, the classification of terrorist risk a priori is related to media attention devoted to realized attacks. The fact that suicide missions still emerge as a statistically significant predictor of media attention further underlines the robustness of that relationship.

In addition to domestic aspects, the political relationship with the US may well influence NYT coverage of a terrorist strike. Column (5) adds the affinity voting index derived by Strezhnev and Voeten (2012) to the list of regressors. The index ranges from zero to one, indicating how often the respective country votes in line with the US (variable *agree3un* in the initial data set). Previously, Dreher and Gassebner (2008) have pointed out that political proximity to the US may in itself raise the threat of terrorism. Regarding news coverage, the results displayed in Table 5 suggest that voting affinity with the US is unrelated to NYT reporting.

Column (6) then adds two binary variables measuring whether the ruling government in the attacked country can be categorized as a leftist or a rightist administration. The data are taken from Beck et al. (2001) and the omitted categories are centrist governments, as well as administrations, where this assignment is not clear.¹⁵ In their codebook, leftist administrations are defined as countries, where the main governing party can be labeled as “communist, socialist, social democratic, or left-wing.” On the other hand, countries governed by rightist parties are characterized as “conservative, Christian democratic, or right-wing.”¹⁶ Interestingly, the NYT seems to report substantially more on attacks in countries ruled by leftist governments at the time of the attack. In terms of magnitude, an attack in a country ruled by a leftist administration increases the media response by the NYT by almost the same rate as a suicide attack. Rightist administrations on the other hand do not seem to be a factor in predicting media response. Table 6 will return to the issue of leftist versus non-leftist governments. Notice that the implied link between suicide attacks and media attention remains robust, not only in terms of significance levels, but also from a quantitative perspective.

¹⁵Adding another binary variable for centrist governments does not change the derived conclusions.

¹⁶Data and codebook can be downloaded under the World Bank database of political institutions 2012 (updated Jan. 2013): <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html>.

Overall, and with these additional specifications in mind, not all terrorist attacks seem to be equal in terms of NYT coverage. In particular, suicide attacks are persistently receiving more coverage and so do attacks in countries ruled by leftist administrations. The following Section will now analyze these aspects in detail.

4 Special Cases: Suicide Attacks and Attacks Under Leftist Governments

4.1 Considering Particular Subsamples

Table 6 displays estimates from additional regressions, separating both along the lines of suicide versus non-suicide attacks and incidents occurring in countries ruled by leftist versus non-leftist administrations.

Starting with the distinction between suicide and conventional terror attacks, columns (1) and (3) replicate the baseline regression from Table 2, column (6). After that, columns (2) and (4) display the respective estimates from a fixed effects framework. These results show substantial differences in terms of NYT coverage. Conventional terrorist attacks are receiving more attention when conducted under a left-leaning government, but this does not seem to be the case for suicide attacks. However, a closer look at the estimates is important here. For instance, consider the derived coefficients for leftist governments in columns (2) and (4), the regressions incorporating country fixed effects. The magnitude of the coefficients are almost identical, but standard errors are increased by a factor of five when only considering suicide attacks. Indeed, only 13 percent of the suicide attacks (254 out of 1,956) were conducted in countries ruled by leftist governments at the time of the attack. Thus, the statistical variation may simply be insufficient to reveal the underlying relationship. However, the results from columns (1) through (4) do allow for a stronger conclusion regarding non-suicide attacks: these forms of terrorism are covered significantly more when conducted under leftist administrations, but significantly less when conducted under rightist governments.

Now consider subsamples separated by the political orientation of the ruling government in columns (5) through (8). First, suicide attacks are consistently receiving *less* attention when conducted in leftist nations, but substantially more coverage under non-leftist administrations.

Table 6: Suicide attacks and attacks in countries ruled by leftist administrations.

Dependent variable: NYT response (mean= 1.98)								
	Only Suicide Attacks		Only non-Suicide Attacks		Leftist Governments		Non-Leftist Governments	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Suicide attack					-0.624*	-0.413	1.000***	0.947***
					(0.336)	(0.337)	(0.373)	(0.332)
Leftist government	0.137	0.876	0.709***	0.871***				
	(0.665)	(0.760)	(0.131)	(0.155)				
Rightist government	2.169*	0.990	-0.215	-1.365***				
	(1.122)	(1.773)	(0.139)	(0.208)				
Distance to US in 1,000 km	-0.650**		-0.447***		-0.119		-0.503***	
	(0.290)		(0.046)		(0.095)		(0.052)	
Attack features ^a	yes	yes	yes	yes	yes	yes	yes	yes
Control variables ^b	yes		yes		yes		yes	
Year, month & weekday fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects		yes		yes		yes		yes
% of attack days under leftist administration	13	13	28	26	100	100	0	0
% of attack days with suicide attack	100	100	0	0	4	4	10	9
<i>N</i>	1,562	1,956	17,781	22,506	5,110	6,013	14,233	18,449
# of countries	40	48	139	160	60	67	114	135
<i>R</i> ²	0.117	0.108	0.067	0.086	0.125	0.131	0.063	0.073

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

^aIncludes # of deaths, # of attacks, dummies for suicide attacks, at least one attack successful, 9 attack types, 22 target types, 9 weapon types, and 4 dummies for whether there was a terrorist attack in this country 2 days before, the day before, the day after, and 2 days after the attack.

^bIncludes (following Table 2, column 6): population size, % Catholics, % Muslims, % Protestants, continental fixed effects, GDP per capita, the Polity IV index, and the absence of press freedom.

Thus, NYT coverage of terrorist strikes is markedly different, depending on the political orientation of the government in the country of the attack. Remember that the estimations displayed in columns (1), (3), (5), and (7) include all control variables from the benchmark regression, i.e. the Polity IV index measuring the degree of democracy and income levels, among others. Finally, notice that the geographical distance to the US remains stable as a negative predictor of NYT coverage with the exception of column (5), where the coefficient drops to 0.12.

4.2 Suicide Attacks Under Leftist Administrations

In addition to dividing the sample into strict subsamples, another possibility to analyze the underlying relationships in detail is to use the entire sample and introduce interaction terms. Specifically, Table 7 re-estimates the benchmark regression, including the binary variables measuring leftist and rightist administrations in the country of the attack and an interaction term with suicide attacks. Column (1) display results from using a fixed effects framework, whereas column (3) uses the control variables included in the baseline regression (Table 2, column 6). Columns (2) and (4) then add an interaction term with rightist governments.

The results show that, in general, suicide attacks are receiving more attention, but the anomaly of attacks under leftist administrations producing less coverage prevails. For instance, consider a suicide mission carried out in a country ruled by a leftist administration. Following column (1), the net effect from taking into account both the political orientation and the suicide mission produces a coefficient of 0.472 ($1.009 + 0.969 - 1.506$). The same attack under a central (or non-extreme) government would produce a coefficient of 1.009, producing over twice the media impact. These results are closely replicated in a fixed effects framework. Under a rightist government (column 2), on the other hand, the respective coefficient turns negative towards -0.7. However, this final conclusion is not confirmed when incorporating country fixed effects (column 4).

4.3 Oaxaca Decompositions

Why does NYT coverage differ so fundamentally along the lines of political orientation and suicide versus conventional attacks? This Section analyzes Oaxaca-Blinder decompositions for both aspects (political orientation and suicide versus non-suicide missions) to distinguish be-

Table 7: Interaction terms between political orientation and suicide attacks.

Dependent variable: NYT response (mean= 1.98)				
	(1)	(2)	(3)	(4)
Suicide attack	1.009*** (0.329)	1.066*** (0.364)	1.248*** (0.368)	1.252*** (0.411)
Leftist government	0.969*** (0.154)	0.972*** (0.154)	0.836*** (0.133)	0.836*** (0.133)
Rightist government	-1.291*** (0.208)	-1.282*** (0.208)	-0.097 (0.137)	-0.096 (0.139)
Leftist government × Suicide attack	-1.506*** (0.402)	-1.561*** (0.429)	-2.618*** (0.428)	-2.622*** (0.459)
Rightist government × Suicide attack		-0.500 (0.610)		-0.030 (0.694)
Attack features ^a , year, month & week-day fixed effects	yes	yes	yes	yes
Country fixed effects	yes	yes		
Additional controls ^b			yes	yes
<i>N</i>	24,462	24,462	19,343	19,343
<i>R</i> ²	0.083	0.083	0.066	0.066

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

^aIncludes # of deaths, # of attacks, dummies for suicide attacks, at least one attack successful, 9 attack types, 22 target types, 9 weapon types, and 4 dummies for whether there was a terrorist attack in this country 2 days before, the day before, the day after, and 2 days after the attack. ^bRegressions include (as in Table 2, column 6) population size, % Catholics, % Muslims, % Protestants, distance to the US (in 1,000 km), continental fixed effects, GDP per capita, the Polity IV index, and the absence of press freedom.

tween the causes of these differences. For instance, it may be that suicide attacks receive more coverage because they also tend to produce significantly more casualties. Within the sample, the average number of casualties from suicide attacks is 14, whereas that number is markedly lower for non-suicide attacks with about four. Even though including the number of victims in the analysis is able to control for these differences and therefore for their respective link to the dependent variable (NYT response), the decomposition allows for different coefficients of all control variables. For instance, it is possible that victims of suicide attacks are receiving more coverage than victims of conventional terrorist attacks.

Table 8 displays the main findings from these estimations, using non-suicide attacks as the reference point. Columns (1) through (3) distinguish suicide versus non-suicide attacks and we can see a substantial raw difference in the NYT response rate between 1.861 and 3.068. Overall, suicide attacks are receiving more attention than non-suicide attacks. So, what explains this difference? The decomposition built on the baseline regression in column (1) suggests that coefficients are able to explain over 76 percent of the raw gap (0.925 of 1.207) and this result is statistically significant on the one percent level. Thus, the various characteristics associated with attacks are *valued differently* for suicide attacks than for non-suicide missions by the NYT.

The estimate associated with endowments displays the plain difference in characteristics between the two types of terrorist attacks. Although the coefficient is even higher here, there is no statistical evidence for suicide attacks receiving more attention *because of* their parameters, such as the number of victims. This means that reporting about suicide attacks is higher because of the NYT response to the control variables, but not because suicide attacks are inherently different from non-suicide attacks. Notice that including further control variables in column (2), namely the variables found important in the additional estimations presented above, marginally changes this finding, but the general conclusion remains. Finally, adding regional fixed effects instead of continental dummies in column (3) further solidifies that finding: suicide attacks are receiving more attention because the NYT responds differently to them, i.e. the coefficients are different, and not because suicide attacks are inherently different from conventional terrorist attacks (endowments).¹⁷ Given that the Oaxaca decomposition requires enough variation in

¹⁷The regional fixed effects include dummies for North America, Central America & Caribbean, South America, East Asia, Southeast Asia, South Asia, Central Asia, Western Europe, Eastern Europe, Middle East & North Africa, Sub-Saharan Africa, Russia & the Newly Independent States, and Australasia & Oceania.

terms of suicide and non-suicide attacks for every explanatory variable, using country fixed effects here would lead to a substantial loss of observations.

Columns (4) through (6) then distinguish between attacks in countries ruled by leftist and non-leftist administrations. Here, the raw difference is not as stark (0.584), but still remarkable with attacks in countries ruled by leftist administrations receiving more coverage. Contrary to suicide versus non-suicide attacks, however, both endowments and coefficients are statistically meaningful at first (columns 4 and 5). However, including regional fixed effects in column (6) then also suggests that attacks under leftist administrations are inherently treated differently (coefficients matter) and this difference in media response is unlikely to be traced back to different characteristics of attacks under leftist versus non-leftist governments.

From predicting media coverage of terrorist attacks, the paper now moves towards testing whether this NYT response rate is able to predict future attacks.

5 Empirical Findings: Predicting Future Attacks

One immediate fear after observing a terrorist attack centers around the question whether one should expect more. Unfortunately, most terrorist attacks do not remain an isolated incident. In fact, throughout the GTD sample from 1998 to 2012, the probability of another attack in the same country within seven days stands at an astonishing 77 percent (see Table 1). One question is then if we can identify indicators that would tell us whether a future attack is likely to occur. Specifically, Tables 9 and 10 evaluate whether the media attention devoted to the initial attack is in any way indicative of future attacks. Remember that the variable measuring media attention only consists of the relative change in coverage from the day before the attack to the day after. Thus, any statistical noise in the days before or thereafter is filtered out by this variable.

In terms of the regression outline, one should be sure to incorporate any other potential determinants of terrorism. First, I include the initial attack features (as above minus the binary variables for attacks in the following two days), the societal characteristics (population size and religious fractions), weekday, month, and regional fixed effects, and income levels. See footnote 17 for a list of regions. The reason for using the somewhat broader measurement of regional

Table 8: Results from Oaxaca decompositions.

Dependent variable: NYT response (mean= 1.98)						
	(1)	(2)	(3) ^f	(4)	(5)	(6) ^f
Prediction NYT response suicide attack	3.068*** (0.314)	3.058*** (0.316)	3.058*** (0.316)			
Prediction NYT response non-suicide attack	1.861*** (0.067)	1.884*** (0.068)	1.884*** (0.068)			
Prediction NYT response leftist				2.388*** (0.147)	2.383*** (0.148)	2.383*** (0.148)
Prediction NYT response non-leftist				1.804*** (0.073)	1.831*** (0.075)	1.831*** (0.075)
Difference	1.207*** (0.321)	1.174*** (0.323)	1.174*** (0.323)	0.584*** (0.164)	0.552*** (0.165)	0.552*** (0.165)
Endowments ^a	1.053 (1.268)	1.234 (1.290)	0.551 (1.329)	1.349*** (0.354)	1.139** (0.533)	1.209 (1.305)
Coefficients ^b	0.925*** (0.339)	0.668* (0.343)	0.757** (0.344)	1.292*** (0.199)	1.705*** (0.235)	1.488*** (0.250)
Interaction ^c	-0.771 (1.272)	-0.728 (1.295)	-0.134 (1.334)	-2.057*** (0.372)	-2.292*** (0.559)	-2.144 (1.319)
Control variables 1 ^d	yes	yes	yes	yes	yes	yes
Control variables 2 ^e		yes	yes		yes	yes
N	19,343	18,944	18,944	19,343	18,944	18,944

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

^a The portion of the pure difference in NYT response owed to endowments, i.e. the remaining explanatory variables from Table 2, column (6).

^b The portion of the pure difference in NYT response owed to coefficients, i.e. the coefficients associated with the control variables.

^c The portion of the pure difference in NYT response owed to the combination of endowments and coefficients.

^d Includes all variables from Table 2, column (6).

^e Variables found to be significant in Tables 4 and 5:

Exports to and imports from the US, natural resources, foreign direct investment, conflict dummies, and political terror risk.

^f Columns (3) and (6) contain 13 regional fixed effects instead of continental dummies.

fixed effects simply relates to the fact that numerous countries experienced very few and isolated incidents, which means that the outcome variable for that country always takes on the value of zero in a logit framework. Thus, including country fixed effects would eliminate these nations from the analysis, leaving no statistical variation.

In addition, the estimations include a proxy for educational development (duration of primary schooling), an index for civil liberties, language fractionalization, and binary variables for several forms of armed conflicts (interstate, internal, and internationalized). The inclusion of these variables follows [Krueger and Malečková \(2003\)](#) and [Abadie \(2006\)](#), who have found these factors to be closely associated with the occurrence of terrorist activities. Results are robust to substituting the Polity IV index for the variable measuring civil liberties (both variables are highly correlated with a coefficient of 0.92). Similarly, using a different proxy for educational attainment, such as the duration of secondary schooling, leaves the results virtually unchanged.

5.1 The Probability Of Another Attack Within 7 Days

Table 9 displays the results from six logit specifications, estimating the probability of another attack day within seven days of the initial incident(s). If the attacked country experienced another terrorist attack within that timeframe the variable is coded as a one and otherwise as a zero. All displayed coefficients represent marginal effects, meaning that, for any derived coefficient $\hat{\beta}$, a one unit change in the independent variable is associated with a $\hat{\beta} \times 100$ percentage point change of the probability of an attack within seven days.

Indeed, it appears as if media attention can predict future attacks, as the coefficient of the NYT response rate is positive and significant throughout all estimations. Moving from a univariate regression framework in column (1) over adding attack features in (2), societal characteristics in (3), regional and time fixed effects in (4), and several economic and political characteristics in the final two columns, the derived coefficient eventually settles around 0.0007. This means that a one standard deviation in media attention (9.31) would increase the probability of another attack within a week by about 0.65 percent. Although the magnitude here is negligible, conventional levels of statistical importance suggest that media attention may be able to predict future attacks.

Beyond media attention, suicide attacks are highly predictive of another attack soon. Thus,

Table 9: Results from logit regressions, predicting future attacks in the same country.

Dependent variable: Probability of another attack within 7 days (mean= 0.77)						
	(1)	(2)	(3)	(4)	(5)	(6)
NYT response	0.0034*** (0.0004)	0.0020*** (0.0004)	0.0011*** (0.0003)	0.0012*** (0.0003)	0.0009*** (0.0003)	0.0007** (0.0003)
<i>Attack Features</i>						
Suicide attack		0.0901*** (0.0127)	0.0741*** (0.0123)	0.0687*** (0.0119)	0.0539*** (0.0119)	0.0323*** (0.0117)
# of deaths		-0.0003 (0.0002)	-0.0004* (0.0002)	-0.0004** (0.0002)	-0.0003 (0.0002)	-0.0004* (0.0002)
# of attacks		0.0059 (0.0071)	0.0048 (0.0067)	0.0063 (0.0065)	0.0052 (0.0058)	0.0054 (0.0059)
At least one attack successful		0.0281*** (0.0090)	0.0128 (0.0088)	0.0026 (0.0088)	0.0032 (0.0087)	0.0011 (0.0085)
Attack, target, and weapon type fixed effects ^a		yes	yes	yes	yes	yes
<i>Societal Characteristics</i>						
Population size			0.0488*** (0.0019)	0.0382*** (0.0022)	0.0631*** (0.0028)	0.0671*** (0.0029)
% Catholic			-0.0002** (0.0001)	-0.0002* (0.0001)	0.0002 (0.0001)	0.0001 (0.0001)
% Muslim			0.0007*** (0.0001)	0.0006*** (0.0001)	-0.0008*** (0.0001)	-0.0011*** (0.0001)
% Protestant			-0.0050*** (0.0004)	-0.0028*** (0.0004)	-0.0012*** (0.0004)	-0.0016*** (0.0004)
<i>Geographic & Time Characteristics</i>						
Regional ^b , month and weekday fixed effects				yes	yes	yes
<i>Economic Characteristics</i>						
GDP per capita					0.0520*** (0.0052)	0.0552*** (0.0051)
Years of primary schooling					0.0611*** (0.0059)	0.0531*** (0.0061)
Absence of civil liberties					0.0797*** (0.0040)	0.0679*** (0.0041)
Language fractionalization					0.1126*** (0.0183)	-0.0073 (0.0196)
Interstate conflict						-0.0821*** (0.0115)
Internal conflict						0.0677*** (0.0074)
Internationalized conflict						0.1073*** (0.0092)
<i>N</i>	24,405	24,403	23,621	23,621	21,530	21,530
# of countries	161	161	146	146	137	137

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, ***. ^aIncludes dummies for 9 attack types, 22 target types, and 9 weapon types. ^bIncludes dummies for 13 regions.

once a country experiences suicide missions the danger of future incidents increases. As before, the remaining attack features are mostly negligible in their statistical importance, with the exception of the number of casualties. It appears as if a bigger number of victims serves as deterrence for future attacks, decreasing the odds of a new attack within the next week. Bigger countries are subject to a higher likelihood of new attacks, everything else equal. Similar conclusions can be drawn for richer and more educated nations – further emphasizing the fact that terrorists are not necessarily poor or uneducated, confirming findings by [Krueger and Malečková \(2003\)](#), [Abadie \(2006\)](#), and [Krueger and Laitin \(2008\)](#). Also in line with the chorus of their findings is the coefficient on the variable measuring the absence of civil liberties. With less civil liberties in a society comes a higher chance of terrorism, especially given an initial attack. Finally, the estimates related to religious groups are interesting, as a higher share of Muslims in society is associated with a *smaller* likelihood of future attacks. This is particularly interesting in light of various papers and mainstream articles relating religion to terrorism (e.g., see [Ginges et al., 2009](#)).

5.2 The Number Of Days Until The Next Attack

Another option to measure the occurrence of future attacks is simply to count the days until the next attack in that country. [Table 10](#) displays the results from several negative binomial regressions, estimating the number of days until the next attack day in the same country. The regressions follow the same succession of control variables as [Table 9](#). To alleviate the potential influence of countries where attacks only occurred on a very limited basis, all observations, where the number of days until the next attack(s) lies more than two standard deviations beyond the mean are excluded.¹⁸ However, the derived results are robust to using the full sample.

As in [Table 9](#), the coefficient on the NYT response rate is statistically significant. The negative sign allows for the same conclusion as in the logit regressions: more media attention is related to a new attack sooner. In particular, the more media coverage an attack receives, the less days pass until the next attack in that country. In addition, the remaining coefficients confirm the findings derived in [Table 9](#). Notice that all signs are reversed, given that [Table 10](#) is

¹⁸The overall mean number of days until the next attack in the same country is 23 days with a standard deviation of 131.43. Thus, all attacks, where the next attack in the same country does not happen within 285 days is excluded from this analysis.

Table 10: Negative binomial regressions estimating the number of days until the next terror attack in the attacked country.

Dependent variable: # of days until next attack in this country (mean= 23.01)						
	(1)	(2)	(3)	(4)	(5)	(6)
NYT response	-0.014*** (0.002)	-0.009*** (0.002)	-0.007*** (0.001)	-0.006*** (0.001)	-0.006*** (0.001)	-0.003*** (0.001)
<i>Attack Features</i>						
Suicide attack		-0.324*** (0.068)	-0.167** (0.083)	-0.282*** (0.058)	-0.225*** (0.059)	-0.117** (0.052)
# of deaths		0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
# of attacks		-0.014 (0.014)	-0.019 (0.015)	-0.022 (0.015)	-0.024 (0.017)	-0.025 (0.017)
At least one attack successful		-0.127** (0.056)	-0.088 (0.059)	-0.038 (0.054)	-0.018 (0.054)	-0.017 (0.055)
Attack, target, and weapon type fixed effects ^a		yes	yes	yes	yes	yes
<i>Societal Characteristics</i>						
Population size			-0.278*** (0.013)	-0.228*** (0.012)	-0.312*** (0.015)	-0.374*** (0.015)
% Catholic			0.002*** (0.001)	-0.001* (0.001)	-0.001* (0.001)	-0.002*** (0.001)
% Muslim			-0.005*** (0.000)	-0.003*** (0.000)	0.002*** (0.001)	0.003*** (0.001)
% Protestant			0.031*** (0.002)	0.019*** (0.002)	0.014*** (0.002)	0.016*** (0.003)
<i>Geographic & Time Characteristics</i>						
Regional ^b , month and weekday fixed effects				yes	yes	yes
<i>Economic Characteristics</i>						
GDP per capita					-0.172*** (0.037)	-0.334*** (0.033)
Years of primary schooling					-0.237*** (0.038)	-0.217*** (0.038)
Absence of civil liberties					-0.353*** (0.028)	-0.332*** (0.028)
Language fractionalization					-1.262*** (0.118)	-0.323*** (0.125)
Interstate conflict						0.371*** (0.052)
Internal conflict						-0.588*** (0.054)
Internationalized conflict						-0.749*** (0.055)
<i>N</i>	23,902	23,900	23,151	23,151	21,088	21,088
# of countries	131	131	119	119	114	114

Notes: White robust standard errors in parentheses. ⁴¹ * $p < 0.10$, ** $p < 0.05$, ***. ^aIncludes dummies for 9 attack types, 22 target types, and 9 weapon types. ^bIncludes dummies for 13 regions.

predicting the number of days until the next attack, whereas Table 9 estimates the probability of another attack within seven days' time.

6 Conclusion

If a main purpose of terrorism is to draw public attention, to generate mass hysteria and fear, then media coverage is exactly what terrorists are seeking to promote their agenda. This article introduces a new data set producing a systematic measurement for the media response rate to terrorist attacks by the New York Times (NYT). The paper presents a systematic analysis of the factors associated with that NYT response rate. I broadly group these characteristics into features related to (i) the attack, (ii) society, (iii) geography, (iv) time, (v) economics, and (vi) politics. Several noteworthy results emerge.

First, suicide missions receive more attention than non-suicide missions, everything else equal. This finding is statistically significant and prevails throughout the addition of numerous control variables, but also the inclusion of country fixed effects and country specific time trends. Suicide attacks may have become so popular amongst terrorist organizations because they guarantee more media hype, as implied by Hoffman (2003). Using an Oaxaca-Blinder decomposition shows that suicide attacks are not receiving more coverage because of their characteristics (e.g., more casualties), but rather because of the fact that they are suicide attacks.

Second, any terrorist attack in a country located further away from the US systematically receive less attention in the NYT. This result is particularly striking and provides us with an insight that is not only related to terrorism, but also to our general understanding of what matters to the representative reader of the NYT. Previously, geographical proximity has been suggested to matter in military interventions (see Duque et al., 2014) and one potential reason may be that we simply care more about events happening closer to us. This paper provides evidence for that claim, as the distance finding is robust to including a number of alternative explanations. Given that the NYT response rate is measured relative to an average day of reporting about that country, the analysis controls for the general number of reporters in a country, which could be higher in countries closer to the US.

Third, and somewhat surprisingly, the NYT seems to report *less* on incidents occurring in

religious countries. This conclusion not only applies to countries that are mainly Muslim, but also to Catholic and Protestant societies. This result is intriguing and may merit a more detailed analysis in the future.

Fourth, several political characteristics of the attacked country are related to media coverage of terrorist strikes. The NYT devotes less attention to attacks in democratic nations, but is particularly attentive to terrorism in countries governed by leftist administrations. The positive statistical effect of an attack carried out in a country ruled by a leftist administration on the NYT response rate is roughly equivalent to the effect of a suicide attack. Interestingly, suicide attacks in countries ruled by leftist administrations do *not* receive more attention. In other words, either a suicide mission or a leftist administration guarantees more coverage, but not if both are true (suicide and leftist). In turn, I find weak evidence for attacks in countries under rightist administrations receiving *less* attention.

Fifth and final, economic aspects of the attacked nation matter. Media response is higher for attacks in poorer nations and the bilateral economic links between the attacked country and the US matters as well. The NYT reports relatively more on attacks in countries with which the US maintains stronger trade relationships, but also if countries display a higher importance of natural resources or foreign direct investment. This finding is not necessarily surprising, as it is understandable that US citizens have a stronger interest to be informed about terrorism in countries with which the US is more involved economically. The finding regarding the importance of natural resources, on the other hand, is interesting and further contributes to the literature on the extraordinary role of natural resources in the global economy. Interestingly, oil rents are unrelated to NYT coverage of terrorism.

Finally, the paper closes with an analysis estimating the probability of future attacks in the attacked countries. The results suggest that media attention does indeed predict future terrorist activities, confirming previous findings by [Rohner and Frey \(2007\)](#).

Fruitful avenues for future research may be a closer look into the relationship between the political orientation of the attacked country's government and media response to terrorist activities. In addition, analyses on regional levels, such as for the Middle East, may allow for a more detailed search mechanism and therefore be able to not only assess media attention in general, but also whether the attention can be categorized as condemning, simply reporting, or

even rationalizing attacks and emphasizing the terrorists' agenda.

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Appendix

The appendix contains three tables. First, Table [A1](#) lists all 161 sample countries with their number of attack days, the respective percentage of those days that witnessed suicide attacks, and the average NYT response rate. Table [A2](#) shows alternative specifications using different definitions of terrorism (provided by the GTD), but also adding other explanatory variables.

Specifically, column (4) adds fuel exports (as a percentage of merchandise exports) to the list of regressors. Notice that this leads to a loss of almost 50 percent of the sample (10,391 observations instead of 19,343). In fact, the coefficient on suicide attacks turns statistically insignificant. However, column (5) shows that this loss of statistical importance can be traced back to the substantial loss of observations, as re-running the initial specification from column (6), Table [2](#), also produces an insignificant coefficient when only using those observations, where fuel exports are available. Thus, it is not the addition of the variable fuel exports, but rather the substantial loss of data that produces the insignificant coefficient in column (4). Finally, column (6) incorporates the urbanization rate as an independent variable, as potentially attacks in largely urbanized countries may draw more attention. Note that this is only the urbanization rate of the entire country, but not the degree of urbanization of the city of attack. Urbanization of the country then plays no role in explaining the NYT response rate and the main coefficients remain virtually unchanged.

Table A1: Sample Countries (January 1, 1998 – December 31, 2012)

Countries	# of attack days	% suicide attacks	NYT response	Countries	# of attack days	% suicide attacks	NYT response
Africa							
Algeria	590	0.03	0.58	India	539	0.02	4.55
Nigeria	312	0.02	0.29	Philippines	524	0.00	0.70
Somalia	307	0.03	0.17	Russian Federation	496	0.05	12.71
Sudan	182	0.01	0.33	Thailand	423	0.00	2.06
Uganda	118	0.00	0.99	Afghanistan	381	0.15	2.56
Congo, Dem. Rep.	112	0.00	0.19	Pakistan	378	0.09	0.69
Burundi	108	0.00	0.03	Sri Lanka	361	0.13	0.85
Kenya	99	0.01	0.55	Nepal	332	0.00	0.98
Angola	92	0.00	0.05	West Bank & Gaza	320	0.09	0.31
Egypt, Arab Rep.	57	0.05	5.37	Israel	309	0.20	2.38
South Africa	47	0.00	4.08	Turkey	301	0.05	2.04
Ethiopia	37	0.00	0.61	Yemen, Rep.	227	0.10	1.42
Senegal	34	0.00	0.85	Indonesia	226	0.04	0.43
Mali	30	0.00	0.77	Iraq	198	0.22	7.15
Libya	29	0.00	0.61	Lebanon	163	0.02	0.26
Niger	26	0.00	0.48	Bangladesh	161	0.02	0.84
Rwanda	26	0.00	0.15	Iran, Islamic Rep.	96	0.08	0.25
Chad	26	0.00	0.46	Syrian	72	0.14	4.96
Central Afr. Rep.	26	0.00	0.10	Myanmar	71	0.00	8.75
Namibia	24	0.00	-0.04	China	50	0.18	0.16
Cambodia	24	0.00	-0.01	Saudi Arabia	46	0.13	0.19
Cote d'Ivoire	22	0.00	0.16	Tajikistan	32	0.03	0.00
Sierra Leone	20	0.00	0.05	Bahrain	21	0.00	0.26
Zimbabwe	18	0.00	0.25	Kyrgyz Republic	18	0.00	-0.11
Mauritania	13	0.23	0.08	Japan	16	0.00	3.21
Liberia	12	0.00	0.00	Jordan	15	0.07	0.16
Congo, Rep.	12	0.00	0.17	Kazakhstan	11	0.18	-0.14
Tanzania	11	0.00	0.19	Malaysia	10	0.00	1.33
Tunisia	9	0.11	0.52	Timor-Leste	10	0.00	0.00
Guinea	8	0.00	0.00	Lao PDR	10	0.00	0.00
Cameroon	8	0.00	-0.06	Kuwait	9	0.00	0.17
Madagascar	7	0.00	1.21	Uzbekistan	8	0.50	-0.13
Swaziland	6	0.00	0.00	Bhutan	5	0.00	22.71
South Sudan	5	0.00	0.15	Hong Kong	5	0.00	0.13
Zambia	5	0.00	0.00	Macao	4	0.00	0.00
Mozambique	5	0.00	1.23	Vietnam	4	0.00	0.00
Guinea-Bissau	5	0.00	0.00	Qatar	3	0.33	0.33
Eritrea	4	0.00	0.00	Maldives	3	0.00	0.30
Morocco	4	0.75	13.96	Korea, Rep.	3	0.00	10.05
Lesotho	2	0.00	0.00	Turkmenistan	1	0.00	0.00
Togo	1	0.00	-0.50	United Arab Em.	1	0.00	2.00
Gambia, The	1	0.00	0.00				
Djibouti	1	0.00	0.00				
Equatorial Guinea	1	0.00	0.00				
Benin	1	0.00	0.00				
Malawi	1	0.00	0.00				

Table A.1 continued: Sample Countries (January 1, 1998 – December 31, 2012)

Countries	# of attack days	% suicide attacks	NYT response	Countries	# of attack days	% suicide attacks	NYT response
Europe							
United Kingdom	333	0.01	2.43	Mexico	54	0.00	3.80
Spain	225	0.00	4.37	Canada	27	0.00	3.69
Greece	195	0.01	1.51	Haiti	23	0.00	0.01
France	184	0.01	3.37	Honduras	7	0.00	0.36
Kosovo	104	0.00	0.20	Puerto Rico	5	0.00	-0.10
Georgia	100	0.00	1.67	Trinidad & Tob.	3	0.00	-0.22
Italy	71	0.01	3.47	Panama	2	0.00	3.00
Macedonia, FYR	49	0.02	0.12	Cuba	1	0.00	1.50
Ireland	45	0.00	5.64	Belize	1	0.00	0.00
Germany	43	0.02	7.68	St. Lucia	1	0.00	0.00
Bosnia & Herz.	28	0.00	0.11				
Ukraine	21	0.00	-0.02	South America & Caribbean			
Serbia	20	0.00	0.88	Colombia	551	0.00	0.90
Sweden	14	0.07	-0.05	Peru	36	0.00	0.26
Netherlands	14	0.00	0.13	Chile	35	0.00	0.59
Albania	13	0.00	-0.08	Venezuela, RB	23	0.00	0.26
Switzerland	12	0.00	0.15	Ecuador	21	0.00	0.34
Belgium	12	0.00	0.20	Argentina	14	0.00	1.27
Azerbaijan	11	0.00	0.00	Brazil	14	0.00	2.83
Belarus	10	0.00	0.25	Guatemala	10	0.00	0.22
Latvia	10	0.00	-0.15	Paraguay	9	0.00	0.22
Bulgaria	10	0.10	1.43	Bolivia	8	0.00	1.54
Croatia	9	0.00	0.03	Guyana	7	0.00	0.05
Austria	9	0.00	0.85	Nicaragua	2	0.00	0.00
Armenia	9	0.00	0.00	Jamaica	1	0.00	-0.50
Cyprus	7	0.00	-0.05	Costa Rica	1	0.00	0.00
Czech Republic	6	0.00	0.75	Uruguay	1	0.00	0.00
Norway	6	0.00	0.44				
Denmark	4	0.25	-0.16	Oceania			
Moldova	4	0.00	0.00	Australia	13	0.00	4.37
Slovak Republic	4	0.00	-0.17	New Zealand	5	0.00	0.90
Hungary	4	0.25	-0.60	Solomon Islands	4	0.00	0.00
Estonia	3	0.00	0.67	Fiji	4	0.00	-0.13
Poland	3	0.00	1.33	Papua New Guinea	2	0.00	-0.25
Finland	2	0.50	0.25				
Montenegro	2	0.00	0.00				
Portugal	1	0.00	-0.38				
Slovenia	1	0.00	0.00				
Iceland	1	0.00	0.00				
Romania	1	0.00	1.00				

Table A2: Alternative specifications II, building on column (6) of Table 2.

Dependent variable: NYT response (mean= 1.98)						
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Attack Features</i>						
Suicide attack	0.776* (0.397)	0.853* (0.446)	0.788* (0.412)	0.622 (0.466)	0.685 (0.469)	0.895** (0.398)
# of deaths	0.003 (0.009)	0.002 (0.009)	0.003 (0.009)	0.001 (0.009)	0.004 (0.009)	0.001 (0.009)
# of attacks	-0.148 (0.107)	-0.101 (0.133)	-0.136 (0.106)	-0.069 (0.164)	-0.059 (0.164)	-0.139 (0.105)
success	-0.375 (0.405)	-0.030 (0.413)	-0.185 (0.403)	-0.175 (0.431)	-0.216 (0.432)	-0.248 (0.391)
Attack, target, and weapon type fixed effects ^a	yes	yes	yes	yes	yes	yes
<i>Societal Characteristics</i>						
Population size	0.394*** (0.086)	0.336*** (0.091)	0.386*** (0.086)	0.571*** (0.097)	0.541*** (0.098)	0.415*** (0.092)
% Catholic	-0.023*** (0.004)	-0.019*** (0.004)	-0.024*** (0.004)	-0.020*** (0.004)	-0.023*** (0.004)	-0.025*** (0.004)
% Muslim	-0.029*** (0.003)	-0.021*** (0.003)	-0.029*** (0.003)	-0.028*** (0.003)	-0.028*** (0.003)	-0.030*** (0.003)
% Protestant	-0.025* (0.014)	-0.015 (0.018)	-0.022 (0.016)	-0.041** (0.017)	-0.034* (0.017)	-0.024 (0.016)
<i>Geographical Characteristics</i>						
Distance from US in 1,000 km	-0.720*** (0.069)	-0.504*** (0.068)	-0.741*** (0.070)	-0.418*** (0.070)	-0.626*** (0.069)	-0.712*** (0.090)
Continental fixed effects	yes	yes	yes	yes	yes	yes
<i>Time Characteristics</i>						
Year & weekday fixed effects	yes	yes	yes	yes	yes	yes
<i>Economic & Political Characteristics</i>						
GDP per capita	-0.547*** (0.127)	-0.341** (0.135)	-0.602*** (0.129)	-0.078 (0.145)	-0.112 (0.147)	-0.634*** (0.165)
Polity IV index	-0.752*** (0.089)	-0.678*** (0.096)	-0.749*** (0.090)	-0.334*** (0.097)	-0.590*** (0.093)	-0.769*** (0.087)
Absence of press freedom	-0.104*** (0.015)	-0.087*** (0.016)	-0.103*** (0.015)	-0.073*** (0.016)	-0.082*** (0.016)	-0.104*** (0.015)
Fuel exports				0.031*** (0.005)		
Urbanization rate						0.004 (0.012)
<i>N</i>	12,167	9,074	12,253	10,391	10,391	12,863
<i>R</i> ²	0.070	0.078	0.069	0.082	0.079	0.070

Notes: White robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

^aIncludes dummies for 9 attack types, 22 target types, 9 weapon types, and 4 dummies for whether there was a terrorist attack in this country 2 days before, the day before, the day after, and 2 days after the attack.

^bColumn (1):: Only using incidents where an act of terrorism was not in doubt (GTD definition, variable *doubtterr* = 0). (2): Using criteria 1 (GTD, variable *crit1* = 1) to define terrorism attacks (political, economic, religious, or social goal).

(3): Using criteria 2 (GTD, *crit2* = 1) to define terrorism (intention to coerce, intimidate or publicize to larger audience(s)).

(4): Using criteria 3 (GTD; *crit3* = 1) to define terrorism (outside international humanitarian law).

(5): Adding fuel exports as explanatory variable (losing 8,952 observations, over 46.3% of the data).

(6): Using same sample as in (4) without including fuel exports as variable.

(7): Adding the urbanization rate as regressor.