

# Guilt by Association: The Effects of Terrorism on Corporate Activity

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24 August 2018

## Abstract

By exploiting variation in nationalities of foreign victims in local terror attacks, we identify distortionary effects of terrorism on country image, trade relations and corporate sales to foreign countries. Effects of terrorism are economically and statistically significant, persistent, and more pronounced after attacks with casualties and high levels of foreign media coverage. “Guilty-by-association” firms, i.e., local country firms whose names resemble names from their countries of origin, are particularly affected through greater deteriorations in foreign segment sales. Distortions driven by terrorist activities also influence overall firm value, asset growth, and profitability.

*JEL* codes: G30, F50, M38, L14, L82.

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Since the turn of the century, the number of terror attacks has more than quadrupled, and terrorism has become one of the most complex problems facing countries around the world (Gould and Klor 2010). Recent studies identify significant effects of terrorism on local companies along with local income, growth, politics, tourism, real estate markets, and foreign direct investments.<sup>1</sup> Nevertheless, very little attention has been paid to the question of whether terrorism affects multinational corporations of victim countries and their activities abroad. The lack of research on this subject is surprising given that the answer to this question is important not only to companies, but also to investors, academics, and governments.

Terrorism may impact multinational corporations of victim countries in multiple ways. Longer delays at airports, seaports, and land-border crossings due to security checks, higher expenditures on security equipment and personnel, and increased insurance fees may significantly distort their foreign sales (Walkenhorst and Dihel 2002; Bandyopadhyay, Sandler, and Younas 2018).<sup>2</sup> Since terror events indicate increasing risk and worsening economic conditions, victim country governments may find it more difficult to negotiate trade and customs union agreements, which may also hamper corporate sales overseas. Additionally, terror events may significantly distort country-of-origin image, which is an established factor shaping consumers' purchase decisions (Armington 1969; Kotler and Gertner 2002; Chernatony and McDonald 2003; Chisik 2003; Michaels and Zhi 2010; Cage and Rouzet 2015).

This paper is the first to study how terrorism affects multinational corporations using data on foreign segment sales and assets, and by paying particular attention to firm-level exposures

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<sup>1</sup> It has been argued that because terrorism destroys a small capital stock, it should not have large and long-lasting effects on victim countries (Mill 1848; Becker and Murphy 2001). Recent studies, however, identify significant effects of terrorism on income (Abadie and Gardeazabal 2003), growth (Blomberg, Hess and Orphanides 2004; Tavares 2004; Ahern 2018), politics (Gould and Klor 2010), tourism (Enders, Sandler, and Parise 1992), real estate markets (Glaeser and Shapiro 2002; Abadie and Gardeazabal 2008; Besley and Mueller 2012), and foreign direct investments (Abadie and Gardeazabal 2008). Additional research on the motivational drivers of terror events and human capital costs of terrorist activities for the terrorist groups include Benmelech and Berrebi (2007), and Benmelech and Klor (2018).

<sup>2</sup> A short list of security provisions and regulations in the United States after September 11 attacks includes the Advance Electronic Information Manifest, the Bioterrorism Act, the Customs-Trade Partnership Against Terrorism (C-TPAT), the Container Security Initiative (CSI), the International Ship and Port Facility Security (ISPS Code) and the Maritime Transportation Security Act (MTSA). Trade experts estimate that costs of these additional security measures reached 3% of the total value of goods being traded by the United States (Walkenhorst and Dihel 2002).

to country image. As an identification methodology, we use terror attacks that target citizens of local countries (local-target countries, hereafter) but also end up hurting citizens of foreign countries (foreign-victim countries, hereafter). These attacks are carried out by local actors, and they have defined local targets, e.g., local governments, educational institutions, police, religious figures, and the like. Nevertheless, they end up also hurting and even sometimes killing citizens of foreign countries. They are difficult to predict not only in terms of time and place, but also in terms of the *nationalities* of foreign citizens they impact. This very feature allows us to form treatment and control groups and pin down effects of terrorism on corporate outcomes.

We run difference-in-differences regressions on firms' foreign segment sales, in which the first difference is between foreign-victim country segments and unaffected foreign country segments, and the second difference is in the event time. For example, if an Austrian citizen gets killed in a terror attack targeting the police in Turkey, we study Turkish firms' sales in Austria against their sales in unaffected foreign countries before and after the attack.

In so doing, we find a 17.75% decrease in segment sales (i.e., asset turnover ratio with total firm assets as the denominator) and a 21.18% decrease in segment assets (also deflated by total firm assets) after terror attacks relative to sample means. These effects are strong for firms in consumer goods sectors<sup>3</sup> and robust to an array of firm and firm-segment controls along with rich fixed effects structures. In our main specification, we use firm-segment and year fixed effects, which allow us to study time-series variation within each firm-segment. These fixed effects also absorb fixed cultural, religious, and ethnic similarities between countries along with geographic distances.

Additionally, we correct for industry  $\times$  year, foreign-victim country  $\times$  year plus local-target country  $\times$  year, and firm  $\times$  year plus foreign-victim country  $\times$  year interactive fixed effects. These absorb time-varying country-specific effects such as economic cycles, political outcomes, and terror exposures. They also absorb industry-year shocks and allow us to compare

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<sup>3</sup> We study the effects across different industries and identify significant (economically and statistically) impacts on firms in consumer goods sectors including food, tobacco, textiles, apparel, leather, toys, machinery, chemicals, computers, software, telephone and television transmission industries. In contrast, we do not find significant effects on firms in oil, gas, coal extraction, utilities, and finance industries. We report these findings in the Internet Appendix Table A.IV.

different geographic segments (i.e., treatment and control) in a given firm-year. Our results are robust to all of these additional corrections. They are also robust to placebo tests, in which we study segment sales to and segment assets in foreign-victim countries' closest neighbors rather than foreign-victim countries themselves.

We find that the reduction in segment sales is particularly significant (economically and statistically) after terror events with casualties. Furthermore, using hand-collected data on terror-related news and country promotion agencies, we show that wider coverage of terror events in foreign media outlets and lower country promotion efforts by local-target country governments before the terror attacks (proxied by the number of country promotion agencies a country sponsors) are both associated with incremental reductions in foreign segment sales.

Does terrorism influence the overall well-being of local-target country firms? To answer this question, we examine effects on valuation, asset growth, and profitability. Using a difference-in-differences framework, we find that firm-level terror exposures depreciate Tobin's Q by 5%, market-to-book ratio by 4%, asset growth by 2% and profit margin by 1.86%. These results are persistent and robust to controlling for firm-level characteristics, along with firm fixed effects, year fixed effects and industry-year fixed effects.

This paper is the first to pin down effects of terror events on corporate activities overseas. We provide two non-exclusive channels through which terror events drive these effects. The first channel is country image, and the second channel is bilateral trade relations. We start our analyses with country image. To identify effects of country image on foreign corporate sales, we run a difference-in-difference-in-differences framework, in which we exploit firm names as a supplementary identification methodology.

There are multiple reasons to do so. First, firm names are chosen long before terror events, and these choices are arguably orthogonal to which foreign countries' citizens might be affected in the future by local terror events and when. Second, to the degree that firm names remind foreign consumers of product country-of-origin, they are also correlated with country image. Firm names therefore allow us to study how "guilt by association," i.e., the association of firms with negative country of origin reputations (Locke 1690; Hamblin 1970), affects their sales to foreign consumers. Third, firm names are costly to change. Almost no treated firm in our sample made significant alterations to its name during our sampling period. This provides

us with stable treatment and control groups—all we need is a measure of how much a firm name is associated with its country of origin.

To measure firm name and country-of-origin associations, we use an open-source script called NamePrism (Ye, Han, Hu, Coskun, Liu, Qin and Skiena 2017).<sup>4</sup> It allows us to compute “predicted nationalities” from names of local-target country firms. With these in hand, we examine whether having a firm name that sounds like a name from the local-target country distorts segment sales incrementally. We find that high firm name and local-target country resemblance decreases sales to foreign-victim countries by up to 25% relative to sample mean. This result is robust to a rich array of controls and fixed effects structures, and highlights the significant impact of country image and firm-level associations with it on corporate activities.

To provide a mechanism through which terror attacks impact country image, we inspect how foreign media coverage of local countries change around terror attacks. We collect news articles from Factiva with subject tags of “terrorism” and region tags equal to the names of the local-target countries. With these in hand, we show that terror-related media coverage of local-target countries in foreign-victim country media outlets increases rapidly by up to 80% after the terror events. This finding is persistent for up to three years and robust to correcting for country-pair and year fixed effects along with foreign-victim country  $\times$  year plus local-target country  $\times$  year interactive fixed effects.

In accordance with this, we compare local-target countries’ reputations in foreign-victim countries against their reputations in unaffected foreign countries, before and after the attacks. We do so by utilizing detailed consumer surveys carried out by BAV Consulting (BAV) between 1993 and 2014 across the globe. In comparison to existing datasets, BAV’s dataset on country image characteristics has the longest horizon, is more diverse, is more geographically granular (allowing us to identify nation brands in different locations), has a higher frequency (in annual format), and includes significantly more image attributes (48 different image characteristics).

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<sup>4</sup> We are grateful to Steven Skiena and Junting Ye for allowing us to use their script. Recent media mention on NamePrism can be found at <https://www.wired.com/story/ai-research-is-in-desperate-need-of-an-ethical-watchdog/>.

BAV's data therefore allow us to analyze countries' image characteristics in multiple ways. First, we study the strongest image attribute of each country. The United States, for example, has its highest score in the image attribute *progressive*, India in *traditional*, Italy in *friendly*, Finland in *trustworthy*, and the United Arab Emirates in *upper class*. We call these attributes nation brands (Dinnie 2016). Second, we study each of BAV's image attributes separately. For example, we study Italy's scores in *progressive*, *traditional*, *trustworthy*, and *upper class* individually. This allows us to identify specific image characteristics that are most affected by terror events.

We show that terror attacks depreciate nation brand scores of local-target countries by 9.78%. This result is robust to correcting for time-varying (both local-target and foreign-victim) country and country-pair characteristics such as income per capita, population, World Trade Organization (WTO) membership, and common currency ownership. It is also robust to controlling for country-pair fixed effects and year fixed effects, along with foreign-victim country  $\times$  year interactive fixed effects or local-target country  $\times$  year interactive fixed effects.

We conduct four supplementary analyses on country image. First, we find that terror-related casualties significantly escalate the effects of terror attacks on nation brand scores. In particular, if a foreigner dies in a local terror event, the nation brand score of the local-target country drops by 14.53%. Second, we inspect whether distances between local-target and foreign-victim countries matter and show that our results hold across different restrictions.

Third, we provide a placebo test in which we examine effects of terror events on foreign-victim countries' closest neighbors. If, for example, a Swiss citizen is hit by a terror event in France, as treatment we study France's reputation in Austria (i.e., the closest neighbor of Switzerland) rather than in Switzerland. In this placebo test, we do not find significant effects on the neighboring countries. Fourth, in addition to examining nation brands, we also run tests on *all* BAV image attributes individually. In so doing, we find that image attributes *friendly*, *kind*, *fun*, *charming*, *gaining in popularity*, *trendy*, *traditional*, and *down to earth* are significantly affected by terror events. Countries such as Ireland, Greece, and Turkey have particularly high scores in these attributes and are therefore particularly prone to reputational losses after terror attacks.

A second non-exclusive channel through which terror events may influence corporate activity is bilateral trade relations. To study the associations between terror events, trade relations and corporate outcomes, we use hand-collected data on bilateral trade agreements provided to us by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). UNESCAP's dataset contains a comprehensive list of agreements, e.g., free trade agreements, customs union agreements, economic partnership agreements, preferential trade agreements, and intellectual property-related preferential trade agreements, that are in force or expired over the course of our sampling period. Importantly, UNESCAP's dataset also contains detailed information on the length of each trade agreement along with its inclusiveness of intellectual property rights (IPR), trade secrets, and affirmation of The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

Using this data, we compare local-target countries' trade agreements with foreign-victim countries against their trade agreements with unaffected foreign countries, before and after the attacks. We find that local-target countries sign fewer trade agreements with foreign-victim countries after the attacks. Furthermore, the number of pages in trade agreements signed between local-target and foreign-victim countries also declines significantly after the attacks. In addition to quantity and length, these agreements also lag in terms of IPR inclusiveness, covering intellectual property rights proposed in the TRIPS agreement and inclusion of trade secrets. These deficiencies grow over a long horizon and are persistent for up to ten years after the attacks. In particular, the length of trade agreements between local-target and foreign-victim countries drops by up to 55% (relative to sample mean) over a period of six years and this decay persists for another three years. These results are robust to correcting for country-pair fixed effects plus local-target country  $\times$  year interactive fixed effects.

Since expiration of trade agreements is a rare phenomenon<sup>5</sup>, weakening trade relations (in terms of the number of agreements and their coverage) have potential to drift economic relations between local-target and foreign-victim countries away from desirable levels over long horizons. Our additional tests show that the "guilt-by-association" effect we identify on

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<sup>5</sup> UNESCAP data includes all trade agreement expirations, and we do correct for them in our analyses.

foreign corporate sales is particularly significant (economically and statistically) in foreign country segments, where local-target countries have established trade relations *ex ante*.

Overall, our results show that terror has long-lasting effects on corporate sales overseas. These effects are statistically significant and economically meaningful. Terror-related casualties and foreign media coverage of terror events have incremental impacts. “Guilty-by-association” firms, i.e., local-target country firms whose names resemble names from their countries of origin, are severely affected through greater deteriorations in foreign sales. Terrorism also distorts bilateral trade agreements between countries for long periods of time. Finally, exposures to terror events influence overall firm value, asset growth, and profitability.

In a related paper, Abedie and Gardeazabal (2003) study terrorist conflicts in the Basque country. The authors identify large reductions in income and stock market performances of local firms with a significant part of their business in the Basque country. In accordance with this paper, we also find detrimental effects of terrorism on corporate performance. In contrast, we concentrate on multinational firms, not local firms. We show that terrorist activities diminish local-target country image and bilateral trade relations, and distort foreign segment sales of multinationals, particularly for “guilty-by-association” firms.

Our paper is also related to literature on branding and corporate activities. Existing papers study effects of *firm* image on asset prices (Belo, Vitorino, and Lin 2014), risk and financial policy (Larkin 2013), investor preferences (Frieder and Subrahmanyam 2005), and consumer behavior (Bronnenberg, Dhar, and Dube 2009; Bronnenberg, Dube, and Gentzkow 2012).<sup>6</sup> In contrast to these papers, we study the effects of *country* image on firm sales, profitability, and value. Despite being a vital concept in marketing (see, for example, Kotler and Gertner 2002; which has 64,720 citations as of August 2018), country image has long been overlooked by financial economists. To the best of our knowledge, our paper is the first to examine its links

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<sup>6</sup> Firm brand image explains performance differences within several industries including the auto industry (Kwoka 1993; Stahl, Heitmann, Lehmann, and Neslin 2011), the consumer goods industry (Thomas 1989; Bronnenberg, Dhar, and Dube 2009) and the hotel industry (Kim, Kim, and An 2003). It’s also associated with decreasing price distortion (Choi 1998), increasing chance of survival (Bar-Isaac 2003), and forming a stable consumer base (Bronnenberg, Dhar, and Dube 2007; Gourio and Rudanko 2014). It also affects firms’ financial policy (Grullon, Kanatas, and Kumar 2006; Larkin 2013) as well as post IPO (Chemmanur and Yan 2009) and M&A performance (Mizik, Knowles, and Dinner 2011) and provides resilience to business cycles (van Heerde, Gijsenberg, Dekimpe and Steenkamp 2013; Bronnenberg, Dube, and Gentzkow 2012).



with terrorism, firm sales, and firm value. In so doing, we also provide a first analysis of the relation between guilt by association and corporate activity.

In a related paper, Hwang (2011) finds that favorability of foreign countries among Americans causes security prices to deviate from fundamentals by affecting U.S. investors' demand for securities. He also finds a positive association between country popularity and mergers and acquisitions activity. Similar to this paper, we also study perceptions about countries. In contrast to this paper, our focus is not on investor choices. Our focus is on the effects of terrorism on foreign segment sales, profitability, and firm value. Nonetheless, one channel we provide is country image and in line with Hwang (2011) we also find that country popularity matters for corporate outcomes. In addition to country image, however, we also provide bilateral trade agreements as a persistent secondary channel, through which terror events may impact corporate activities.

Finally, our paper is also related to growing research on media and political conflict in economics (Rohner and Frey 2007; DellaVigna, Enikolopov, Mironova, Petrova, and Zhuravskaya 2014; Yanagizawa-Drott 2014; Adena, Enikolopov, Petrova, Santarosa, and Zhuravskaya 2015; Jetter 2017) and broader research on media in finance (Dyck and Zingales 2002; Miller 2006; Tetlock 2007, 2010, 2011, 2015; Tetlock, Saar-Tsechansky, and Macskassy 2008; Dyck, Volchkova, and Zingales 2008; Dyck, Morse, and Zingales 2010; Solomon 2012; Liu and McConnell 2013; Solomon, Soltes, and Sosyura 2014; Baloria and Heese 2018). We contribute to these literatures by showing how media coverage amplifies effects of terrorism on country image and foreign corporate sales.

The remainder of the paper is organized as follows. Section II presents our data and summary statistics. Section III discusses our research design and identification strategy. Section IV presents our main findings. Section V concludes the article.

## **I. Data and Summary Statistics**

We gather data from several resources. We use University of Maryland's Global Terrorism Dataset (GTD)<sup>7</sup> to identify terror events, local-target countries, and foreign-victim countries.

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<sup>7</sup> More information on GTD can be found at: <https://www.start.umd.edu/gtd/downloads/Codebook.pdf>.

In particular, we use terror attacks that have a defined local target (i.e., people or institutions in a local-target country), but also impact citizens of foreign countries. We restrict our sample to *initial* terror attacks on each local and foreign country pair and exclude attacks that are directed at foreign military or are unsuccessful.<sup>8</sup>

– Insert Table I about here –

Table I presents key information on terror attacks. Panel A records clearly defined targets in each attack, Panel B records terror attack types, Panel C records terrorist group names, and Panel D records the number of attacks, affected countries, and firms over time. As shown in Panel A, 32.2% of terror events targeted local businesses, and 22.2% targeted private citizens and property. In addition, 46.7% of the attacks conducted with a bombing or explosion, and 24.4% were armed assault. The table also shows that 51.1% of the time the attacker identity was yet unknown when the terror event was added to the GTD dataset. Among the identified terrorist groups, ETA carried out 3.3% of the attacks, Chechen rebels carried out 2.2% of the attacks, and PKK conducted 2.2% of the attacks. In Panel D, we present the number of attacks, local-target countries, foreign-victim countries, and local-target country firms affected by the terror events. The staggered nature of these events makes it less likely that alternative factors such as economic cycles or terror events in one single country are driving our results. Terror attacks impact around 24% of the countries in the globe as foreign victims or local targets. If one excludes countries with less than 10 million citizens, this number becomes 52%.

– Insert Table II about here –

Panel A of Table II presents information on segment-level sales,<sup>9</sup> financial characteristics, and firm name and country-of-origin resemblance. Our segment-level sales data along with data on other financial characteristics are from Thomson Reuters Worldscope. We manually correct misspelled country names in Worldscope segment data to be able to match this data with BAV's global surveys on country image.<sup>10</sup>

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<sup>8</sup> We use only events in which the nationality of victim can be clearly identified. In other words, if the foreign victim is listed as "International" we do not use that event, because we cannot identify the nationality of the victim. We also exclude attacks on foreign military overseas due to these events mostly being targeted events rather than exogenous shocks.

<sup>9</sup> Since 1977 U.S. firms are required to report audited geographical segments that account for more than 10% of their consolidated sales (Denis, Denis, and Yost 2002).

<sup>10</sup> We do not use foreign segments that are reported at the regional level due to linking issues with the BAV dataset. Interested researchers can download this code from the corresponding author's website at

We collect data on firm name and country of origin resemblance by using the NamePrism algorithm of Ye, Han, Hu, Coskun, Liu, Qin, and Skiena (2017). More specifically, we use their application program interface (API) on nationalities (<http://www.name-prism.com/api>) by entering all available firm names in Thomson Reuters datasets. By doing so, we compute a name similarity score by measuring the probability of a company's name being most similar to names from its country of origin.

Panel B of Table II presents detailed information on country-level image characteristics, economic characteristics, local-target country promotion efforts, media coverage of terror attacks in foreign countries, and bilateral trade agreements. Our country image data is from annual surveys carried out by BAV between 1993 and 2014 across 42 countries.<sup>11</sup> In these surveys, respondents are asked to evaluate countries using BAV's 48 emotional image attributes.<sup>12</sup> For example, when survey respondents in Turkey evaluate Germany on BAV's image attribute *trustworthy*, they each give a yes or no answer to the following question: do you find Germany to be *trustworthy*? Germany then receives a score in Turkey on its image attribute *trustworthy*, measured as the percentage of respondents that associate it with being *trustworthy*. Germany also receives scores in the remaining 47 image attributes in Turkey and all of the 48 image attributes across the remaining annual country surveys.

Using this data, we identify the strongest image attribute of each country and call it that country's nation brand (Dinnie 2016). To do so, we first compute countries' median scores in all attributes across all yearly surveys, and then take time-series averages of these median

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<https://sites.google.com/site/mehmetihsanacanayaz>.

<sup>11</sup> These countries are Argentina, Australia, Austria, Brazil, Chile, China, Colombia, Czech Republic, Denmark, Ecuador, Finland, France, Germany, Greece, Guatemala, Holland, India, Indonesia, Italy, Japan, Jordan, Malaysia, Mexico, Norway, Peru, Poland, Puerto Rico, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Kingdom, United States, Uruguay, and Venezuela.

<sup>12</sup> BAV imagery attributes and additional constructs include Arrogant, Authentic, Best Brand, Carefree, Cares About Customers, Charming, Chic, Classic, Customer Centric, Cutting Edge, Daring, Different, Differentiation, Distant, Distinctive, Down To Earth, Dynamic, Energetic, Friendly, Fun, Gaining In Popularity, Glamorous, Good Value, Healthy, Helpful, High Performance, High Quality, Independent, Innovative, Intelligent, Kind, Leader, No Nonsense, Obliging, Original, Outgoing, Prestigious, Progressive, Reliable, Restrained, Rugged, Sensuous, Simple, Social, Socially Responsible, Straightforward, Stylish, Superior, Tough, Traditional, Trendy, Trustworthy, Unapproachable, Unique, Up To Date, Upper Class, and Worth More.

scores.<sup>13</sup> We repeat this analysis for each individual attribute to identify the most prominent imagery attribute of a country (i.e., the imagery attribute with its highest average score).<sup>14</sup> In addition to nation brand scores, we also report scores in an array of image attributes. Figures A.I and A.II in the Online Appendix provide nation brands of each country along with bilateral country image surveys.

We collect country-level economic characteristics data from the CEPII GeoDist database, the World Trade Organization (WTO), and the World Bank's World Development Indicators. Terror-related news in foreign-victim country media outlets are from Factiva, and country promotion agencies data are collected from the World Association of Investment Promotion Agencies (WAIPA) and individual country promotion agency websites.<sup>15</sup> Our data on bilateral trade agreements come from UNESCAP.

As shown in Panel A, Part 1, foreign segment sales are around 4.28% of total assets of the local-target country firms and foreign segment assets correspond to 2.55% of total assets. The average firm has about 4.74 additional foreign segments, as the logged value equals 1.57. As shown in Panel B, Part 2, the average local-target country firm has a logged Tobin's Q of 0.90, R&D to assets ratio of 5%, Capex to assets ratio of 5%, return on equity of 6.27%, and return on assets of 3.54%. In Part 3, we show that 20% of local-target country firms are correctly perceived as firms from local-target countries given their highest name similarity scores. This value increases to 42% once we look at Top 5 country resemblances for names of local-target country firms.

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<sup>13</sup> We keep country-years with at least three foreign country surveys and carry forward scores in missing years.

<sup>14</sup> Some alternative datasets to BAV are Anholt-GfK Roper Nation Brands Index, US Gallup Poll, FutureBrand Country Index, and Brand Finance Nation Brands. In terms of sampling period Anholt-GfK Roper Nation Brands Index covers only 2005, FutureBrand Country Index covers post 2009, and Brand Finance Nation Brands covers post 2010. They are therefore inferior to BAV data in terms of sampling period. The closest dataset to ours in terms of sample period is US Gallup Poll, which has reliable data starting from 1996. US Gallup data, however, only shows Americans' favorability of 42 foreign countries. The survey is therefore not bilateral. It also only contains one imagery attribute (i.e., favorability). Anholt-GfK Roper Nation Brands Index measures reputation across six dimensions (people, exports, culture, governance, tourism, investment, and immigration), and it only has data on 20 countries. Likewise, FutureBrand Country Index and Brand Finance Nation Brands indices do not contain a large array of imagery attributes and are not bilateral. BAV data therefore is far richer than all of these alternatives.

<sup>15</sup> Part of our data before 2006 comes from a list of investment promotion agencies created by Marcelo Olarreaga. We are thankful to him for sending this data.

As shown in Part 1 of Panel B, the average nation brand score is 20.44, and the median nation brand score is 18.44. We also present summary statistics on selected image attributes. Summary statistics on the remaining image attributes are also presented in the Internet Appendix Table A.I. *Friendly*, for example, is the highest-scored attribute, with a mean of 19.41 and a median of 16.90. Looking at country-pair characteristics, in Part 2 of Panel B, only 4% of the country pairs (local-target and foreign-victim countries) have had a conflict (i.e., war), 21% of the pairs have a common religion, and 14% have a common language. Local-target and foreign-victim countries are comparable in terms of their remaining characteristics such as GDP, land area, and WTO membership. As shown in Part 3 of Panel B, there are on average 1.35 country promotion agencies in local-target countries. We provide detailed definitions of many of these variables along with detailed explanations of our data collection process in Appendix Section A. We report summary statistics of the remaining BAV image attributes in Table A.I.

## II. Research Design

We examine the impact of terror attacks on foreign segment sales using a difference-in-differences methodology as in Bertrand and Mullainathan (2003). In particular, we estimate the following regression:

$$y_{jkl} = \alpha_{jl} + \alpha_t + \gamma X_{jkl} + \varphi Z_{jt} + \delta \text{Treatment}_{klt} + \varepsilon_{jkl}, \quad (1)$$

where  $j$  indexes firm,  $k$  indexes home country,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl}$  is the dependent variable of interest (i.e., segment sales or assets of firm  $j$  of country  $k$  in foreign country  $l$  in year  $t$ , deflated with total firm assets), and  $\alpha_t$  and  $\alpha_{jl}$  are year and firm-segment fixed effects.  $X_{jkl}$  and  $Z_{jt}$  contain segment-level control variables such as segment age, number of other segments, and segment-wide Herfindahl-Hirschman index (HHI) index, along with firm-level controls such as cash flows to assets, Tobin's Q, and leverage. Cash flows are deflated by lagged assets, Tobin's Q is lagged, and leverage is deflated by lagged assets.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ . It is therefore one after the initial attack and zero beforehand.  $\varepsilon_{jkl}$  is the error term. Importantly, we fully control time-invariant differences between treated and

untreated firm segments with firm-segment fixed effects and aggregate time trends with year dummies. Our estimate of terrorist attacks' impact on foreign sales is  $\delta$ .

There are multiple benefits to using this methodology. First, it allows us to exploit the staggered nature of terror attacks over time. This time-series variation is valuable, because it helps us rule out alternative stories such as financial crises, sanctions, or armed conflicts driving our results. Importantly, our specification implicitly takes as the control group all firm-segments that are unaffected by terror attacks by time  $t$ , even if they might eventually be affected later on.

Second, since we exploit firm-segment data, we can separate out the effects of terror attacks from the effects of contemporaneous shocks in foreign-victim and local-target countries. We do this first by introducing the interacted fixed effects:  $\alpha_k \times \alpha_t$ . For a simple illustration of our methodology, consider a Turkish firm that is selling to a foreign country (e.g., Germany) whose citizens are impacted by a terrorist attack in Turkey. By introducing  $\alpha_k \times \alpha_t$ , we compare sales of Turkish firms in a given year to foreign-victim countries (e.g., Germany, whose citizens are impacted in Turkey) with sales of Turkish firms in that year to non-victim foreign countries (e.g., France, whose citizens are not impacted by terror attacks in Turkey). This specification allows us to control for yearly shocks at the home-country level, which could otherwise impact our empirical findings.

Furthermore, we also exploit data on firms from non-local-target countries that also sell in foreign-victim countries. This allows us to fully control for yearly shocks in foreign-victim countries by using interacted fixed effects  $\alpha_l \times \alpha_t$ . With this specification, we compare sales of Turkish firms in Germany (whose citizens are impacted in Turkey) with sales of Greek firms in Germany (as Germans are not impacted by a terrorist attack in Greece). Hence, we control for local shocks at foreign countries that might otherwise affect sales to those countries.

Finally, we control for  $\alpha_j \times \alpha_t$  interactive fixed effects, which allows us to fully control for yearly shocks at the firm level. With this specification, we compare foreign-victim country segments of firms with their non-foreign-victim country segments in a given year. Unobserved firm-year variables such as manager mood are therefore absorbed with this fixed effects structure.

### III. Results

#### A. The Effects of Terror Attacks on Foreign Corporate Sales

In this section, we study effects of terror events on local-target country firms' foreign segments. We begin our analysis by investigating effects of terror attacks on segment sales using the difference-in-differences specification in equation (1). The estimated coefficient of interest is the one on  $Treatment_{klt}$ , which equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ . We use two-way clustering at the firm-segment and year level to account for the presence of cross-sectional and serial correlation in the data.

– Insert Table III about here –

Table III presents our results. In column (1), we show the negative effect of terror attacks on sales to foreign-victim countries. We find a 0.76% decrease in sales (i.e., deflated by total firm assets) to foreign-victim countries on average. The effect is economically significant, as this decrease corresponds to 17.75% deterioration relative to the sample mean. Our main result is also robust to controlling for firm-segment-level and firm-level characteristics as well as a comprehensive set of fixed effect structures.

In columns (2) through (7), we use different sets of fixed effects, as explained at length before, in order to control for yearly local-target, foreign-victim country and firm-level shocks. Across all specifications, the estimated coefficient of interest,  $Treatment$ , remains statistically significant and negative, with estimates ranging from  $-0.43$  to  $-0.92$ . Moreover, as shown in Figure I, we estimate a dynamic treatment effect within the five-year event window surrounding the terror attacks, similar to Bertrand and Mullainathan (2003). In particular, we include pre- and post-event-year dummies up to five years around the event year. The fact that we don't see a strong pre-event trend in segment sales is in line with the hypothesis that we don't have an "unnatural experiment" (Besley and Case 2000). We identify an economically and statistically significant decline in foreign segment sales in the treatment period.

– Insert Figure I about here –

These results are supportive of the hypothesis that terror events have significant effects on firm sales to foreign-victim countries. We next show the effects of terror events on local-target country firms' assets in foreign-victim countries. Once again, we investigate the effects of

terror attacks using our difference-in-differences specification in equation (1). We present our results in Table IV. In column (1), we show the negative effect of terror attacks on firm assets in foreign-victim countries. We find a 0.54% decrease in segment assets (i.e., deflated by total firm assets) to foreign-victim countries on average. The effect is economically significant, as this decrease corresponds to 21.18% deterioration relative to the sample mean. This finding is robust to controlling for firm-segment and firm characteristics, as well as a comprehensive set of fixed effect structures that absorb yearly local-target country, foreign-victim country and firm-level shocks. Across all specifications, the estimated coefficient of interest, *Treatment*, remains statistically significant and negative, with estimates ranging from  $-0.39$  to  $-0.62$ . These results are shown in columns (2) through (7).

– Insert Table IV about here –

We further estimate a dynamic treatment effect within the five-year event window surrounding the terror attacks. Once again, we include pre- and post-event-year dummies up to five years around the event year. As shown in Figure II, we do not see a trend before the terror attacks but identify a significant decline in segment assets in the treatment period.

– Insert Figure II about here –

Results from this section highlight the effects of terror attacks on firms’ foreign segment activities. In particular, we find sizable effects on segment sales and assets. These findings are economically and statistically significant and robust to a rich array of controls and fixed effects structures. As a placebo test, we study effects of terror attacks on foreign-victim countries’ closest neighbors rather than the foreign-victim countries themselves. As shown in Internet Appendix Tables A.II and A.III, we do not find significant and persistent effects in foreign-victim countries’ closest neighbors.

### *B. Firm-Level Ramifications of Terror Attacks*

Our findings in the previous section highlight the impact of terror events at the firm-segment level. In this section, we examine whether terror attacks impact the overall well-being of firms. To do so, we run regressions on the following specification:

$$y_{jt} = \alpha_j + \alpha_t + \gamma X_{jt} + \delta \text{Affected}_{jt} + \varepsilon_{jt}, \quad (2)$$



where  $j$  indexes firm and  $t$  indexes survey year.  $y_{jt}$  is the dependent variable of interest (i.e., Logged Tobin's Q, Logged Market-to-book, Asset Growth, or Profit Margin of firm  $j$  in year  $t$ ), and  $\alpha_j$  and  $\alpha_t$  are firm and year fixed effects.  $X_{jt}$  contains control variables such as logged assets, assets squared, and firm age as in Bennedsen and Zeume (2018), or cash flows to assets, Tobin's Q, and leverage as in Cohen, Coval, and Malloy (2011). Cash flows are deflated by lagged assets, Tobin's Q is lagged, and leverage is deflated by lagged assets.  $Affected_{jt}$  denotes whether at least one of firm  $j$ 's segments was affected by terror attacks by year  $t$ .<sup>16</sup>

– Insert Table V about here –

We present our results in Table V. Our findings confirm that terror exposures significantly deteriorate the overall firm value. These deteriorations are economically impactful, statistically significant, and persistent. In particular, firms that have segment-level exposures to terror attacks lose up to 5% of their market values, as shown in columns (1) and (2). These effects hold after correcting for firm-level controls, firm fixed effects, and industry-year fixed effects. We also pin down distortions in asset growth as high as 2%. This is in line with our findings at the segment level. As shown in column (4), we further identify a negative effect on profit margins. In particular, firms with segment-level exposures to terror attacks exhibit a drop of 1.86% in their profit margins.

Our results so far show significant effects of terrorism on segment- and firm-level outcomes. We identify depreciations after terror attacks in sales and assets at the segment level and show sizable deteriorations in value, profitability, and asset growth at the firm level. Our findings are economically and statistically significant and robust to a rich array of controls and fixed effects structures. Following sections present potential channels driving these findings.

### *C. Name Resemblance and Guilt by Association*

Terrorism may impact foreign segment activities through different channels. As an initial channel we propose country-of-origin image, which is an established factor in shaping consumers' purchase decisions (Armington 1969; Kotler and Gertner 2002; Chernatony and McDonald 2003; Chisik 2003; Michaels and Li 2010; Michaels and Zhi 2010; Cage and Rouzet

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<sup>16</sup> This means that at least one foreign segment country's citizen got killed or injured in a terror attack.

2015). We run a difference-in-difference-in-differences framework, in which we exploit firm names as a supplementary identification methodology.

In particular, we study how firm name and country-of-origin resemblance affects corporate activities. We are motivated to do so, because firm names are chosen long before terror events, and these choices are arguably orthogonal to which foreign countries' citizens might be affected in the future by local terror events and when. Firm names are also difficult to change. Moreover, if firm names remind foreign consumers of product country-of-origin, they are also correlated with country image. To the extent that terror events have a negative effect on local-target country's image overseas, we predict local-target country firms, whose names resemble names from their country of origin, to be more severely affected by the consequences of these terror attacks.

To measure firm name and country of origin resemblance, we use an open-source software called NamePrism as in Ye, Han, Hu, Coskun, Liu, Qin, and Skiena (2017). The authors train the NamePrism algorithm using 57 million contact lists from an email company to classify 74 million labeled names from 118 different countries, containing over 90% of the world's population. NamePrism is shown to perform considerably better than other existing name classifiers, and to the best of our knowledge, it provides the most detailed country classifications.

Using NamePrism, we compute a "predicted nationality" for each firm in our sample in order to identify a guilt-by-association effect on local-target country firms.<sup>17</sup> We then examine

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<sup>17</sup> We focus on the sales of a firm in international markets, where the uncertainty about product quality is often a concern and buyers search for information cues before making a decision. In the presence of information frictions, country of origin image might serve as external cues simplifying assessments of product quality causing consumers to use nation brand image as a heuristic for product evaluation. The economics and psychology literatures offer insight with respect to the potential role that country images might play as a stereotype in affecting product evaluations and consumers' decisions (Bordalo, Coffman, Gennaioli, and Shleifer, 2016; Bodenhausen and Lichtenstein, 1985; 1987). The international economics literature also introduces "national images" as a cue entering the information sets of consumers at the time of purchase. For example, Chisik (2003) models a static game in which firms derive greater benefits from an improvement in their country's image and predict improved national images to increase the percentage of high-quality firms in an economy. In a similar spirit, Cage and Rouzet (2015) develop an infinite-horizon two-country model to explore the interrelation between country reputation and exporting firm quality. In such a framework, authors show the role of self-fulfilling country images in determining the fraction of high- and low-quality firms in multiple equilibria. Tirole (1996) models the potential impact on individual members of an organization of the collective reputation and shows how the group members may be adversely affected from the "original sin" of the previous group members. Empirically, there is also a long stream of literature in marketing that documents the importance of country-of-origin labels for products using experimental

whether having a firm name that sounds like a name from the local-target country affects corporate outcomes incrementally after terror attacks. Given the predicted success rate, we apply the algorithm only to firms that have names longer than four characters, excluding incorporation information such as Inc. or Corp. Furthermore, we observe that the predictable capability of the algorithm is weaker for certain languages. We therefore drop languages with an average predicted score of 5%. In general, our results get stronger as we increase this lower bound.

– Insert Table VI about here –

We investigate effects of name resemblance on segment sales using a difference-in-difference-in-differences specification. We present our results in Table VI. The estimated coefficient of interest is the one on  $Treatment_{klt} \times Z_j$ , where  $Z_j$  is one of *Top 1 name resemblance*, *Top 3 name resemblance*, and *Top 5 name resemblance*. These variables are respectively equal to one if firm  $j$ 's name has the highest predicted “nationality” equal to its country of incorporation, or if among firm  $j$ 's top 3 or top 5 “nationality” predictions includes its country of incorporation. If, for example, Chanel receives its highest score for French, then *Top 1 name resemblance* would equal one for Chanel. If Chanel receives its second highest score for French, then *Top 1 name resemblance* would equal zero for Chanel, but *Top 3 name resemblance* would equal one.

In column (1) of Table VI, we show that our previous results hold in this restricted sample. We show the effects of terror attacks on “guilty-by-association” firms in columns (2) to (4). We find that high firm name and local-target country resemblance incrementally decreases sales in foreign-victim countries by between 0.87% and 1.07%. This result is robust to controlling for firm-segment-level and firm-level characteristics as well as a comprehensive set of fixed effects structures.<sup>18</sup> For a local-target country firm having a firm name that sounds

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methods (Gurhan-Canli and Maheswaran, 2000; Insch and McBride, 2004). See Bilkey and Nes (1982) and Verlegh and Steenkamp (1999) for a survey of the marketing literature on country-of-origin effects. See Dinc and Erel (2013) and cited literature for economic nationalism.

<sup>18</sup> In untabulated results we use Cox proportional-hazards models (Cox, 1972) to show that local-target country firms with high name resemblance also experience quicker segment deaths. To do so, we define segment death year as the year of last positive segment sales for each firm-segment in our sample. These findings are available upon request.

like a name from its country of origin is therefore detrimental to its sales in foreign-victim countries.

#### *D. Foreign Media Exposure and Country Image*

In this section we study foreign media coverage of terror attacks and the impact of terrorism on local-target country image overseas. We also examine how media coverage amplifies effects of terrorism on country image and foreign corporate sales. We start by analyzing foreign media response to terror attacks. To do so, we use news articles from Factiva with subject tags of “terrorism” and region tags equal to names of the local-target countries, which allows us to analyze the number of terror-related articles about local-target countries across different foreign countries. We estimate the following regression:

$$y_{klt} = \alpha_t + \alpha_{kl} + \delta \text{ Treatment}_{klt} + \varepsilon_{klt}, \quad (3)$$

where  $k$  indexes country,  $l$  indexes survey country, and  $t$  indexes survey year.  $y_{klt}$  is the dependent variable of interest (i.e., log of one plus the number of terror-related articles about local-target country  $k$  in foreign country  $l$  in year  $t$ ), and  $\alpha_t$  and  $\alpha_{kl}$  are year and country-pair fixed effects.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{klt}$  is the error term. Our estimate of terrorist attacks’ effect on media coverage is  $\delta$ .

– Insert Table VII about here –

We present our findings in Table VII. As shown in column (1), after correcting for country pair and year fixed effects, we observe a 47% increase in the number of terror-related articles about local-target countries in foreign-victim media outlets after the terror attacks. This finding is robust to additionally correcting for foreign-victim country  $\times$  year interactive fixed effects, local-target country  $\times$  year interactive fixed effects, and foreign-victim country  $\times$  year plus local-target country  $\times$  year interactive fixed effects. In different specifications, we find increases between 36% and 50%.

As shown in Figure III, we also study terror-related news coverage in the event time of terror attacks. In particular, we introduce pre- and post-event-year dummies for up to four years around the event year. In so doing, we show that there isn’t a strong pre-event trend, and we identify a significant increase in the treatment period. Specifically, there is an 80% increase in

terror-related news coverage in the event year. This increase seems to persist during the following four years.

– Insert Figure III about here –

In accordance with these findings, we next compare local-target countries’ reputations in foreign-victim countries against their reputations in unaffected foreign countries, before and after the attacks. We do so by utilizing detailed consumer surveys carried out by BAV Consulting (BAV) between 1993 and 2014 across the globe. We estimate the following regression:

$$y_{klt} = \alpha_t + \alpha_{kl} + \gamma X_{klt} + \delta \text{Treatment}_{klt} + \varepsilon_{klt}, \quad (4)$$

where  $k$  indexes country,  $l$  indexes survey country, and  $t$  indexes survey year.  $y_{klt}$  is the dependent variable of interest (i.e., nation brand score of country  $k$  in survey country  $l$  in year  $t$ ), and  $\alpha_t$  and  $\alpha_{kl}$  are year and country-pair fixed effects.  $X_{klt}$  contains control variables such as logged GDPs, populations, WTO membership, and common currency dummies.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{klt}$  is the error term. Our estimate of terrorist attacks’ effect on country reputations is  $\delta$ . We use two-way clustering at the local-target country and year level to account for the presence of cross-sectional and serial correlation in the data.

The country-pair fixed effects help us study the time-series variation in local-target country reputation within each country pair. We additionally correct for foreign-victim country  $\times$  year interactive fixed effects and local-target country  $\times$  year interactive fixed effects. These interactive fixed effects absorb important time-varying heterogeneity for local-target and foreign-victim countries such as yearly exposures to terrorism and economic cycles.

– Insert Table VIII about here –

Table VIII presents our results. In column (1), we show that there is a 2.00-unit decline in nation brand scores of the local-target countries in foreign-victim countries after the events. This decrease corresponds to a 9.78% relative to sample mean. We investigate the robustness of this effect in the rest of the table. In column (2), we introduce country  $\times$  year interacted fixed effects ( $\alpha_k \times \alpha_t$ ) to control for time-varying contemporaneous shocks in local-target countries. Our results continue to hold. We find a 1.86-unit decline in the nation brand scores of the local-

target countries in foreign-victim countries, which corresponds to a drop of 9.1% relative to the sample mean. In column (3), we control for foreign-country  $\times$  year interacted fixed effects ( $\alpha_l \times \alpha_t$ ) to account for any concurrent time-varying shock in foreign-victim countries. Again, the estimated coefficient on  $Treatment_{klt}$  is unaffected. We find a decrease in nation brand score, albeit smaller in magnitude (coefficient =  $-0.71$ ).

In column (4), we isolate terror attacks with fatalities and use its interaction with our treatment. *Casualty* is defined as a dummy variable equal to one if a terror attack kills a citizen of the foreign-victim country. We predict terror attacks to more severely distort nation brand scores if a citizen of foreign country is killed. We show the effect actually becomes more pronounced for the subset of events with fatalities. The coefficient on the interaction term,  $Treatment * Casualty$ , is almost twice the coefficient of the term  $Treatment$ , and it amounts to a 14.53% decrease relative to the sample mean. Moreover, in column (5), results are robust to using an intensive margin measure, *Number of Fatalities*, which is defined as the number of people killed who are from a foreign country in a terror attack. Our coefficient of interest is once again significant.

Finally, we look at the role of media coverage of terror-related news in foreign-victim countries during the event years. We predict the negative effect of terrorist attacks on nation brand scores to be more pronounced when terror-related news is strongly disseminated in foreign-victim country media outlets. We use *Media attention in foreign-victim country* to proxy for stronger news dissemination. It's equal to the number of news in foreign media outlets in hundreds. The coefficient on  $Treatment * Media\ attention\ in\ foreign-victim\ country$  is in the predicted sign, and it is statistically significant. This means that 100 terror-related articles written about the local-target country in the event years are associated with decreases in nation brand score by 0.59%, or 2.89% relative to the sample mean.

Next, we show our cross-sectional analysis of segment-level sales using terror-related casualties, media coverage in foreign-victim countries, governments' active promotion efforts before the attacks, and strength of local-country image in foreign-victim countries before the attacks as potential channels that may influence foreign corporate sales. To do so, we interact our  $Treatment$  variable with these variables.

– Insert Table IX about here –

We present our findings in Table IX. In columns (1) and (2), we use *Casualty* and *Number of Casualties* to represent the severity of terror attacks and interact these with the treatment variable. In so doing, we find an incremental decrease of 1.36% in firm sales to foreign-victim countries after terror events with casualties and a 0.39% decrease for each additional casualty. Further, in column (3), we show that 100 terror-related media articles in foreign-victim country media outlets depreciate foreign segment sales of local-target country firms to foreign-victim countries by 0.19%.

Next, we study whether country promotion efforts just before terror attacks help alleviate negative effects on foreign sales.<sup>19</sup> We look at the ex ante number of promotion agencies in local-target countries and define *Weak Country Promotion* as a dummy variable equal to one if the headquarters country has fewer country promotion offices than the sample median from one year before the attack. In column (4), we interact *Weak Country Promotion* with *Treatment* to compare the effect across countries that increase their promotion efforts by opening more agencies and countries that do not. We find that deteriorations in nation brands after terror events are economically and statistically significant for weak-promoter local-target countries. The coefficient on the interaction term *Weak Country Promotion\*Treatment* is  $-1.94$  and statistically significant. These result provides descriptive evidence on the usefulness of country promotion in preventing erosions in nation brands and protecting the private sector from its negative ramifications. Furthermore, to identify whether nation brand scores amplify our findings, we also interact our treatment variable with *High Nation Brand*, which denotes whether the local-target country nation brand scores are greater than the median at the foreign-victim country surveys in year 2000, i.e., before our sampling period. Once again the interaction term is significant.

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<sup>19</sup> Country promotion emerges as a new tool that countries use to reduce informational barriers to entry into foreign markets, besides the traditional policy tools (i.e., export subsidies, tax schemes, R&D subsidies, etc.), which has already extensively been explored in prior literature (e.g., Mayer, 1984; Bagwell and Steiger, 1989; Grossman and Horn, 1988; Chen, 1991; Harding and Javorcik, 2011). However, due in part to the lack of reliable data, the effectiveness of country promotion in boosting or protecting foreign sales remains an unexplored issue. Most agencies use proactive country brand management techniques with the objective of changing the image of the country. Image-building activities comprise public relation events, generation of favorable news, and advertising campaigns in international newspapers (Morisset and Andrews-Johnson, 2004).

Our results in this section highlight a strong response by foreign-victim country media outlets to terror attacks. Media coverage influences country image and amplifies the effects of terrorism on corporate outcomes. Governments' active promotion efforts before the attacks and the strength of local-country image in foreign-victim countries before the attacks also influence these effects. In the following section, we provide a second channel, through which terrorism may impact firm sales overseas.

### *E. Bilateral Trade Relations*

Our results until this section highlight the importance of country-of-origin image and associations with it on corporate sales overseas. In this section we study bilateral trade agreements as a complementary channel through which terror events may influence corporate activity. We use hand-collected data on bilateral trade agreements provided to us by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), which include a comprehensive list of agreements, e.g., free trade agreements, customs union agreements, economic partnership agreements, preferential trade agreements, and intellectual property-related preferential trade agreements, that are in force or expired over the course of our sampling period. This dataset also includes comprehensive information on the length of each trade agreement (in terms of number of pages) along with its inclusiveness of intellectual property rights (IPR), trade secrets, and affirmation of The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

With this data in hand, we compare local-target countries' trade agreements with foreign-victim countries against their trade agreements with unaffected foreign countries, before and after the attacks. We estimate the following regression:

$$y_{klt} = \alpha_{kt} + \alpha_{kl} + \delta \text{Treatment}_{klt} + \varepsilon_{klt}, \quad (5)$$

where  $k$  indexes country,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{klt}$  is the dependent variable of interest and it's one of *Trade agreement*, *Total Pages*, *IPR Mention*, *IPR Chapter* and *Trade Secrets*. *Trade agreement* denotes whether there is a trade agreement between country  $k$  and foreign country  $l$  in year  $t$ . *Total Pages* denotes the average number of pages in trade agreements between country  $k$  and foreign country  $l$  in year  $t$ . *IPR Mention*, *IPR Chapter* and *Trade Secrets* respectively denote whether intellectual property rights (IPR) were



covered, there is a chapter on IPR, and trade secrets are mentioned in trade agreements between country  $k$  and foreign country  $l$  in year  $t$ .  $\alpha_{kt}$  and  $\alpha_{kl}$  are country-year and country-pair fixed effects.  $Treatment_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{klt}$  is the error term. Our estimate of terrorist attacks' effect on bilateral trade relations is once again  $\delta$ .

– Insert Table X about here –

We present our findings in Table X. As shown in column (1), after correcting for country pair and country-year fixed effects, we observe a 6% decrease in the number of trade agreements after the terror attacks. We also find that the number of pages in trade agreements signed between local-target and foreign-victim countries also declines by 21.20 pages (23% relative to sample mean) after the attacks. In addition to quantity and length, we pin down depreciations in IPR mentions, IPR chapters, reaffirming TRIPS agreement and inclusion of trade secrets. These results are shown in columns (3) to (6).<sup>20</sup> Once trade agreements are in force they are unlikely to be cancelled. Therefore, weakening trade relations (particularly in terms of trade agreement complexity and coverage) after terror events are therefore likely to drift economic relations between local-target and foreign-victim countries away from desirable levels over long horizons.

– Insert Figure IV about here –

In order to show the deteriorations in bilateral trade relations in the event time, we also estimate a dynamic treatment effect on the average number of pages in trade agreements within the ten-year event window surrounding the terror attacks. We include pre- and post-event-year dummies up to ten years around the event year. As shown in Figure IV, we do not see a trend before the terror attacks but identify a significant decline in segment assets in the treatment period.

Finally, we study how exposures to trade relations influence the “guilt-by-association” effect we established on foreign corporate sales. To do so, we look at the number of trade agreements local-victim countries had with foreign-victim countries before the attacks relative to the trade agreements they had with unaffected foreign countries. If the number of trade

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<sup>20</sup> Although we do not tabulate all of our findings, we identify similar deteriorations in some of these dependent variables using other fixed effects structures.

agreements between a local-victim country and a foreign-victim country is greater than or equal to the number of trade agreements between a local-victim country and unaffected foreign countries, then we say that the foreign-victim country is an economically important foreign country for the local target country.

For example, assume that in a terror attack Czechia and Brazil are foreign-victim countries, and Turkey and Russia are the corresponding local-target countries. If Turkey has a customs union agreement with Czechia before the attack, and no other trade agreements with any other country, then Czechia is an economically important foreign-victim country for Turkey. Respectively, for Turkish firms Czechia segment is an economically important segment due to trade relations. In contrast, if Russia has trade agreements before the attack but none with Brazil, Brazil is then not an economically important foreign-victim country for Russia. Following these definitions, we run difference-in-difference-in-difference-in-differences regressions on foreign corporate sales also by using ex ante economic importance as an interaction variable.

– Insert Table XI about here –

We present the results in Table XI. As shown in column (5), we find that the “guilt-by-association” effect from columns (2) and (4) is persistent only in foreign-victim countries that are economically important. This finding is robust to a rich array of controls and fixed effects structures, and it highlights the incremental effect of trade relations on the “guilt-by-association” effect we establish on local-victim country firms.

#### *F. Additional findings*

In this section, we provide robustness tests on country image. To study the impact of terror events on specific country image characteristics, we run specification (4) on the image attributes *friendly*, *fun*, *charming*, *trendy*, *traditional* and *down to earth*.<sup>21</sup> Our results are shown in Panel A of Table XII. As shown in columns (1) to (6), terror events have significant and long-lasting effects on a wide array of image characteristics. We find a 1.58-unit decline in scores in *friendly*, a 1.56-unit decline in scores in *fun*, a 0.97-unit decline in scores in

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<sup>21</sup> Our untabulated results on all of the remaining BAV image attributes are available upon request for interested readers.

*charming*, a 0.74-unit decline in scores in *trendy*, a 2.10-unit decline in scores in *traditional*, and a 1.55-unit decline in scores in *down to earth*. Respectively, these correspond to a 8.14% decrease in scores in *friendly*, a 14.50% decrease in scores in *fun*, a 8.09% decrease in scores in *charming*, a 8.71% decrease in scores in *trendy*, a 15.98% decrease in scores in *traditional*, and a 14.95% decrease in scores in *down to earth*.<sup>22</sup> These findings suggest that the effects of terror events are not only significant for nation brands but also for individual image characteristics. Countries such as Ireland, Greece, and Turkey have particularly high scores in these attributes and are particularly prone to reputational losses after terror attacks.

– Insert Table XII about here –

Since BAV’s choice of survey locations already embeds a selection of economically important countries, our unaffected countries provide a reasonable control group. Nonetheless, we provide stronger control by systematically limiting the distance between country pairs. We do this by using population-weighted distances as in Mayer and Zignago (2005).<sup>23</sup> As presented in the first three columns of Panel B, our results are robust to comparing nearby treatment and control pairs. In particular, after controlling for country-level characteristics and an array of fixed effects, we find deteriorations of –1.73 units to –2.21 units in nation brand scores of the local-target countries in foreign-victim countries after the event year.

Finally, we provide a placebo test, in which we study the effects of terror attacks not on the foreign-victim countries but on their closest available neighbors. In so doing, we do not find economically and statistically meaningful effects on the neighbor countries. The coefficient of interest is not only positive but also statistically insignificant (i.e., equal to 1.52). Controlling for additional interactive fixed effects does not seem to change this finding.

#### IV. Conclusion

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<sup>22</sup> *Fun*, *trendy*, and *down to earth* have sample means of 10.76, 8.49, and 10.37.

<sup>23</sup> This measure calculates distance based on bilateral distances between the biggest cities of those two countries, those inter-city distances being weighted by the share of the city in the overall country’s population.

This paper is a first attempt at filling a gap in the financial economics literature by establishing a causal link between terrorism and foreign sales of multinational corporations. We employ a novel identification methodology that exploits the unforeseeable nature of local terror attacks, not only in terms of time and place, but also in terms of the nationalities of foreign citizens they impact. We capture effects of terrorism on country image, bilateral trade relations, and foreign corporate sales and assets using a difference-in-differences framework, in which we compare affected foreign countries with unaffected foreign countries, in the event time of the attacks.

We find that terror has long-lasting effects on country image and foreign corporate sales. These effects are statistically significant and economically meaningful. Terror-related casualties and media coverage of terror events have incremental effects. “Guilty-by-association” local-target country firms, i.e., firms whose names resemble names from local countries, are severely affected through greater deteriorations in foreign sales. Terror exposures distort the overall firm value, asset growth, and profitability.

We look at the relations between terrorism, country image, bilateral trade, and foreign corporate sales, but overlook potential effects of terrorism on immigration regulations and corporate activities in foreign-victim countries. We also overlook potential effects on firms that are not from local-target countries but are falsely identified as local-target country firms due to name similarities. We leave other extensions and considerations for future work.

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**Table I**  
**Terror-event Characteristics**

This table presents key information on terror attacks using data from the merged GTD and Worldscope universe, spanning the period 2001–2013. We use terror attacks that have a defined local target (i.e., people or institutions in the local-target country), but also impact citizens of foreign countries. We restrict our sample to initial terror attacks on each local and foreign country pair and exclude attacks that are directed at foreign military or are unsuccessful. **Panel A** reports target types, **Panel B** reports attack types, **Panel C** reports terrorist groups, and **Panel D** reports the number of attacks, affected countries, and multinational local country firms newly affected by terror attacks each year.

<b>Panel A: Target types</b>		
	<b>N</b>	<b>%</b>
Business	29	32.2
Private Citizens & Property	20	22.2
Government (Diplomatic)	17	18.9
NGO	7	7.8
Tourists	4	4.4
Airports & Aircraft	3	3.3
Police	3	3.3
Educational Institution	2	2.2
Journalists & Media	2	2.2
Unknown	2	2.2
Religious Figures/Institutions	1	1.1
<b>Total</b>	<b>90</b>	<b>100</b>
<b>Panel B: Terror attack types</b>		
	<b>N</b>	<b>%</b>
Bombing/Explosion	42	46.7
Armed Assault	22	24.4
Hostage Taking (Kidnapping)	11	12.2
Facility/Infrastructure Attack	10	11.1
Hijacking	2	2.2
Unarmed Assault	2	2.2
Other	1	1.1
<b>Total</b>	<b>90</b>	<b>100</b>
<b>Panel C: Terrorist groups</b>		
	<b>N</b>	<b>%</b>
Unknown	46	51.1
Unaffiliated Individual(s)	4	4.4
Basque Fatherland and Freedom (ETA)	3	3.3
Chechen Rebels	2	2.2
Free Aceh Movement (GAM)	2	2.2
Kurdistan Workers' Party (PKK)	2	2.2
National Liberation Army of Colombia (ELN)	2	2.2
Abu Sayyaf Group (ASG)	1	1.1
Athens and Thessaloniki Arsonist Nuclei	1	1.1
Conspiracy of Cells of Fire	1	1.1
Corsican National Liberation Front (FLNC)	1	1.1
Other	35	27.7
<b>Total</b>	<b>90</b>	<b>100</b>

TABLE I, continued

<b>Panel D: Yearly observations</b>				
	<b>Number of terror attacks</b>	<b>Number of local-target countries</b>	<b>Number of foreign-victim countries</b>	<b>Number of local-target country firms</b>
2001	17	12	10	264
2002	6	6	5	191
2003	9	7	7	115
2004	5	4	4	61
2005	9	8	7	649
2006	8	4	7	43
2007	7	7	5	269
2008	13	12	11	275
2009	8	7	7	42
2010	3	3	2	7
2011	2	2	2	52
2012	1	1	1	1
2013	2	2	2	6
<b>Total</b>	<b>90</b>	<b>75</b>	<b>70</b>	<b>1,975</b>

## Table II

### Summary Statistics

This table reports country-level and firm-level characteristics. We provide number of observations, mean, median, and standard deviations.

- In **Panel A**, we present data on segment-level corporate sales, financial characteristics, and name-embedding characteristics of exporter firms from local-target countries. In part (1), we report segment-level sales characteristics of firms headquartered in local-target countries. *Sales in victim country to book assets* denotes sales to foreign-victim country divided by total firm assets. *Segment age* is self-explanatory. *Number of additional segments* denotes the number of firm segments in addition to the given segment. *Segment Herfindahl-Hirschman index (HHI)* is computed using sales in FF-48 industries individually for each foreign segment. In part (2), we present financial characteristics. Detailed definitions of these variables are presented in Appendix Section A.1. In part (3), we report firm name and country of origin match scores using the NamePrism algorithm of Ye, Han, Hu, Coskun, Liu, Qin, and Skiena (2017). Top 1 name resemblance, Top 3 name resemblance, and Top 5 name resemblance are respectively equal to one if firm  $j$ 's name has highest predicted "nationality" equal to its country of incorporation, or if among firm  $j$ 's top 3 or top 5 "nationality" predictions includes its country of incorporation.
- In **Panel B**, we present data on country image, economic characteristics, promotion efforts, bilateral trade agreements, and foreign media coverage. In part (1), we report image attribute scores from surveys carried out by BAV in foreign countries. Each country gets a percentage score in each attribute that denotes the percentage of the respondents associating it with the image attribute. In part (2), we present economic characteristics of country pairs (i.e., local and foreign countries in our sample). *Conflict* denotes whether there is an active war between a given country/foreign country pair. *Distance* is the population-weighted distance between the two most populous cities in thousand kilometers, as in Mayer and Zignago (2005). *Common religion* and *common ethnic language* denote whether countries share a common religion and an ethnic language, respectively. *Logged GDP* denotes US\$ GDP per capita in thousands, *Population* denotes population in millions, *Area* denotes area in thousand kilometers squared, and *WTO member* denotes whether a given country is a WTO member in a given year. In part (3), we present data on country promotion agencies. We hand-collect country promotion agencies data from World Association of Investment Promotion Agencies (WAIPA) and individual country promotion agency websites. In part (4), we present data on media coverage of terror events in foreign countries. Logged terror-related news articles are Factiva news articles with subjects equal to "Terrorism" and region tags equal to local country names. In part (5), we present data on bilateral trade agreements between countries. *Trade agreement* denotes whether there is an active trade agreement between country  $k$  and foreign country  $l$  in year  $t$ . *Total Pages* denotes the average number of pages in active trade agreements between country  $k$  and foreign country  $l$  in year  $t$ . *IPR Mention*, *IPR Chapter*, *Affirming TRIPS*, and *Trade Secrets* respectively denote whether intellectual property rights (IPR) were covered, there is a chapter on IPR, the total number of bilateral trade agreements affirming TRIPS agreement, and whether trade secrets are mentioned in active trade agreements between countries.

(Table is on the following page)

<b>Panel A: Firm-level characteristics</b>				
<b>Part 1: Segment-level sales</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Sales in victim country to book assets (%)	251,190	4.28	0.00	9.42
Segment assets to total assets (%)	251,201	2.55	0.00	27.34
Logged segment age	251,201	2.26	2.40	0.72
Logged number of additional segments	251,201	1.57	1.61	0.58
Segment HHI	251,201	0.35	0.25	0.30
<b>Part 2: Financial characteristics</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Logged Tobin's Q	250,258	0.90	0.80	0.38
Logged Market-to-book	250,276	0.63	0.53	0.46
Logged size	250,283	3.02	3.01	0.11
R&D to book assets	130,463	0.05	0.02	0.06
Capex to book assets	248,969	0.05	0.04	0.05
Leverage	251,201	0.24	0.21	0.21
Return on equity (%)	244,670	6.27	8.69	20.14
Return on assets (%)	250,581	3.54	4.78	10.60
Profit margin (%)	242,550	27.15	23.65	19.43
Cash flows to assets	251,201	0.02	0.00	0.07
<b>Part 3: Name characteristics</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Top 1 name resemblance	220,752	0.20	0.00	0.40
Top 3 name resemblance	220,752	0.35	0.00	0.48
Top 5 name resemblance	220,752	0.42	0.00	0.49
<b>Panel B: Country-level characteristics</b>				
<b>Part 1: Image characteristics</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Nation brand score	7,407	20.44	18.44	10.66
Charming	7,407	11.99	10.66	10.08
Down To Earth	7,407	10.37	10.06	7.99
Fun	7,407	10.07	8.70	5.67
Friendly	7,407	19.41	16.90	12.16
Traditional	7,407	13.14	11.77	6.94
Trendy	7,407	8.49	7.87	6.75
<b>Part 2: Economic characteristics</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Conflict	7,407	0.04	0.00	0.19
Distance	7,407	6.97	7.46	4.81
Common religion	7,407	0.21	0.08	0.27
Common ethnic language	7,407	0.14	0.00	0.35
Logged GDP	7,407	9.29	9.61	1.27
Logged GDP (Foreign country)	7,407	9.40	9.97	1.30
Population	7,407	145.84	58.68	278.33
Population (Foreign country)	7,407	175.78	57.97	340.04
Area	7,407	2.14	0.51	3.38
Area (Foreign country)	7,407	3.41	0.55	4.85
WTO member	7,407	0.97	1.00	0.18
WTO member (Foreign country)	7,407	0.91	1.00	0.28
<b>Part 3: Promotion efforts</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Number of promotion agencies	7,407	1.35	1.00	1.35
<b>Part 4: Media coverage abroad</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Logged terror related articles	25,500	0.25	0.00	0.85
<b>Part 5: Bilateral trade agreements</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
Trade agreement	41,600	0.80	1.00	0.40
Total pages	41,600	91.92	16.00	216.71
IPR mention	41,600	0.24	0.00	0.30
IPR chapter	41,600	0.23	0.00	0.29
Affirming TRIPS	41,600	0.63	0.00	0.84
Trade secrets	41,600	0.25	0.00	0.42

**Table III**

**Effects of Terror Attacks on Foreign Segment Sales**

This table reports the impact of terror events on firms' foreign segment sales. We run regressions on the following specification:

$$y_{jkl t} = \alpha_{jl} + \alpha_t + \gamma X_{jkl t} + \varphi Z_{jt} + \delta \text{Treatment}_{klt} + \varepsilon_{jkl t},$$

where  $j$  indexes firm,  $k$  indexes country of incorporation,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl t}$  is the dependent variable of interest (i.e., segment sales of firm  $j$  of country  $k$  in foreign country  $l$  in year  $t$  deflated with total firm assets),  $\alpha_t$  and  $\alpha_{jl}$  are year and firm-segment fixed effects.  $X_{jkl t}$  and  $Z_{jt}$  contain segment-level control variables such as *Log(Segment age)*, *Log(Number of other segments)*, *Segment-wide Herfindahl-Hirschman index (HHI) index* using FF-48 industries, along with firm-level controls such as *Cash flows to assets*, *Log(Tobin's Q)*, and *Leverage*. *Cash flows* are deflated by lagged assets, *Log(Tobin's Q)* is lagged, and *Leverage* is deflated by lagged assets.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{jkl t}$  is the error term. Our sample is the merged GTD and Worldscope universe, and our sample period is from 1995 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

	Segment-level Sales to Total Assets (%)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment	-0.76** (-2.74)	-0.69** (-2.53)	-0.88*** (-3.19)	-0.67** (-2.39)	-0.92*** (-3.75)	-0.63** (-2.56)	-0.43** (-2.09)
Log(Segment age)	...	0.73*** (3.60)	0.68*** (3.58)	0.69*** (3.74)	0.55*** (3.00)	0.58*** (3.21)	...
Log(Number of other segments)	...	-2.31* (-1.90)	-2.69** (-2.18)	-2.78** (-2.20)	-3.18** (-2.42)	-3.21** (-2.41)	...
Segment HHI	...	0.07 (0.40)	0.12 (0.73)	0.44*** (4.41)	0.18 (1.25)	0.44*** (4.57)	-0.09*** (-15.62)
Cash flows to assets	...	-1.70 (-1.33)	-1.38 (-1.19)	-0.02 (-0.02)	2.21* (2.07)	2.32** (2.22)	...
Leverage	...	-1.08*** (-5.30)	-1.02*** (-5.23)	-1.02*** (-5.18)	-0.96*** (-5.22)	-1.00*** (-5.44)	...
Log(Tobin's Q)	...	0.01 (0.10)	0.08 (0.61)	0.07 (0.57)	0.02 (0.15)	0.02 (0.19)	...
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	No
Year fixed effects?	Yes	Yes	No	No	No	No	No
Industry-year fixed effects?	No	No	Yes	Yes	Yes	Yes	No
Foreign country × year fixed effects?	No	No	No	Yes	No	Yes	No
Country of incorporation × year fixed effects?	No	No	No	No	Yes	Yes	Yes
Firm × year fixed effects?	No	No	No	No	No	No	Yes
Observations	250,477	250,477	250,477	250,361	250,477	250,361	250,477
R <sup>2</sup>	0.559	0.560	0.566	0.576	0.577	0.585	0.488

**Table IV**

**Effects of Terror Attacks on Foreign Segment Assets**

This table reports the impact of terror events on firms' foreign segment assets. We run regressions on the following specification:

$$y_{jkl,t} = \alpha_{jl} + \alpha_t + \gamma X_{jkl,t} + \varphi Z_{jt} + \delta \text{Treatment}_{klt} + \varepsilon_{jkl,t},$$

where  $j$  indexes firm,  $k$  indexes country of incorporation,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl,t}$  is the dependent variable of interest (i.e., segment assets of firm  $j$  of country  $k$  in foreign country  $l$  in year  $t$  deflated with total firm assets), and  $\alpha_t$  and  $\alpha_{jl}$  are year and firm-segment fixed effects.  $X_{jkl,t}$  and  $Z_{jt}$  contain segment-level control variables such as *Log(Segment age)*, *Log(Number of other segments)*, *Segment-wide Herfindahl-Hirschman index (HHI) index* using FF-48 industries, along with firm-level controls such as *Cash flows to assets*, *Log(Tobin's Q)*, and *Leverage*. *Cash flows* are deflated by lagged assets, *Log(Tobin's Q)* is lagged, and *Leverage* is deflated by lagged assets.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{jkl,t}$  is the error term. Our sample is the merged GTD and Worldscope universe, and our sample period is from 1995 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

	Segment-level Assets to Total Assets (%)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment	-0.54*** (-4.27)	-0.54*** (-4.25)	-0.52*** (-4.16)	-0.62*** (-4.34)	-0.48*** (-3.49)	-0.47*** (-3.33)	-0.39*** (-3.12)
Log(Segment age)	...	0.03 (0.36)	0.07 (0.96)	0.14* (1.88)	0.17* (2.04)	0.18** (2.14)	...
Log(Number of other segments)	...	-2.72** (-2.66)	-3.22*** (-3.23)	-3.27*** (-3.23)	-3.17*** (-3.12)	-3.26*** (-3.21)	...
Segment HHI	...	0.24*** (3.80)	0.23*** (3.67)	0.23*** (3.91)	0.19*** (2.95)	0.19*** (3.24)	0.05*** (3.35)
Cash flows to assets	...	-2.10** (-2.22)	-2.06** (-2.28)	-1.63* (-2.01)	-1.08 (-1.61)	-0.98 (-1.45)	...
Leverage	...	0.35*** (3.20)	0.34*** (3.14)	0.33*** (3.06)	0.33*** (3.02)	0.33*** (2.98)	...
Log(Tobin's Q)	...	-0.27*** (-3.55)	-0.32*** (-4.37)	-0.31*** (-4.23)	-0.27*** (-3.50)	-0.27*** (-3.57)	...
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	No	No	No	No	No
Industry-year fixed effects?	No	No	Yes	Yes	Yes	Yes	No
Foreign country × year fixed effects?	No	No	No	Yes	No	Yes	No
Country of incorporation × year fixed effects?	No	No	No	No	Yes	Yes	Yes
Firm × year fixed effects?	No	No	No	No	No	No	Yes
Observations	250,488	250,488	250,488	250,372	250,488	250,372	250,162
R <sup>2</sup>	0.542	0.542	0.548	0.556	0.557	0.564	0.750



**Table V**

**Firm-level Effects**

This table reports the impact of terror events on firm value, asset growth, and profitability. We run regressions on the following specification:

$$y_{jt} = \alpha_j + \alpha_t + \gamma X_{jt} + \delta \text{Affected}_{jt} + \varepsilon_{jt},$$

where  $j$  indexes firm and  $t$  indexes survey year.  $y_{jt}$  is the dependent variable of interest (i.e., *Logged Tobin's Q*, *Logged Market-to-book*, *Asset growth*, or *Profit Margin* of firm  $j$  in year  $t$ ), and  $\alpha_t$  and  $\alpha_j$  are year and firm fixed effects.  $X_{jt}$  contains *Log(Book assets)*, *Log(Book assets squared)*, and *Log(Age)*, or firm-level controls such as *Cash flows to assets*, *Log(Tobin's Q)*, and *Leverage*. *Cash flows to assets* is deflated by lagged assets, *Log(Tobin's Q)* is lagged, and *Leverage* is deflated by lagged assets. *Affected<sub>jt</sub>* denotes whether at least one of a firm's segments was affected by terror attacks by year  $t$ . Our sample is the merged BAV, GTD, and Worldscape universe, and our sample period is from 1995 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

	<b>Log(Tobin's Q)</b>	<b>Log(M/B)</b>	<b>Asset Growth</b>	<b>Profit Margin</b>
	(1)	(2)	(3)	(4)
Affected	-0.05*** (-2.95)	-0.04*** (-3.58)	-0.02** (-2.36)	-1.86*** (-3.16)
Log(Age)	-0.14*** (-7.27)	-0.11*** (-8.87)	-0.15*** (-10.37)	...
Log(Book assets)	-0.36*** (-5.85)	-0.16*** (-4.73)	0.20*** (8.48)	...
Log(Book assets sq.)	0.01*** (4.58)	0.00** (2.38)	-0.00*** (-5.82)	...
Cash flows to assets	...	...	...	3.65 (1.13)
Leverage	...	...	...	-1.03 (-1.59)
Log(Tobin's Q)	...	...	...	6.70*** (10.59)
Firm fixed effects?	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes
Observations	66,649	66,649	66,649	64,244
R <sup>2</sup>	0.626	0.677	0.238	0.762

**Table VI**

**Firm Name and Country-of-Origin Resemblance**

This table presents results on how firm name and country-of-origin resemblance affects foreign segment sales. We run regressions on the following specification:

$$y_{jkl} = \alpha_{jl} + \alpha_t + \gamma X_{jkl} + \varphi Z_{jt} + \delta \text{Treatment}_{klt} + \mu \text{Treatment}_{klt} * T_j + \varepsilon_{jkl},$$

where  $j$  indexes firm,  $k$  indexes country of incorporation,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl}$  is the dependent variable of interest (i.e., segment sales of firm  $j$  of country  $k$  in foreign country  $l$  in year  $t$  deflated with total firm assets).  $\alpha_t$  and  $\alpha_{jl}$  are year and segment fixed effects.  $X_{jkl}$  and  $Z_{jt}$  contain segment-level control variables such as *Log(Segment age)*, *Log(Number of other segments)*, *Segment-wide Herfindahl-Hirschman index (HHI) index* using FF-48 industries, along with firm-level controls such as *Cash flows to assets*, *Log(Tobin's Q)*, and *Leverage*. *Cash flows* are deflated by lagged assets, *Log(Tobin's Q)* is lagged, and *Leverage* is deflated by lagged assets.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ .  $T_j$  is one of *Top 1 name resemblance*, *Top 3 name resemblance*, and *Top 5 name resemblance*. They are respectively equal to one if firm  $j$ 's name has highest predicted "nationality" equal to its country of incorporation, or if among firm  $j$ 's top 3 or top 5 "nationality" predictions includes its country of incorporation.  $\varepsilon_{jkl}$  is the error term. Our sample is the merged BAV, GTD, and Worldscope universe, and our sample period is from 1995 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

**(Table is on the following page)**

	Segment-level Sales to Total Assets (%)			
	(1)	(2)	(3)	(4)
Treatment	-0.69** (-2.55)	-0.43 (-1.35)	-0.19 (-0.50)	-0.08 (-0.19)
Treatment * Top 1 name resemblance	...	-0.87* (-1.91)	...	...
Treatment * Top 3 name resemblance	...	...	-1.05** (-2.22)	...
Treatment * Top 5 name resemblance	...	...	...	-1.07** (-2.12)
Log(Segment age)	0.76*** (3.61)	0.77*** (3.45)	0.77*** (3.53)	0.77*** (3.61)
Log(Number of other segments)	-1.68 (-1.24)	-1.68*** (-8.88)	-1.67*** (-12.60)	-1.68*** (-17.76)
Segment HHI	0.05 (0.28)	0.05 (0.29)	0.05 (0.29)	0.05 (0.29)
Cash flows to assets	-2.32 (-1.55)	-2.30 (-1.55)	-2.29 (-1.54)	-2.27 (-1.53)
Leverage	-1.09*** (-5.13)	-1.09*** (-5.11)	-1.09*** (-5.13)	-1.09*** (-5.13)
Log(Tobin's Q)	-0.04 (-0.27)	-0.04 (-0.23)	-0.04 (-0.27)	-0.04 (-0.28)
Firm-segment fixed effects?	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes
Observations	220,103	220,103	220,103	220,103
R <sup>2</sup>	0.558	0.558	0.559	0.559

**Table VII****Foreign Media Response to Local Terror Attacks**

This table studies effects of terror attacks on foreign media coverage of local-target countries. In our main specification, we estimate the following regression:

$$y_{klt} = \alpha_t + \alpha_{kl} + \delta \text{ Treatment}_{klt} + \varepsilon_{klt}$$

where  $k$  indexes country,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{klt}$  is the dependent variable of interest (i.e., log of one plus the number of terror related news articles about country  $k$  in foreign country  $l$  media outlets in year  $t$ ), and  $\alpha_t$  and  $\alpha_{kl}$  are year and country-pair fixed effects.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{klt}$  is the error term. News articles in foreign country media outlets are hand-collected from Factiva with subject tags of “terrorism” and region tags equal to names of target countries. Our estimate of terrorist attacks’ effect on country reputations is  $\delta$ . Our sample is the merged Factiva and GTD universe, and our sample period is from 1995 to 2014. We use all survey countries that exist in BAV database at least once. Further descriptions on data collection can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

	<b>Logged Number of Terror-related News Articles</b>			
	(1)	(2)	(3)	(4)
Treatment	0.47** (2.74)	0.50*** (2.90)	0.40*** (3.32)	0.36*** (3.27)
Country pair fixed effects?	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	No	No	No
Country $\times$ year fixed effects?	No	Yes	No	Yes
Foreign country $\times$ year fixed effects?	No	No	Yes	Yes
Observations	25,500	24,520	25,500	24,520
$R^2$	0.515	0.592	0.649	0.729

## Table VIII

### Effects of Terrorism on Country Image Overseas

This table studies effects of terror attacks on nation brand scores overseas. In our main specification, we estimate the following regression:

$$y_{klt} = \alpha_t + \alpha_{kl} + \gamma X_{klt} + \delta \text{Treatment}_{klt} + \varepsilon_{klt}$$

where  $k$  indexes country,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{klt}$  is the dependent variable of interest (i.e., nation brand score of country  $k$  in foreign country  $l$  in year  $t$ ), and  $\alpha_t$  and  $\alpha_{kl}$  are year and country-pair fixed effects.  $X_{klt}$  contains control variables such as *Log(GDP per capita)*, *Log(Population)*, and *WTO membership*, along with *Common currency* dummies for both country  $k$  and location  $l$ .  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{klt}$  is the error term. *Casualty* denotes whether a citizen of the foreign victim country died in the terror attack. *Number of casualties* denotes the number of people who died. *Media attention in foreign-victim country* denotes the number of terror-related news articles (in hundreds) in foreign-victim country media outlets in the event year. Our sample is the merged BAV and GTD, and our sample period is from 1993 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

(Table is on the following page)

	Nation Brand Score					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-2.00*** (-3.86)	-1.86** (-2.73)	-0.71* (-1.97)	-1.49** (-2.42)	-1.45** (-2.35)	-1.17 (-1.49)
Treatment * Casualty	...	...	...	-2.97*** (-3.61)	...	...
Treatment * Number of casualties	...	...	...	...	-1.76*** (-3.43)	...
Treatment * Media attention in foreign-victim country	...	...	...	...	...	-0.59** (-2.42)
Log(GDP per capita)	1.39 (1.50)	...	2.20*** (6.48)	1.39 (1.51)	1.39 (1.51)	1.46 (1.49)
Log(GDP per capita <sup>Foreign country</sup> )	2.39*** (4.89)	1.54* (1.81)	...	2.46*** (5.05)	2.47*** (5.02)	2.24*** (4.12)
Log(Population)	-3.87 (-0.91)	...	-3.72 (-0.84)	-4.00 (-0.95)	-3.87 (-0.92)	-2.33 (-0.51)
Log(Population <sup>Foreign country</sup> )	-11.53 (-1.64)	-11.56 (-1.64)	...	-11.34 (-1.61)	-11.50 (-1.64)	-13.98* (-1.85)
GATT/WTO member	-4.88** (-2.10)	...	-0.91** (-2.12)	-4.72* (-1.99)	-4.69* (-1.96)	-5.14** (-2.13)
GATT/WTO member <sup>Foreign country</sup>	-0.96** (-2.20)	-4.57 (-1.52)	...	-0.93** (-2.10)	-0.91** (-2.08)	-0.90* (-2.05)
Common currency	5.04*** (3.49)	5.41*** (3.07)	2.55** (2.55)	4.91*** (3.42)	4.90*** (3.42)	5.15*** (3.70)
Country pair fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	No	No	Yes	Yes	Yes
Foreign country × year fixed effects?	No	No	Yes	No	No	No
Country × year fixed effects?	No	Yes	No	No	No	No
Observations	7,083	6,971	7,073	7,083	7,083	6,256
R <sup>2</sup>	0.853	0.870	0.910	0.853	0.853	0.848

**Table IX**

**Media Coverage, Country Image and Foreign Sales**

This table reports how terror-related casualties, media coverage of terror events, country image, and country promotion efforts influence foreign segment sales. We run regressions on the following specification:

$$y_{jkl t} = \alpha_{jl} + \alpha_t + \gamma X_{jkl t} + \phi Z_{jt} + \delta \text{Treatment}_{klt} + \mu \text{Treatment}_{klt} * M_{klt} + \varepsilon_{jkl t},$$

where  $j$  indexes firm,  $k$  indexes country of incorporation,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl t}$  is the dependent variable of interest (i.e., segment sales of firm  $j$  from country  $k$  in foreign country  $l$  in year  $t$  deflated with total firm assets), and  $\alpha_t$  and  $\alpha_{jl}$  are year and segment fixed effects.  $X_{jkl t}$  and  $Z_{jt}$  contain segment-level control variables such as segment age, number of other segments, segment-wide Herfindahl-Hirschman index (HHI) index using FF-48 industries, along with firm-level controls such as cash flows to asset, Tobin's Q, and leverage. Cash flows are deflated by lagged assets, Tobin's Q is lagged, and leverage is deflated by lagged assets.  $\text{Treatment}_{klt}$  is a dummy variable that is equal to one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ .  $M_{klt}$  includes additional variables. *Casualty* denotes whether a citizen of the foreign victim country died in the terror attack. *Number of casualties* denotes the number of people who died. *Media attention in foreign-victim country* denotes the number of terror-related news articles (in hundreds) in foreign-victim country media outlets in the event year. *Weak country promotion* denotes whether the local target country has fewer country promotion agencies than the sample median in the year before the terror attack. *High nation brand* denotes whether the local target country nation brand score is greater than the median score in foreign country surveys in 2000.  $\varepsilon_{jkl t}$  is the error term. Our sample is the merged BAV, GTD, and Worldscope universe, and our sample period is from 1993 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

**(Table is on the following page)**

	Segment-level Sales to Total Assets (%)				
	(1)	(2)	(3)	(4)	(5)
Treatment	-0.59* (-2.07)	-0.63** (-2.23)	-0.55 (-1.59)	0.95* (1.80)	1.04 (1.40)
Treatment * Casualty	-1.36** (-2.11)	...	...	...	...
Treatment * Number of casualties	...	-0.39* (-1.75)	...	...	...
Treatment * Media attention in foreign-victim country	...	...	-0.19* (-1.84)	...	...
Treatment * Weak country promotion	...	...	...	-1.94*** (-3.02)	...
Treatment * High nation brand	...	...	...	...	-1.88** (-2.33)
Log(Segment age)	0.74*** (3.42)	0.74*** (3.39)	0.79*** (3.44)	0.73*** (3.43)	0.49* (1.88)
Log(Number of other segments)	-2.31*** (-21.57)	-2.31*** (-21.71)	-2.12 (-1.25)	-2.31*** (-20.85)	-2.14*** (-8.59)
Segment HHI	0.07 (0.39)	0.07 (0.39)	-0.42 (-1.70)	0.07 (0.39)	0.16 (0.91)
Cash flows to assets	-1.70 (-1.33)	-1.70 (-1.33)	-2.20 (-1.28)	-1.69 (-1.32)	-2.07 (-0.61)
Leverage	-1.08*** (-5.28)	-1.08*** (-5.30)	-1.12*** (-5.04)	-1.07*** (-5.27)	-1.06*** (-4.49)
Log(Tobin's Q)	0.01 (0.09)	0.01 (0.09)	-0.10 (-0.65)	0.00 (0.02)	-0.37** (-2.52)
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes
Observations	250,477	250,477	172,006	250,477	87,644
R <sup>2</sup>	0.560	0.560	0.569	0.560	0.644



**Table X**

**Effects of Terrorism on Bilateral Trade Agreements**

This table studies effects of terror attacks on trade agreements between countries. In our main specification, we estimate the following regression:

$$y_{klt} = \alpha_{kt} + \alpha_{kl} + \delta \text{ Treatment}_{klt} + \varepsilon_{klt}$$

where  $k$  indexes country,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{klt}$  is the dependent variable of interest and it's one of *Trade agreement*, *Total Pages*, *IPR Mention*, *IPR Chapter* and *Trade Secrets*. *Trade agreement* denotes whether there is an active trade agreement between country  $k$  and foreign country  $l$  in year  $t$ . *Total Pages* denotes the average number of pages in active trade agreements between country  $k$  and foreign country  $l$  in year  $t$ . *IPR Mention*, *IPR Chapter*, *Affirming TRIPS* and *Trade Secrets* respectively denote whether intellectual property rights (IPR) were covered, there is a chapter on IPR, the number of bilateral trade agreements affirming TRIPS, and whether trade secrets are mentioned in active trade agreements between country  $k$  and foreign country  $l$  in year  $t$ .  $\alpha_{kt}$  and  $\alpha_{kl}$  are country-year and country-pair fixed effects.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{klt}$  is the error term. Our sample is the merged UNESCAP bilateral trade agreements dataset and GTD, and our sample period is from 1993 to 2014. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

	<u>Trade Agreement</u>	<u>Total Pages</u>	<u>IPR Mention</u>	<u>IPR Chapter</u>	<u>Affirming TRIPS</u>	<u>Trade Secrets</u>
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-0.06** (-2.53)	-21.20* (-1.77)	-0.06*** (-3.07)	-0.05*** (-3.19)	-0.08** (-2.34)	-0.05** (-2.22)
Country pair fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
Country $\times$ year fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	41,320	41,320	41,320	41,320	41,320	41,320
$R^2$	0.795	0.867	0.815	0.816	0.903	0.873

**Table XI**

**Trade Relations, Country-of-Origin Resemblance and Foreign Sales**

This table presents results on how firm name and country-of-origin resemblance affects foreign segment sales. We run regressions on the following specification:

$$y_{jkl} = \alpha_{jl} + \alpha_t + \gamma X_{jkl} + \varphi Z_{jt} + \delta \text{Treatment}_{klt} + \mu \text{Treatment}_{klt} * T_j \\ + \lambda \text{Treatment}_{klt} * N_{jl} + \rho \text{Treatment}_{klt} * T_j * N_{jl} + \varepsilon_{jkl},$$

where  $j$  indexes firm,  $k$  indexes country of incorporation,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl}$  is the dependent variable of interest (i.e., segment sales of firm  $j$  of country  $k$  in foreign country  $l$  in year  $t$  deflated with total firm assets).  $\alpha_t$  and  $\alpha_{jl}$  are year and segment fixed effects.  $X_{jkl}$  and  $Z_{jt}$  contain segment-level control variables such as *Log(Segment age)*, *Log(Number of other segments)*, *Segment-wide Herfindahl-Hirschman index (HHI) index* using FF-48 industries, along with firm-level controls such as *Cash flows to assets*, *Log(Tobin's Q)*, and *Leverage*. *Cash flows* are deflated by lagged assets, *Log(Tobin's Q)* is lagged, and *Leverage* is deflated by lagged assets.  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ .  $T_j$  is *Top 5 name resemblance* as in Table VI.  $N_{jl}$  denotes whether firm  $j$ 's foreign segment  $l$  is a high-level economic relation segment as explained in Section IV.E.  $\varepsilon_{jkl}$  is the error term. Our sample is the merged BAV, GTD, and Worldscope universe, and our sample period is from 1995 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

**(Table is on the following page)**

	Segment-level Sales to Total Assets (%)				
	(1)	(2)	(3)	(4)	(5)
Treatment	-0.69** (-2.55)	-0.08 (-0.20)	-0.41 (-1.10)	0.14 (0.29)	-0.72 (-1.32)
Treatment * Top 5 name resemblance	...	-1.07** (-2.12)	...	-1.05* (-2.07)	0.60 (0.85)
Treatment * High economic relation segment	...	...	-0.38 (-0.88)	-0.31 (-0.71)	0.89 (1.37)
Treatment * Top 5 name resemblance * High economic relation segment	...	...	...	...	-2.22** (-2.50)
Log(Segment age)	0.76*** (3.61)	0.77*** (3.58)	0.75*** (3.56)	0.76*** (3.55)	0.76*** (3.62)
Log(Nr. of other segments)	-1.68 (-1.24)	-1.68*** (-11.14)	-1.67 (-1.23)	-1.68*** (-11.25)	-1.66 (-0.02)
Segment HHI	0.05 (0.28)	0.05 (0.29)	0.05 (0.28)	0.05 (0.29)	0.05 (0.00)
Cash flows to assets	-2.32 (-1.55)	-2.27 (-1.53)	-2.32 (-1.56)	-2.28 (-1.54)	-2.27 (-1.54)
Leverage	-1.09*** (-5.13)	-1.09*** (-5.13)	-1.09*** (-5.13)	-1.09*** (-5.13)	-1.08*** (-5.12)
Log(Tobin's Q)	-0.04 (-0.27)	-0.04 (-0.28)	-0.04 (-0.26)	-0.04 (-0.27)	-0.04 (-0.26)
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes
Observations	220,103	220,103	220,103	220,103	220,103
R <sup>2</sup>	0.558	0.559	0.558	0.559	0.559

## Table XII

### Robustness Tests on Country Image

This table reports the effects of terror attacks on different country image attributes. It also reruns tests on nation brands using nearby treatment and control countries and provides a placebo test using foreign-victim countries' closest neighbors. Panel A presents results on selected image attributes. Columns 1–3 of Panel B reruns Table VIII regressions on nation brands using nearby neighbors. *Distance* is population weighted as in Mayer and Zignago (2005). *High/Medium/Low distance* denotes up to 10/5/2.5 thousand kilometers. Columns 4–6 of Panel B presents results from our placebo test. In our main specification, we estimate the following regression:

$$y_{klt} = \alpha_t + \alpha_{kl} + \gamma X_{klt} + \delta \text{Treatment}_{klt} + \varepsilon_{klt}$$

where  $k$  indexes country,  $l$  indexes survey location, and  $t$  indexes survey year.  $y_{klt}$  is the dependent variable of interest (i.e. nation brand or attribute score of country  $k$  in survey location  $l$  in year  $t$ ),  $\alpha_t$  and  $\alpha_{kl}$  are year and country-pair fixed effects.  $X_{klt}$  contains control variables such as logged GDPs, populations and WTO membership, and common currency dummies for both country  $k$  and location  $l$ .  $\text{Treatment}_{klt}$  is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{klt}$  is the error term. Our sample is the merged BAV and GTD, and our sample period is from 1993 to 2014. More detailed variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

(Table is on the following page)

**Panel A: Dimensions of Country Image**

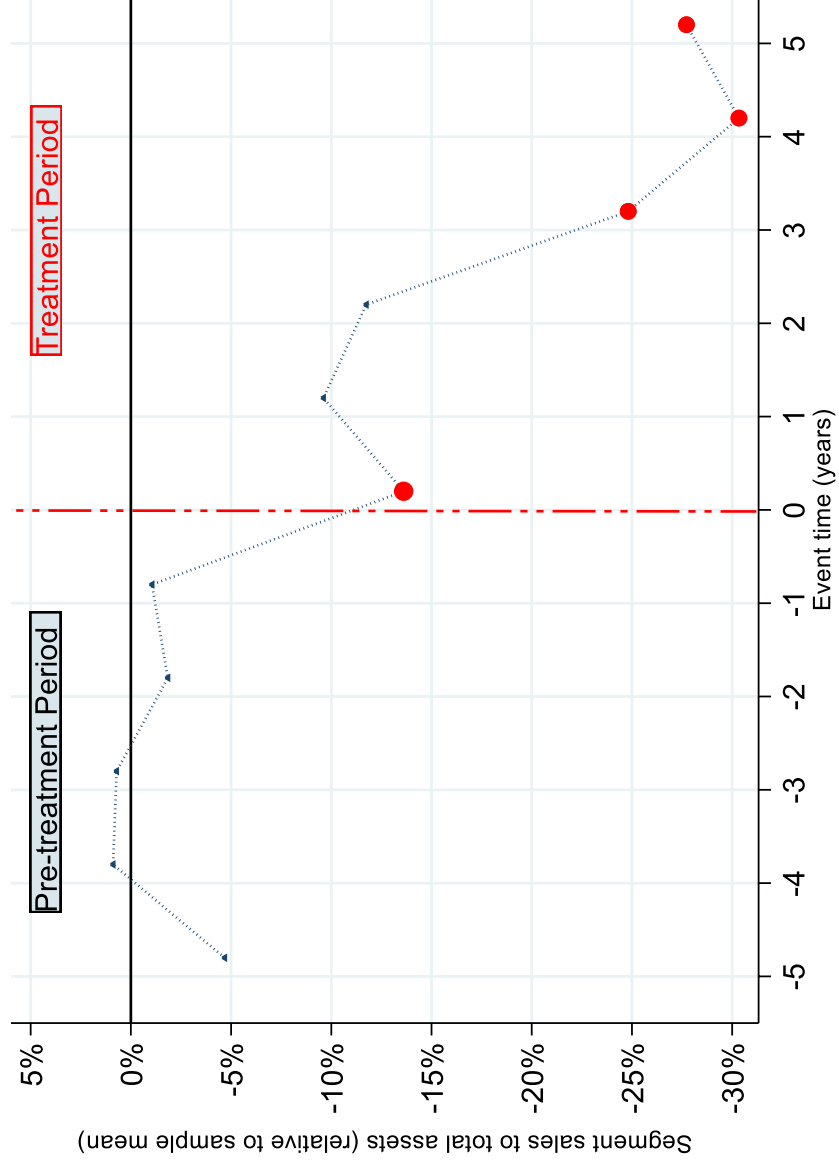
	<b>Friendly</b>	<b>Fun</b>	<b>Charming</b>	<b>Trendy</b>	<b>Traditional</b>	<b>Down to Earth</b>
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-1.58** (-2.47)	-1.56*** (-3.37)	-0.97** (-2.58)	-0.74* (-1.76)	-2.10*** (-3.85)	-1.55** (-2.39)
Country and country-pair controls?	Yes	Yes	Yes	Yes	Yes	Yes
Country pair fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,083	7,083	7,083	7,083	7,083	7,083
$R^2$	0.892	0.870	0.813	0.795	0.837	0.794

**Panel B: Subsample and Placebo Tests**

	<b>Nation Brand Score</b>			<b>Nation Brand Score in Foreign-victim Country's Closest Neighbor</b>		
	<i>High Distance</i>	<i>Medium Distance</i>	<i>Low Distance</i>			
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-1.94*** (-3.83)	-1.73** (-2.63)	-2.21** (-2.57)	1.52 (1.58)	1.73 (1.45)	1.28 (1.55)
Country and country-pair controls?	Yes	Yes	Yes	Yes	Yes	Yes
Country pair fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	No	No
Foreign country × year fixed effects?	No	No	No	No	No	Yes
Country × year fixed effects?	No	No	No	No	Yes	No
Observations	6,545	5,497	2,817	7,360	7,243	7,360
$R^2$	0.848	0.844	0.857	0.849	0.868	0.908

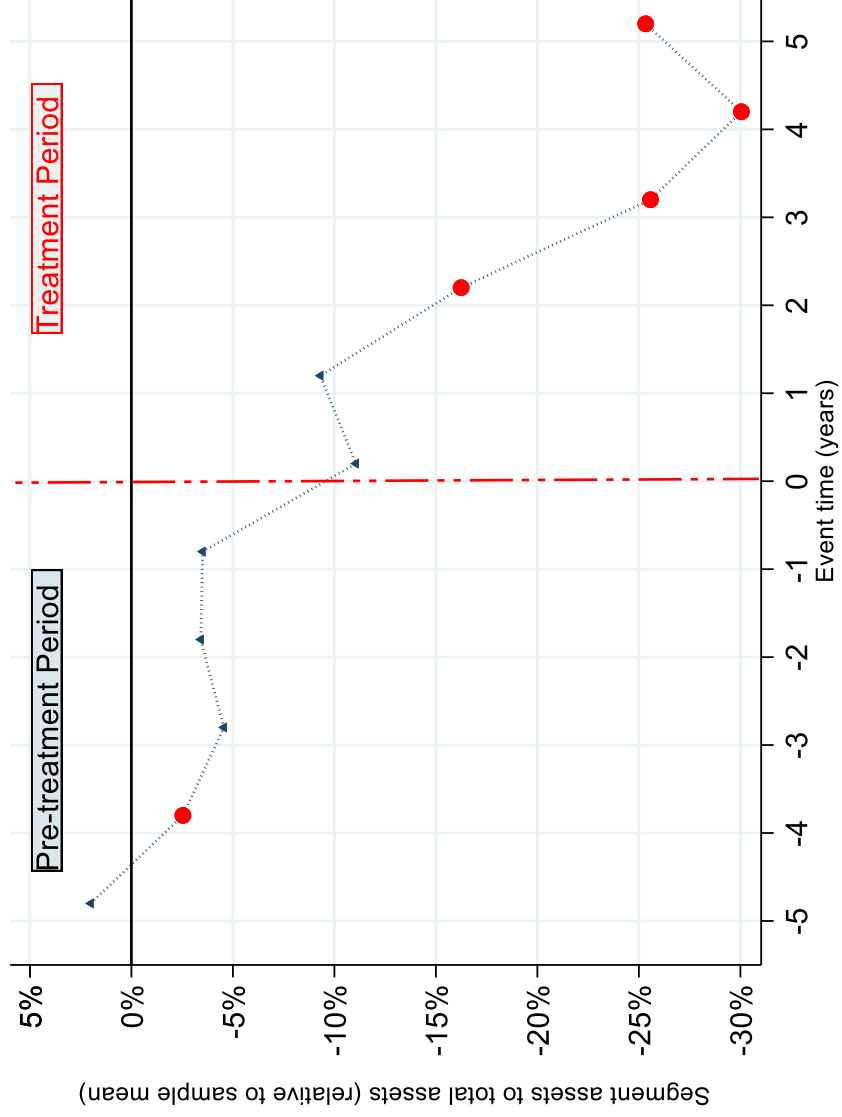
**Figure I**  
**Segment Sales in the Event Time**

This figure shows the evolution of segment sales relative to control firm segments around the terror attacks. The x-axis denotes years around the terror attacks. The y-axis shows the interaction coefficients between years-to-attack dummies and the *Treatment* variable as in specification (1). Interaction terms are obtained from an OLS regression on a sample of treatment and control firm-segments with segment sales to total assets ratios on the left-hand side. We divide the sales to total assets ratios by the sample mean to show changes relative to sample mean on the Y-axis. On the right-hand side, we control for segment age, number of other segments, segment-wide Herfindahl-Hirschman index (HHI) index using FF-48 industries, along with firm-level controls such as cash flows to asset, Tobin's Q, and leverage. We also control for firm-segment fixed effects, industry  $\times$  year fixed effects, and country  $\times$  year fixed effects. The red vertical dotted line records the event time. The blue triangle markers record statistically insignificant coefficients, and the red circle markers record statistically significant coefficients at the 10%, 5%, and 1% levels.



**Figure II**  
**Segment Assets in the Event Time**

This figure shows the evolution of segment assets relative to control firm segments around the terror attacks. The x-axis denotes years around the terror attacks. The y-axis shows the interaction coefficients between years-to-attack dummies and the *Treatment* variable as in specification (1). Interaction terms are obtained from an OLS regression on a sample of treatment and control firm-segments with segment assets to total assets on the left-hand side. We divide the segment assets to total assets ratios by the sample mean to show changes relative to sample mean on the Y-axis. On the right-hand side, we control for segment age, number of other segments, segment-wide Herfindahl-Hirschman index (HHI) index using FF-48 industries, we control for segment age, number of other segments, segment-wide Herfindahl-Hirschman index (HHI) segment fixed effects, along with firm-level controls such as cash flows to asset, Tobin's Q, and leverage. We also control for firm-segment fixed effects, industry  $\times$  year fixed effects, and country  $\times$  year fixed effects. The red vertical dotted line records the event time. The blue triangle markers record statistically insignificant coefficients, and the red circle markers record statistically significant coefficients at 10%, 5%, and 1% levels.



**Figure III**

**Terror-related News Articles in the Event Time**

This figure shows the evolution of terror and local-target country related news articles in foreign media outlets around the terror attacks. The x-axis denotes years around the terror attacks. The y-axis shows the interaction coefficients between years-to-attack dummies and the *Treatment* variable as in specification (4). Interaction terms are obtained from an OLS regression on a sample of treatment and control countries (all survey countries that exist in BAV sample) with logged number of terror-related news articles on the left-hand side. On the right-hand side, we control for country-pair and year fixed effects. The red vertical dotted line records the event time. The blue triangle markers record statistically insignificant coefficients, and the red circle markers record statistically significant coefficients at 10%, 5%, and 1% levels.

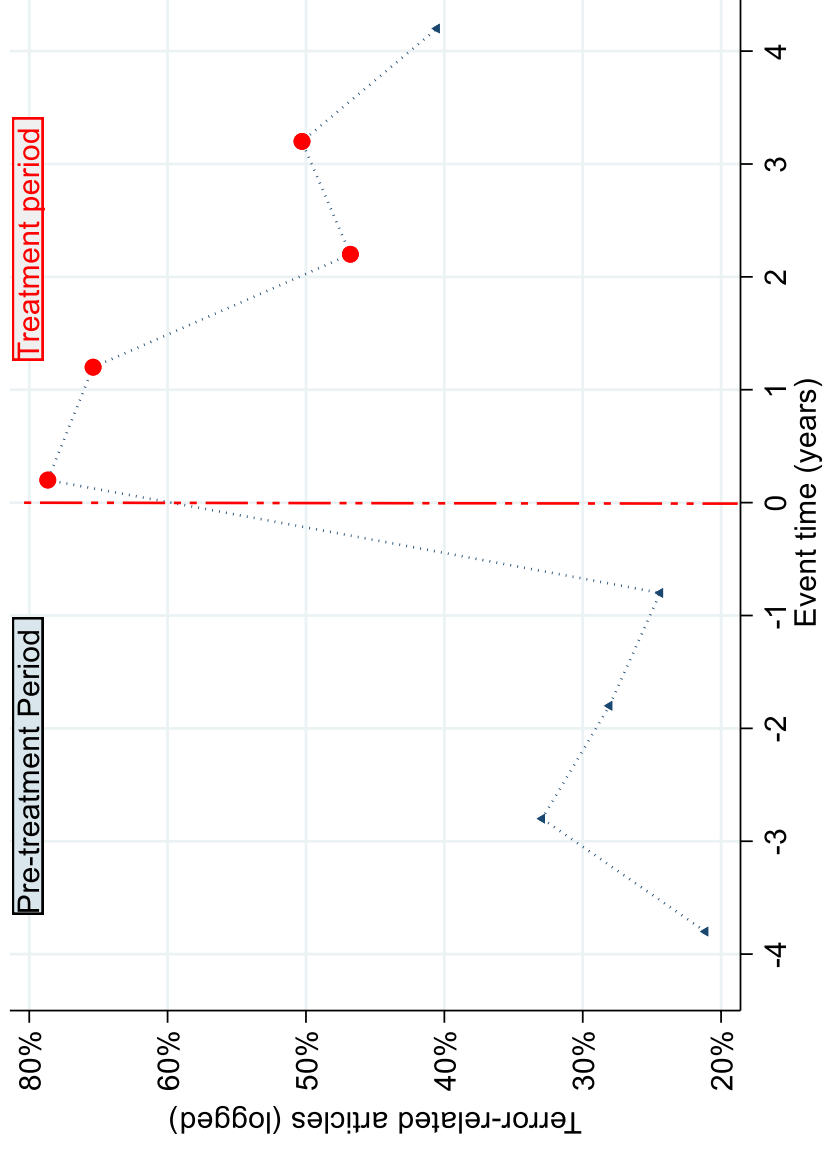
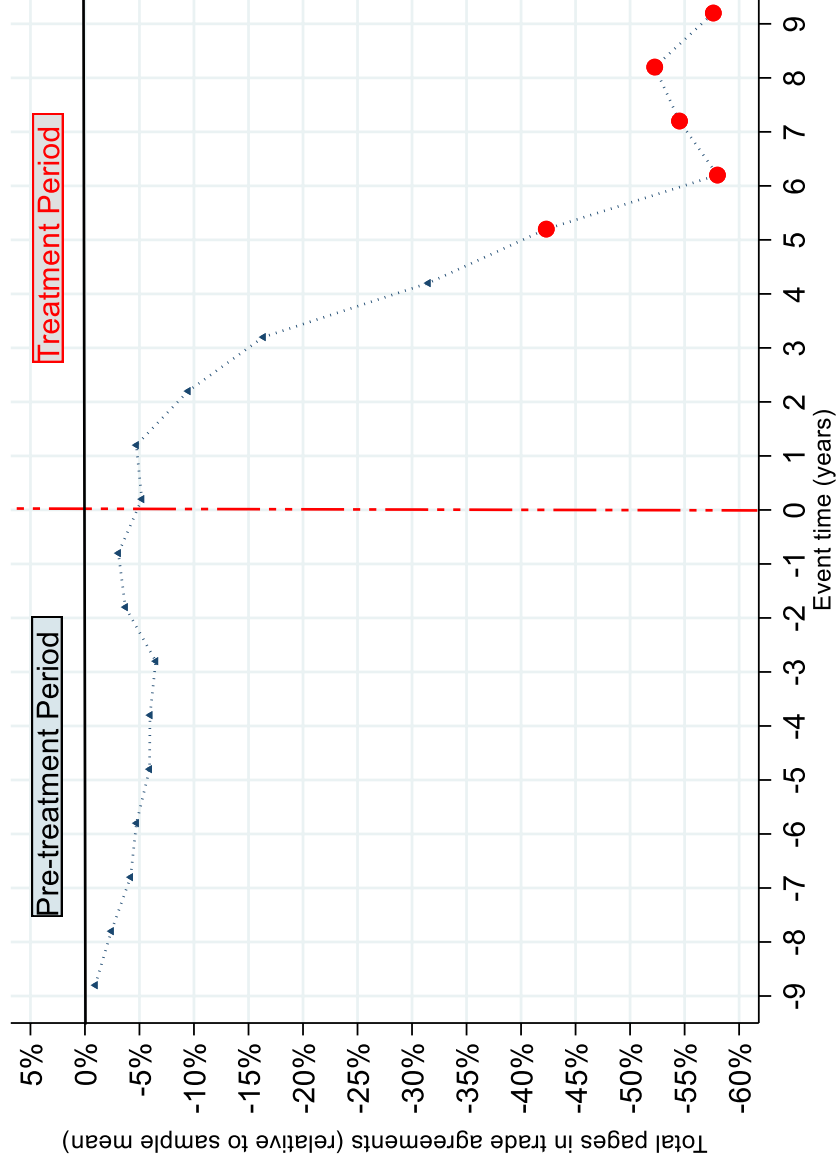




Figure IV

### Bilateral Trade Agreement Length in the Event Time

This figure shows the length of bilateral trade agreements (i.e., the average number of pages) around the terror attacks. The x-axis denotes years around the terror attacks. The y-axis shows the interaction coefficients between years-to-attack dummies and the *Treatment* variable as in specification (5). Interaction terms are obtained from an OLS regression on a sample of treatment and control countries (all survey countries that exist in UNESCAP trade agreements dataset) with mean number of pages in trade agreements in a given year on the left-hand side. On the right-hand side, we control for country-pair and country-year fixed effects. The red vertical dotted line records the event time. The blue triangle markers record statistically insignificant coefficients, and the red circle markers record statistically significant coefficients at 10%, 5%, and 1% levels.



Internet Appendix  
for  
*Guilt by Association:*  
*The Effects of Terrorism on Corporate Activity*

MEHMET I. CANAYAZ and ALPER DARENDELI

## Appendix A: Variable Descriptions

### *A.1 BAV Data*

BAV surveys are at an annual frequency and measure country reputations using image attributes. These attributes (including BAV's image constructs that are their linear combinations) include Arrogant, Authentic, Best Brand, Carefree, Cares About Customers, Charming, Chic, Classic, Customer Centric, Cutting Edge, Daring, Different, Differentiation, Distant, Distinctive, Down To Earth, Dynamic, Energetic, Friendly, Fun, Gaining In Popularity, Glamorous, Good Value, Healthy, Helpful, High Performance, High Quality, Independent, Innovative, Intelligent, Kind, Leader, No Nonsense, Obliging, Original, Outgoing, Prestigious, Progressive, Reliable, Restrained, Rugged, Sensuous, Simple, Social, Socially Responsible, Straightforward, Stylish, Superior, Tough, Traditional, Trendy, Trustworthy, Unapproachable, Unique, Up To Date, Upper Class, and Worth More. Each country gets a percentage score in each of these attributes, determined by the percentage of the respondents associating the rated country with the imagery attribute by ticking a box that matches the rated country with the attribute. Surveys are carried out in Argentina, Australia, Austria, Belgium, Brazil, Chile, China, Colombia, Czech Republic, Denmark, Ecuador, Finland, France, Germany, Greece, Guatemala, Holland, India, Indonesia, Ireland, Italy, Japan, Jordan, Malaysia, Mexico, New Zealand, Norway, Peru, Philippine, Poland, Puerto Rico, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, UAE, United Kingdom, United States, Uruguay, and Venezuela. These are the countries without restrictions. To identify a rated country's overall score in a given imagery attribute, we first find its median score in that attribute across surveys in a given year, and we then take a time-series average. Using this methodology we compute country scores in all image attributes, and we report for each country three image attributes with highest scores. Table A.I provides summary statistics for BAV image attributes that are not presented in the main text. Furthermore, Figures A.I and A.II show each country's nation brand and average nation brand scores across different geographies.

### *A.2 Worldscope Data*

*Tobin's Q* is defined as  $(\text{ITEM2999} + \text{ITEM8001} - \text{ITEM3501}) / \text{ITEM2999}$  and is used as a lagged control variables in segment-level regressions. *Market-to-book ratio* is defined as

ITEM7210 / ITEM7230. *Market capitalization* (in USD) is defined as ITEM7210. *R&D to assets* is defined as ITEM1201 / ITEM2999. *Capital expenditures to assets* is defined as ITEM4601 / ITEM2999. *Leverage* is defined as ITEM3255 / L.ITEM2999. *Return on equity* is defined as ITEM8301. *Profit margin* is defined as ITEM8306. *Cash flows to assets* is defined as (ITEM7250 + ITEM1151) / L.ITEM7230. *Segment-level sales* are ITEM19600 to ITEM19690. We manually clean segment names in order to match segment data with terrorism and brand value data. We are happy to provide our code (about 14,000 lines) that cleans country names for interested researchers. We winsorize all variables at 2.5% on both tails. In our segment sales regressions, we drop country pairs with no economic relation, proxied by the total firm sales being zero during our sampling period. In segment sales regressions, we also exclude terror events in the years 2000, 2014, and 2015 to be able to run difference-in-difference regressions.

### *A.3 Country Promotion Agencies*

We compile a list of promotion agencies using data from various resources. Part of our data comes from country promotion agencies from the website of World Association of Investment Promotion Agencies (WAIPA). WAIPA is an international organization established in 1995 to provide networking opportunities for agencies acting as a forum. It has 170 members from 130 countries. We identify agencies disclosed in the Members List section of the website, augmented with a set of promotion agencies listed in the Appendices of two UNCTAD papers (UNCTAD Advisory Paper 14, 1999 and UNCTAD Advisory Paper, 2001). The foundation years are obtained from individual agency websites, and in cases where this information is missing, we proxy it with promotion agency website creation years.

### *A.4 Country-Level Controls*

We use several sources to collect our country-level data. Country population and real gross domestic product (GDP) data are obtained from the World Bank's World Development Indicators. We also use country-pair variables in our analysis. *Conflict* denotes whether there is war between target and victim countries in history. *Distance* denotes the bilateral distance between the most populous cities of target and victim countries in thousand kilometers, in which those inter-city distances are weighted by the share of the city in the overall country's population.<sup>1</sup> *Common*

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<sup>1</sup> The distance formula is a generalized mean of city-to-city bilateral measure developed by Head and Mayer

*religion* and *common ethnic language* denote whether target country and victim country share a common religion and a common ethnic language spoken by at least 9% of the population, respectively. These country-pair variables come from the CEPII GeoDist database, except for common religion, which is obtained from the CEPII Gravity dataset. Finally, GATT/WTO membership of different countries over time is from the World Trade Organization website, and data on countries' land area (in squared kilometers) is sourced from the CEPII Gravity Dataset.

### *A.5 Factiva*

We use Factiva to find all terror-related articles published in 114 leading newspapers and news agencies across 43 countries.<sup>2</sup> Factiva is a global news database that has been used in numerous prior finance and accounting studies covering over 35,000 publications in 26 languages. We use Factiva indexing codes to list all terror-related articles about country *i* published in country *j*. These codes allow us to identify date, subject, language, and source of articles as well as country names mentioned in a specific article.<sup>3</sup> Then we count the number of terror-related articles about country *i* published in country *j* in a given year. We iterate this process for all the country-pairs in BAV surveys during our sample period.<sup>4</sup> We follow Baker, Bloom, and Davis (2016) in choosing the leading newspapers of each country. For countries not included in Baker, Bloom, and Davis (2016), newspapers are selected based on web popularity rankings compiled by 4imn.com.<sup>5</sup>

### *A.6 GTD Data*

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(2002).

<sup>2</sup> We miss five countries (i.e., Greece, Guatemala, Puerto Rico, Sweden, Turkey) that are included in BAV surveys but whose newspapers are not covered by Factiva during our sample period.

<sup>3</sup> Specifically, we use tag combination of “region”= Target Country, “subject”=Terrorism, “language”=All, “date”=Time Interval, “more options”= Full Article, and “source”=newspaper to identify terror-related news. We exclude republished articles from our analysis.

<sup>4</sup> We restrict our sample to post-2001 period as majority of the non-US newspapers are not covered by Factiva prior to 2001.

<sup>5</sup> 4imn.com is an international search engine focusing on worldwide newspapers including 7,000 newspapers in 200 countries. They use an algorithm extracted from three different search engines, Google Page Rank, Alexa Traffic Rank, and Majestic Seo, to rank the newspapers based upon the popularity of their websites.

We download terror-related data from GTD. This dataset has 156,772 observations. We exclude attacks on military (`targtype1==4`), as they are endogenous. We also exclude unsuccessful attempts. We are left with 120,458 observations. We drop all attacks before 2000, because we want to have reasonable number of observations in the pre-treatment periods -particularly for events that occur in the beginning of 2000s. This is important, because we take the initial attacks between country pairs and our country image and news data is relatively unpopulated in the 1990s. We are left with 65,798 observations. We then identify initial attacks for each country pair. In so doing, we are left with 803 observations. Many of these remaining attacks are, however, between countries that do not ever have economic relations according to the Worldscope universe (e.g., Syria, Pakistan, State of Palestine, Democratic Republic of the Congo, Algeria, Niger, Kenya, Iraq, Yugoslavia, Libya, Yemen, Afghanistan, Somalia, and Nigeria). When we merge the remaining data with Worldscope data between 1995 and 2014, we are left with 90 terror attacks. The local-target country and foreign victim country pairs (listed using “local-target country name” - “foreign-victim country name”) are Argentina-United States; China-United States; United States-United Kingdom; Austria-Switzerland; Austria-Turkey; Belgium-United States; Chile-Brazil; Brazil-United States; Canada-Turkey; United States-Mexico; Chile-United States; China-Australia; China-France; Colombia-Ecuador; Colombia-Peru; Colombia-United States; France-Italy; France-Spain; France-Germany; France-Switzerland; France-Morocco; France-Turkey; Switzerland-Germany; France-Israel; Germany-Poland; Germany-China; Germany-Italy; Germany-Greece; Greece-Switzerland; Greece-Cyprus; Greece-Canada; Greece-France; Greece-Germany; Greece-Sweden; Greece-Spain; India-United States; India-Italy; India-Germany; India-Thailand; India-Bangladesh; Indonesia-Australia; Indonesia-United States; Indonesia-Singapore; Indonesia-South Korea; Indonesia-United Kingdom; Indonesia-Germany; United States-Ireland; Israel-United Kingdom; Norway-United States; Italy-United States; Italy-Switzerland; United Kingdom-Spain; United Kingdom-Turkey; Japan-United States; Malaysia-Pakistan; Pakistan-India; Pakistan-Germany; Pakistan-United States; Peru-United States; Philippines-Australia; Philippines-China; Philippines-Japan; Philippines-Indonesia; Russia-China; Russia-United States; Saudi Arabia-United States; Spain-France; Spain-United Kingdom; Spain-Italy; Sri Lanka-Japan; Sri Lanka-Holland; Sri Lanka-India; Sri Lanka-United Kingdom; Sweden-Russia; Switzerland-Israel; Thailand-China; Thailand-Malaysia; Thailand-Taiwan; Thailand-Cambodia; Thailand-Japan; Thailand-United States; Thailand-India; Thailand-Myanmar; Thailand-Philippines;

Turkey-Germany; Turkey-United Kingdom; Turkey-Russia; United States-Israel; Venezuela-Colombia; Venezuela-Peru.

#### *A.7 Other Additional Findings*

In this subsection we provide placebo and subsample tests on foreign segment sales and assets. We start with our placebo tests. Tables A.II and A.III rerun our analyses on foreign sales and assets on foreign-victim countries' closest available neighbors. As shown in these tables, we do not find significant effects on neighbors. Table A.IV presents results from our subsample test. It revisits our analyses on foreign sales and assets by running specification (1) on each FF-12 industry separately. As shown in this table, we find significant effects of terror on foreign sales in industries such as food, tobacco, textiles, apparel, leather, toys, machinery, trucks, planes, chemicals, computers, software, electronic equipment, telephone, and television transmission. In contrast, we do not find effects in cards, TVs, furniture, household appliances, oil, gas, and coal extraction, along with utilities, wholesale, healthcare and finance. Similar results are obtained for segment assets - the only industry, in which we find additional negative effects is cars, TVs, household appliances. We also study local-target countries one by one but do not report these results given that the number is large. These results however are available upon request.

**Table A.I****Further Summary Statistics**

This table reports country image characteristics that are not shown in the main text. We provide number of observations, mean, median, and standard deviations. All image attribute scores are from surveys carried out by BAV in foreign countries. Each country gets a percentage score in each attribute that denotes the percentage of the respondents associating it with the image attribute.

<b>Image characteristics</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Stdev.</b>
	7,407	6.54	4.68	6.02
Authentic	7,407	9.00	8.54	4.64
Best Brand	7,407	2.62	1.98	2.28
Carefree	7,407	5.71	5.52	4.41
Cares Customers	7,407	4.52	4.12	2.97
Daring	7,407	8.78	7.68	8.30
Different	7,407	12.63	12.31	5.01
Distinctive	7,407	12.49	11.81	5.98
Dynamic	7,407	12.63	12.31	5.01
Energetic	7,407	7.41	7.39	5.45
Gaining In Popularity	7,407	8.18	7.58	6.89
Glamorous	7,407	7.45	6.56	6.39
Good Value	7,407	5.62	4.82	3.89
Healthy	7,407	3.95	3.48	3.35
Helpful	7,407	4.59	3.57	4.21
High Performance	7,407	4.53	3.62	4.42
High Quality	7,407	6.98	6.35	4.45
Independent	7,407	7.49	8.40	6.79
Innovative	7,407	6.77	5.72	4.77
Intelligent	7,407	8.93	8.05	7.50
Kind	7,407	8.05	6.84	7.16
Leader	7,407	7.42	6.46	6.84
Obliging	7,407	5.81	4.88	6.00
Original	7,407	9.37	8.75	5.03
Prestigious	7,407	7.96	6.93	4.89
Progressive	7,407	8.69	7.14	6.14
Reliable	7,407	6.57	5.64	4.67
Restrained	7,407	6.80	6.83	5.01
Rugged	7,407	6.47	6.00	5.32
Sensuous	7,407	3.08	2.29	3.47
Simple	7,407	8.09	8.02	5.82
Social	7,407	7.50	7.50	7.49
Socially Responsible	7,407	5.21	5.18	5.01
Straightforward	7,407	4.56	4.22	2.86
Stylish	7,407	7.26	6.50	4.57
Tough	7,407	7.80	6.95	6.73
Trustworthy	7,407	11.34	9.96	7.18
Unique	7,407	11.29	10.59	5.57
Unapproachable	7,407	13.06	10.13	9.48
Upper Class	7,407	7.24	6.43	6.15
Up To Date	7,407	6.91	6.00	4.55
Worth More	7,407	2.61	2.37	2.28



**Table A.II**

**Placebo Tests on Foreign Segment Sales**

This table reports the impact of terror events on firms' foreign segment sales. As treated group, we hold sales of local-target country firms to foreign-victim countries' closest neighbors. As control, we hold all firm-segments other than local-target country firm segments in foreign-victim countries. Once again, we run regressions on the following specification:

$$y_{jkl} = \alpha_{jl} + \alpha_t + \gamma X_{jkl} + \varphi Z_{jt} + \delta \text{Treatment}_{klt} + \varepsilon_{jkl},$$

where  $j$  indexes firm,  $k$  indexes country of incorporation,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl}$  is the dependent variable of interest (i.e., segment sales of firm  $j$  of country  $k$  in foreign country  $l$  in year  $t$  deflated with total firm assets), and  $\alpha_t$  and  $\alpha_{jl}$  are year and firm-segment fixed effects.  $X_{jkl}$  and  $Z_{jt}$  contain segment-level control variables such as *Log(Segment age)*, *Log(Number of other segments)*, *Segment-wide Herfindahl-Hirschman index (HHI) index* using FF-48 industries, along with firm-level controls such as *Cash flows to assets*, *Log(Tobin's Q)*, and *Leverage*. *Cash flows* are deflated by lagged assets, *Log(Tobin's Q)* is lagged, and *Leverage* is deflated by lagged assets. *Treatment<sub>klt</sub>* is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{jkl}$  is the error term. Our sample is the merged GTD and Worldscope universe, and our sample period is from 1995 to 2014. Further variable descriptions can be found in the Appendix. \*\*\*, \*\*, or \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

	Segment-level Sales to Total Assets (%)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment	-0.82 (-1.43)	-0.87 (-1.54)	-0.89 (-1.55)	-0.34 (-0.59)	-0.74 (-1.25)	-0.25 (-0.44)	-0.33 (-0.56)
Log(Segment age)	...	0.63*** (3.46)	0.56*** (3.35)	0.50*** (3.20)	0.38** (2.59)	0.40** (2.73)	...
Log(Number of other segments)	...	-2.01 (-1.54)	-2.34* (-1.80)	-2.40* (-1.76)	-2.81* (-2.01)	-2.81* (-1.95)	...
Segment HHI	...	0.10 (0.64)	0.16 (1.08)	0.46*** (4.40)	0.20 (1.55)	0.46*** (4.71)	-0.04 (-0.02)
Cash flows to assets	...	-1.88 (-1.41)	-1.49 (-1.22)	-0.19 (-0.17)	2.15 (1.72)	2.29* (1.87)	...
Leverage	...	-1.08*** (-4.79)	-1.02*** (-4.68)	-1.01*** (-4.59)	-0.97*** (-4.78)	-1.02*** (-4.97)	...
Log(Tobin's Q)	...	-0.01 (-0.10)	0.05 (0.37)	0.03 (0.22)	-0.00 (-0.01)	-0.00 (-0.01)	...
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	No
Year fixed effects?	Yes	Yes	No	No	No	No	No
Industry-year fixed effects?	No	No	Yes	Yes	Yes	Yes	No
Foreign country × year fixed effects?	No	No	No	Yes	No	Yes	No
Country of incorporation × year fixed effects?	No	No	No	No	Yes	Yes	Yes
Firm × year fixed effects?	No	No	No	No	No	No	Yes
Observations	214,270	214,270	214,270	214,157	214,270	214,157	214,577
R <sup>2</sup>	0.562	0.563	0.569	0.579	0.580	0.588	0.491

**Table A.III**

**Placebo Tests on Foreign Segment Assets**

This table reports the impact of terror events on firms' foreign segment assets. As treated group, we hold assets of local-target country firms in foreign-victim countries' closest neighbors. As control, we hold all firm-segment assets other than local-target country firm assets in foreign-victim countries. Once again, we run regressions on the following specification:

$$y_{jkl,t} = \alpha_{jl} + \alpha_t + \gamma X_{jkl,t} + \varphi Z_{jt} + \delta \text{Treatment}_{kl,t} + \varepsilon_{jkl,t},$$

where  $j$  indexes firm,  $k$  indexes country of incorporation,  $l$  indexes foreign country, and  $t$  indexes survey year.  $y_{jkl,t}$  is the dependent variable of interest (i.e., segment assets of firm  $j$  of country  $k$  in foreign country  $l$  in year  $t$  deflated with total firm assets), and  $\alpha_t$  and  $\alpha_{jl}$  are year and firm-segment fixed effects.  $X_{jkl,t}$  and  $Z_{jt}$  contain segment-level control variables such as *Log(Segment age)*, *Log(Number of other segments)*, *Segment-wide Herfindahl-Hirschman index (HHI) index* using FF-48 industries, along with firm-level controls such as *Cash flows to assets*, *Log(Tobin's Q)*, and *Leverage*. *Cash flows* are deflated by lagged assets, *Log(Tobin's Q)* is lagged, and *Leverage* is deflated by lagged assets. *Treatment<sub>kl,t</sub>* is a dummy variable that equals one if a terror attack in country  $k$  impacted citizens of country  $l$  by year  $t$ , and  $\varepsilon_{jkl,t}$  is the error term. Our sample is the merged GTD and Worldscope universe, and our sample period is from 1995 to 2014. Further variable descriptions can be found in the Appendix. \*\*\*, \*\*, and \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

	Segment-level Assets to Total Assets (%)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment	0.01 (0.03)	0.01 (0.03)	-0.04 (-0.08)	0.38 (0.84)	-0.13 (-0.29)	0.21 (0.51)	0.33 (1.07)
Log(Segment age)	...	0.05 (0.78)	0.08 (1.25)	0.12* (1.81)	0.21*** (2.90)	0.21*** (2.96)	...
Log(Number of other segments)	...	-2.75** (-2.36)	-3.12** (-2.78)	-3.16** (-2.78)	-3.00** (-2.63)	-3.10** (-2.71)	...
Segment HHI	...	0.17** (2.54)	0.17** (2.58)	0.16** (2.54)	0.14** (2.21)	0.14** (2.27)	0.04 (0.03)
Cash flows to assets	...	-0.81 (-1.50)	-0.79 (-1.52)	-0.18 (-0.35)	-0.24 (-0.56)	-0.08 (-0.18)	...
Leverage	...	0.41*** (3.40)	0.40*** (3.29)	0.38*** (3.15)	0.33** (2.81)	0.33** (2.76)	...
Log(Tobin's Q)	...	-0.24** (-2.79)	-0.30*** (-3.44)	-0.28*** (-3.25)	-0.21** (-2.40)	-0.22** (-2.45)	...
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	No	No	No	No	No
Industry-year fixed effects?	No	No	Yes	Yes	Yes	Yes	No
Foreign country × year fixed effects?	No	No	No	Yes	No	Yes	No
Country of incorporation × year fixed effects?	No	No	No	No	Yes	Yes	Yes
Firm × year fixed effects?	No	No	No	No	No	No	Yes
Observations	214,270	214,270	214,270	214,157	214,270	214,157	213,954
R <sup>2</sup>	0.555	0.555	0.561	0.570	0.569	0.576	0.755

Table A.IV

Results Across Different Industries

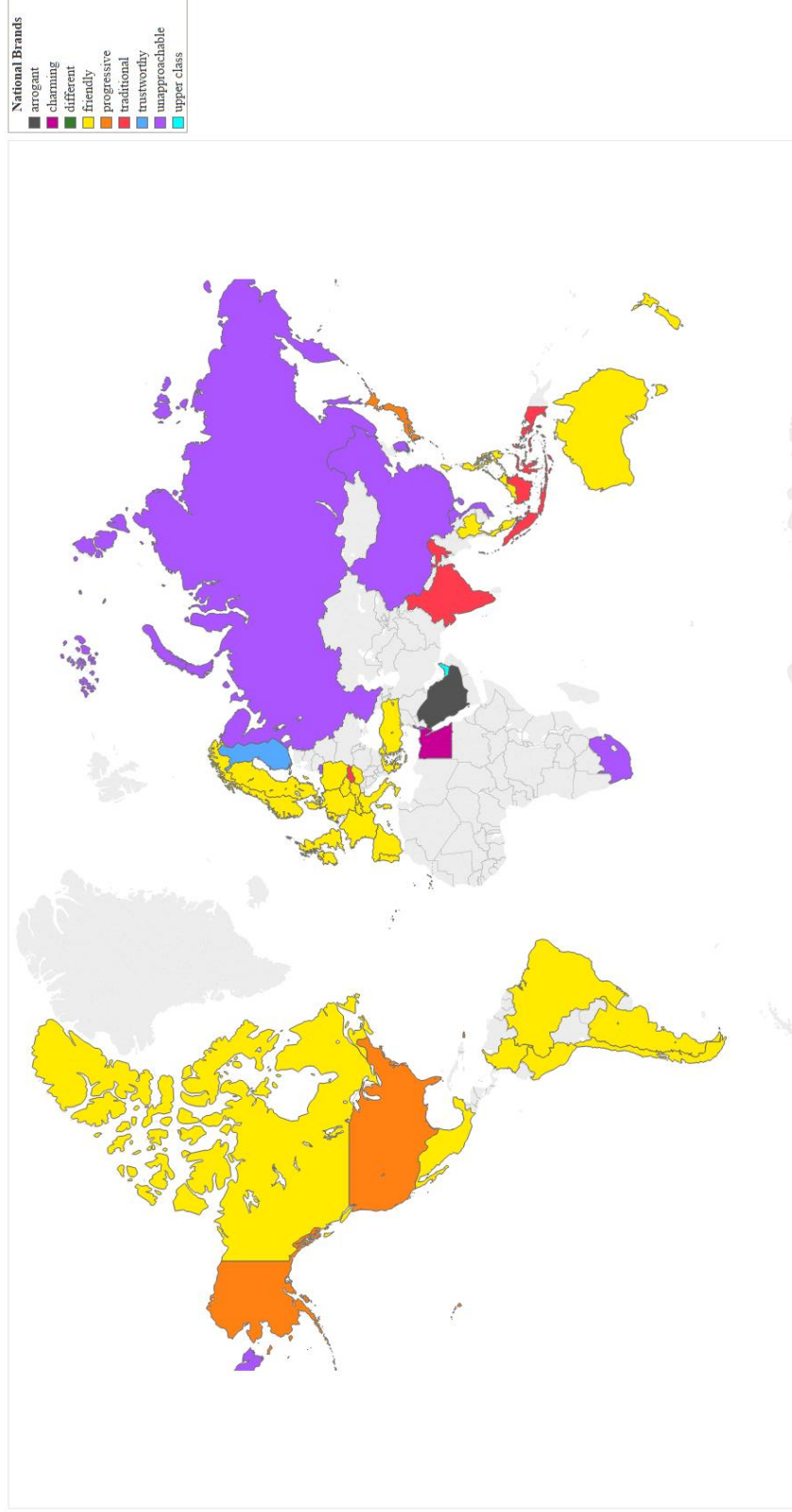
This table reruns specification (1) separately for each Fama-French 12 industry group. \*\*\*, \*\*, or \* indicate that the coefficient estimate is significantly different from zero at the 1%, 5%, and 10% levels, respectively.

FF12 Industry:	NoDur	Durbl	Manuf	Enrgy	Chems	BusEq	Tele	Utils	Shops	Hlth	Money	Other
	Food, Tobacco, Textiles, Apparel, Leather, Toys	Cars, TVs, Furniture, Household Appliances	Machinery, Trucks, Planes, Off Furn, Paper, Com Printing	Oil, Gas, and Coal Extraction Products	Chemicals and Allied Products	Computers, Software, and Electronic Equipment	Telephone and Television Transmission	Utilities	Wholesale, Retail, and Some Services (Laundries, Repair Shops)	Healthcare, Medical Equipment, and Drugs	Finance	
Treatment	-1.30* (-1.98)	-0.13 (-0.13)	-0.82* (-1.98)	0.20 (0.25)	-2.45*** (-3.47)	-1.81*** (-3.31)	-1.32* (-1.74)	0.71 (0.81)	1.34 (1.45)	-0.09 (-0.11)	0.14 (0.25)	0.08 (0.12)
Controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	21,521	12,449	51,582	8,967	9,498	57,325	5,364	3,264	19,311	11,799	12,780	37,531
R <sup>2</sup>	0.628	0.533	0.578	0.589	0.559	0.514	0.599	0.492	0.573	0.586	0.589	0.545
	<b>Segment-level Assets to Total Assets (%)</b>											
Treatment	-0.71* (-1.92)	-0.84** (-2.43)	-0.63** (-2.64)	-1.12 (-1.44)	-0.20 (-0.66)	-0.60** (-2.59)	-1.83* (-1.90)	-0.24 (-0.21)	0.60 (1.19)	0.12 (0.26)	0.55 (0.73)	-0.45 (-1.18)
Controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-segment fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	21,521	12,449	51,582	8,967	9,498	57,325	5,364	3,264	19,311	11,799	12,780	37,531
R <sup>2</sup>	0.576	0.533	0.559	0.583	0.577	0.489	0.548	0.506	0.530	0.525	0.571	0.549

**Figure A.1**

**Nation Brands**

This figure shows the strongest image attributes of all countries in BAV universe, spanning the years 1993 to 2014. Image surveys are carried out in foreign countries at an annual frequency and measure country reputations using BAV's 48 image attributes. To identify a rated country's overall score in a given attribute, we first find its median score across surveys in a given year and then take a time-series average. Using this methodology, we compute country scores in all attributes, and we report each country's strongest attribute. We name the strongest attributes nation brands.



**Figure A.II**

**Country Pairs and Nation Brand Scores**

This figure reports average nation brand scores of each country (y-axis) in foreign country surveys (x-axis). We take time-series averages within each country pair. Countries are listed using their ISO 2 codes. Higher scores are reported in darker green. Sample is BAV data between 1993 and 2014.

