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Abstract

The paper empirically investigates how international terrorism and institutional factors affect foreign direct investment (FDI) outflows from rich countries. I employ a sample of 23 FDI sending countries in the period from 1995 to 2010, and use the sample selection correction method to address the missing observations problem. I show that, on average, if FDI host country increases the number of terrorist attacks towards investor by one standard deviation, decreases flow of investment by 14 percent of the average FDI share in a host's GDP. I also find that if one investor experiences an attack, other investors suffer from a negative spillover effect. Finally, I find that in the last 16 years perceived political stability is the most important factor for FDI investments.

1   Introduction

The Global Business Policy Council Survey shows that terrorism risk is one of the most significant factors deterring corporate foreign investment (Abadie and Gardeazabal, 2008). The authors argue that the importance attributed to terrorism risk is greater than what can be justified by the distribution of capital. In addition, terrorist attacks jeopardize human lives and destroy properties which have both direct and indirect consequences on investment. For instance, the destruction of facilities (tangible capital) and the precarious safety of local employees that deter workers from effectively performing their tasks are direct costs. Moreover, investments can be lost because of uncertain political or economic conditions due to terrorist attacks, which is an indirect cost to the receiving economy.

In Filer and Stanišić (2012), we show that there are economic costs of terrorism measured through lost FDI and the negative spillover effect between receiving countries. Based on these results, I take a step forward and study the negative effect of terrorism in the context of economic relationship between investors and hots.

In this study I examine in more detail how security conditions between individual country pairs affect their economic relationship and answer the following questions: How big is the economic loss, or decrease of investments, that follows the realizations of terrorist incidents? Are there any spillover effects of terrorism among investors? Are perceived security conditions the most important institutional conditions for investors? In addition, the individual country pair observations enable me to examine terrorism spillover effects among investors which have not been analyzed before. I find this point important to explore since it can help us understand how investors decide in high risk situations.

To answer these questions I employ country-pair data of the 23 most developed countries as senders and 52 FDI receiving countries over 16 years from the United Nations

Conference for Trade and Development (UNCTAD). The dataset of bilateral investment flows between countries contains a large share of missing observations; therefore, I use the sample selection correction method to correct for this problem. For an example of such a method in a similar context, I refer to Razin, Rubenstian and Sadka (2004). To my knowledge this estimation technique has not been applied within the context of investment flows and terrorism.

2 Relationship to Literature

Foreign direct investments (FDI) have an important role in the global economy.[1] Attracting more FDI in a economy is insured by improving countries' institutional stability and market potential (Drifffield and Love, 2007; Pessoa, 2008; Alfaro, Kalemli-Ozcan, and Sayek, 2009). Not surprisingly, numerous papers study factors that attract FDI: quality of institutions, corruption, size of the economy, open trade policies, labor costs, and tax polices (Edwards, 1992; Chunlai, 1997; Wei, 2000; Sin and Leung, 2001; Janicki and Wunnava, 2004; Abadie and Gardeazabal, 2008; Bellak, Leibrecht, and Riedl, 2008; and Alfaro Kalemli-Ozcan, and Sayek, 2009). For the past two decades, the total volume of FDI has been constantly increasing (Fig 1) as well as the attention paid to the relationship between terrorism and FDI.[2]

The empirical evidence from the literature studying the relationship between terrorism and investment, shows that terrorism risk, domestic terrorism, and international terrorist attacks have a negative effect on FDI (Sandler and Enders, 1996; Chen and Siems, 2004; Blomberg, Hess and Orphanides, 2004; Eckstein and Tsiddon, 2004; Frey,

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[1]Foreign direct investment (FDI) is defined as investment involving a long-term relationship, reflecting a lasting interest in and control by (equal and more than 10 percent of ownership) a resident entity in one economy (a foreign direct investor or parent enterprise) of an enterprise in a different economy (an FDI enterprise or affiliate enterprise or foreign affiliate). Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates www.unctadstat.unctad.org

[2]To illustrate this point I use the FDI outflow information from 23 FDI sending countries from 1995 to 2010.

Luechinger, and Stutzer, 2007; Abadie and Gardeazabal, 2008; and Llusa and Tavares, 2010).[3] In the case study of Greece and Spain, Enders and Sandler (1996) find that the countries suffered a 13.5% and 11.9% decrease in net FDI due to terrorist attacks in the period from 1975 to 1995.[4] Abadie and Gardeazabal (2008) show that the risk of terrorism lowers the expected returns to investment, reducing it in a country where attacks occur. Enders, Sachsida and Sandler (2006) use time series analysis to show a negative short term effect of the 9/11 attacks on investment, and using panel data they show the negative effect of international terrorism on U.S. investments abroad. In Filer and Stanišić (2012), we study the impact of terrorism on capital flows in over 160 countries during a 25-year period. We find that terrorist attacks significantly decrease FDI flows while having no effect on external debt or portfolio investments. The result of the study is in line with existing literature that FDI are more vulnerable to political (terrorism) risks than other forms of capital flow (Lee and Powell, 1999).[5] In addition, we find that terrorist attacks have a negative spillover effect on investments in neighboring countries, and what matters more are cultural rather than geographical characteristics.

Despite empirical evidence of the negative effect of terrorism on investment, I find avenues for expansion in methodological approach used so far. In this paper, I use individual country pairs in a given year as units of observation. This approach has been used in the literature before (Hallward-Driemeier, 2003; and Razin, Rubinstein, and Sadka, 2004; Malečková and Stanišić, 2011) but not in the context of terrorism. The novelty of this approach is in matching country pairs in context of investment and terrorism. This identification of investors (targets) and hosts (perpetrators) in

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[3]The referred studies measure FDI as net FDI, as percentage of GDP, as FDI stocks, or as FDI flows, but all of the studies find a similar negative effect of terrorist attacks.

[4]In the literature, there is a number of papers studying the negative effect of terrorism on economies as well. For example, Abadie and Gardeazabal (2008) find that terrorism produces a 10-percent negative difference between Basque per capita GDP and similar regions in Spain without terrorism. Eckstein and Tsiddon (2004) look at the effect of terrorism on the Israeli economy and find that even though the death rate from terrorism is similar to the death rate of car accidents in Israel, terrorism affects the economy in a far more severe way.

[5]Lee and Powell (1999) argue that the reason for the low flexibility of FDI is in the investor's intensive engagement in the management of investment.

investment flows (terrorist attacks) will provide a measurement of the economic costs of terrorist attacks in terms of lost investments. Previously authors used panel data (Blomberg, Hess, and Orphanides, 2004; Enders, Sachsida, and Sandler, 2006; Llusa and Tavares, 2010; Filer and Stanišić, 2012) or time series (Abadie and Gardeazabal, 2003; Eckstain and Tsiddon, 2004; Chen and Sims, 2004; and Li and Shaub, 2009) to estimate the effect of terrorism on investments. All studies show a negative impact of terrorism on investment, but they miss exploring this relationship in more detail. For example, how do terrorist attacks change the investment flow between countries? Are all terrorist attacks equally damaging for investments? For how long does the effect dissipate?

Additionally in this paper, I examine the spillover effects of terrorism among investors and discuss the differences between general security conditions and the particular security relationship between countries. Is it the case that attacks perpetrated against some investors have more impact than attacks on others? I find this point particularly interesting because of the known fact that high risk is associated with high returns on investment.

3 Methodology

The bilateral investment datasets usually suffer from the missing observations problem. Razin, Rubinstein, and Sadka (2004) assume that for observations where investment flows are observed, investment profits are for sure more than zero. Since an investment's profit is a latent variable, the authors use available information on investment costs: If the costs are smaller the probability of profits being more than zero is higher. Therefore, using an investment's fixed setup costs, the authors estimate the probability of investment between countries. In this step, they estimate the "selection hazard" or the inverse Mill's ratio, and include it in the OLS model of FDI flow between countries in order to

correct for the sample selection problem.

3.1 FDI flow model

I use the bilateral investment model from Razin et al. (2004) to estimate the effect of terrorist incidents on investment flows between countries. The model uses individual country pair investment flow data, and it describes the investment from one country to another by:

$$Y_{i,j,t} = \mathbf{X_{i,j,t}}\beta + U_{i,j,t},\tag{1}$$

where $Y_{i,j,t}$ is a variable denoting flow from the sending j to the receiving country i in period t. This variable can be positive or negative, or it can also be zero when investments bring profit which is below some threshold. $X_{i,j,t}$ is a vector of explanatory variables; β is a vector of coefficients, and $U_{i,j,t}$ is a normally distributed error.[6] The error term contains both time invariant differences between country pairs (for example, wage rate differences) and country pair specific time variant heterogeneity.

If the missing observations are replaced with zeros, the results will be biased because the sample is non-random. In those cases, the best choice is an estimation method that corrects for the sample selection problem. In order to establish the sample correction steps, the authors start from the assumption that for all observed flows in the dataset, profits are positive. The authors establish the indicator function rule:

$$D_{i,j,t} = \begin{cases} 1 & \text{if } Z_{i,j,t} > 0; \\ 0 & \text{otherwise} \end{cases}\tag{2}$$

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[6] $U_{i,j,t}$ is with 0 mean and standard deviation σ_U^2.

where

$$Z^*_{i,j,t} = Y_{i,j,t} - C_{i,j,t}, \tag{3}$$

where $C_{i,j,t}$ are the fixed setup costs of investment. Razin et al. (2004) show that there are at least two variables describing fixed setup investment costs: (i) a lagged investment participation variable equal to zero if in the previous period there were no investments or 1 if there were; and (ii) a measure of capital openness in the sending country, which conditions the ease of acquisitions of greenfield establishments important for new investments.[7]

The profit function is estimated by:

$$Z_{i,j,t} = \mathbf{X_{2,i,j,t}}\gamma + V_{i,j,t}, \tag{4}$$

where $X_{2,i,j,t}$ includes a set of control variables from equation (1) and two additional variables that describe the investment costs (lagged FDI and measure of the sender's capital openness.)

Therefore, before estimating the investment flow model, one needs to examine the probability that sender invests receiver. The methodology that meets these requirements is the Heckman sample correction method that can be summarized in two steps. In the first, it estimates the probability of one country investing in another, equation (2); and in the next step, under the condition that investments occur, it estimates factors significant for the size of investment, or flow equation (1).

The final estimation model is:[8]

$$E(Y_{i,j,t}|X_{i,j,t}, D_{i,j,t} = 1) = \mathbf{X_{i,j,t}}\beta + \beta_\lambda\lambda, \tag{5}$$

[7]UNCTAD contains negative FDI outflows (disinvestments) but the lagged dummy is equal to 1 only with positive investments.

[8]For detailed steps of the model see Razin et al. (2004).

where λ is the inverse Mill's ratio controlling for the sample selection bias.

A common issue in the literature studying the relationship between investments and terrorist attacks is reverse causality. Presence of foreign capital can indirectly decrease the cost of terrorist attacks by making targets accessible consequently increasing the number of attacks. To address this issue Li and Schaub (2004) use the same terrorism dataset, as in this study, and find no evidence that "globalization", through international trade, FDI and portfolio investment, increases the number of terrorist attacks against U.S. targets. Abadie and Gardeazabal (2008) argue that if bias exists, it is a positive bias in the estimated coefficient, which would not change the qualitative characteristic of the coefficient; it would just make the coefficient larger. In this paper in order to address any possible concerns regarding reverse causality, I use lagged terrorism variables, relying on the available resources and mentioned evidence from the literature.

4   Data

4.1   The sample

The sample contains pairs of 23 sending and 52 FDI receiving countries from 1995 to 2010. The sending countries are the top 23 countries by standards of quality of life.[9] In total, 23 sending paired with 52 receiving countries make 1,196 country pairs. However, out of the total number of pairs, data are available for 817 (68%), while 379 (32%) pairs are missing.

Out of the total number of observations, $19,136$ ($1,196$ pairs over 16 years), FDI is different from zero in $7,080$ observations (37%), while $12,056$ observations (63%) are missing. Out of $12,056$ missing observations, $6,855$ are missing pairs over 16 years, while $5,201$ missing observations are missing years for observed pairs. [10]

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[9]World Bank, www.worldbank.org

[10]I compared the FDI country pair UNCTAD dataset with similar datasets from the IMF and OECD sources. The IMF dataset is available two years only, 2009 and 2010, while OECD's from 2001 to 2010. I find that there are differences between the datasets regarding the recorded number of observations.

FDI receiving countries with the most missing pairs are: Trinidad and Tobago, Mauritius, El Salvador, Honduras, and Panama. I find no evidence that the missing data are biased towards countries from certain continents. If I examine FDI sending countries in missing pairs, I find that smaller economies (New Zealand, Cyprus, Greece, and Ireland) have the highest number of missing pairs. On average an FDI sending country invests in 35 out of 52 countries, while big economies like the United States, the United Kingdom, Germany, France, and the Netherlands invest in most of the FDI receiving countries.

Theoretically, 23 investors can invest in 169 host countries.[11] However, the country-pair dataset contain information on 52 receiving countries.[12] I use FDI country-level data to investigate if there are any particularities regarding this subgroup of countries since there is no explicit rule, except the availability of data, by which the 52 countries are chosen.[13] I use country-level investment flows from UNCTAD worldwide data for the period from 1995 to 2010. I estimate equation (1) using the fixed effects panel data estimation method and the ratio of FDI flow and the countries' GDP as the dependent variable. In addition, I include a dummy variable that equals 1 if the receiving country is in the country-pair dataset.[14] The estimation results show no significance of the variable that describes countries from the country-pair dataset. I find these results sufficient to conclude that the estimation results of this study are valid for any other subgroup of receiving countries.

Controlling for the same years, I find that UNCTAD has the least missing observations for given pairs. I find that there is a 80% overlap among the missing data from UNCTAD, IMF, and OECD datasets. The observations for which datasets overlap show that there is a 0 to over 3,000 percent difference in recorded FDI flows. A possible explanation is that the differences are due to differences in FDI definitions that these datasets use. For further details on how definitions differ across datasets refer to Duce (2003).

[11]169=192-23; The United Nations has 192 registered countries (www.un.org).

[12]Appendix A contains detailed information about methodology and the sources of UNCTAD FDI country pair data.

[13]The UNCTAD collects data on pair FDI flows based on the reports that FDI receiving countries make. For more details regarding the UNCTAD resources see Appendix A.

[14]From this model, I also exclude specific country pair variables

4.2   The Dependent Variable

The average size of investment ouflow from FDI sending to receiving countries is 91,413 million current US dollars per year (s.d. 175,161).[15] The average share of FDI flow in the receivers' GDP is 0.2%, with a standard deviation of 0.5% (Table 1). In Table 2, the right-hand side column shows pairs of countries with the highest outflow for 16 years. The country pair with the largest investment is the United States to Mexico (157,084 million USD) followed by Japan to China (61,992 million USD).[16]

Table 3 shows the average share of FDI flow in GDP for the total period of 16 years. Table 3 shows FDI receivers ordered by the 16-year averaged GDP, the last row in Table 3 shows the total FDI outflow from sender to receiver in 16 years. The matrix shows that poor countries receive a small share of the world total FDI flows. At the same time, these investments have the highest importance for hosts (Vanuatu, 14%; Bosnia and Herzegovina, 15%; or Papua New Guniea, 31% of GDP). On the other hand, Mexico, Brazil and Russia, as large economies, attract most of world's FDI, which make significantly smaller shares of the countries' GDP, 3%, 4%, and 5% respectively.

4.3   Terrorism Variables

Domestic attacks include the number of domestic terrorist incidents that occurred in a receiving country, and it is taken from the Global Terrorism Database (START, 2011). This variable includes terrorist incidents where both perpetrators and targets are the same nationals. The average number of domestic terrorist incidents (Table 1) per year

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[15]The definition of FDI from UNCTAD is: *FDI inflows and outflows comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to a FDI enterprise, or capital received by a foreign direct investor from a FDI enterprise. FDI includes the three following components: equity capital, reinvested earnings and intra-company loans. Data on FDI flows are presented on a net basis (capital transactions' credits less debits between direct investors and their foreign affiliates). Net decreases in assets or net increases in liabilities are recorded as credits, while net increases in assets or net decreases in liabilities are recorded as debits. Hence, FDI flows with a negative sign indicate that at least one of the three components of FDI is negative and not offset by positive amounts of the remaining components. These are called reverse investment or disinvestment.* The complete list of resources that UNCTAD uses to collect the data are described in detail in Appendix B, Table B1.

[16]USD stands for "current US dollars".

is 20 (s.d. 61). The countries with the highest domestic terrorism are Pakistan, followed by India and Colombia (Table 4).[17]

The variable *International attacks* represents the number of international terrorist attacks in an FDI receiving country. This variable includes attacks where perpetrators are nationals of the receiving country, while targets are all other nationalities.[18] I create this variable from the ITERATE dataset (Mickolus, Sandler, Murdock and Flemming, 2004) for the period 1995 to 2010. The average number of international attacks in a receiving country (Table 1) per year is 1 (s.d. 4). The country with the most international terrorist incidents over 16 years is Colombia, followed by Pakistan and Nigeria (Table 2).

The variable *Pair attacks* represents country pair terrorist attacks, also created from the ITERATE dataset (Mickolus et al., 2004). I identify pair attacks as terrorist incidents carried out by the nationals of FDI receiving countries against targets of sending countries using available information on the nationalities of perpetrators and targets.[19] As seen in Table 1, the average number of pair attacks is 0.02 per year (s.d. 0.28).

In Table 2, the left-hand side column shows six pairs of countries by the number of attacks from 1995 to 2010. The pair with the most attacks are Pakistan-United States with 53 attacks in total, while Nigeria and the United States are the second highest with 29 incidents in total. Out of a total of 389 pair attacks in 16 years, approximately 17% were perpetrated by Pakistan, followed by Algeria (13%) and Nigeria (10%). In 54% of

[17]I use information about perpetrators and targets to identify which attacks are domestic and which are international. If parties are of the same nationality where an incident happened then it is counted as "domestic".

[18]Target nationalities include not only the 23 sending country nationals but also other foreign targets. I decide to use ITERATE as main dataset for international and pair-specific attacks because it is used in the literature more often, and it is a dataset of only international attacks. For a discussion on the differences among terrorism datasets see the analysis of WITS Impact on Scholarly Work on Terrorism (Krueger, Laitin, Shapiro and Stanišić, 2011). Unpublished manuscript.

[19]The ITERATE dataset contain only international terrorist incidents. It contains information on both the nationality of perpetrators and targets. I count pair attacks regardless of the country where it happened. For example, if perpetrator of country "X" participated in an attack against nationals of country "Y" in country "Z", this attack will be counted as a terrorist attack of "X" against "Y". This approach was used in previous literature Krueger and Malečkovà (2009), and Malečkovà and Stanišić, (2011).

the cases, the United States was the target, followed by France (11%). Descriptions of the variables and detailed sources are in Appendix B, Table B1.

4.4 Exclusion restriction variables

The main assumption used in the sample correction method is that the fixed set-up costs affect investment profits and therefore determine the probability of a sender making an investment in a receiving country.[20]

The FDI participation dummy and sender's capital openness increase the probability of investment by decreasing the set-up costs of investment. The authors assume that if countries had a positive investment flow in the previous year than in the current year, the investment set-up costs will be lower. At the same time, the more liberalized a sender country's capital markets are, the more flexible financial flows are between the sender and receiver. For example, acquiring invested capital abroad that is characteristic for green field investments is easier when the sender's capital markets are more liberalized.

4.5 Control Variables

The rest of the control variables in the model are grouped in three categories: economic, institutional, and geographical variables.

- Economic variables:

  - FDI stock in the previous year (*FDI Stock*) in a receiving country from the UNCTAD dataset, controlling for already existing stock of FDI addresses concerns of preconditioned factors for attractiveness of FDI.[21]

  - Gross Domestic Product (GDP) per capita for both the receiving and FDI sending countries (*GDP per capita*; *GDP per capita*) are standard control

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[20]For a further discussion how OLS or Tobit estimates are biased if the fixed set-up costs are disregarded, refer to Razin, Rubinstein, and Sadka, (2004).

[21]This variable includes the stock of all investments in the country (investments besides the 23 investors observed in this study)

variables that control for variation of FDI due to the development (or size) of the economies. These variables are from the World Bank Development Indicators database.[22] Even though, the reason for including these variables in the model is straightforward, it nevertheless deserves a careful consideration. For example, the size of the economies can affect FDI flows, the reverse is also true. FDI flows may in return affect both economies leading to reverse causality bias. To overcome this issue the usual approach is to instrument GDP per capita variable with their previous year values as control variables (Razin et al., 2004).

– *Educational gap* captures the differences in human capital between countries. It is calculated as a ratio between the average years of schooling in an FDI receiving country and in an FDI sending country. The data are from the World Bank Development Indicators.[23]

– In the group of economic variables are so-called "mass variables" referring to the populations of both countries ($(Population_i)$; $(Population_j)$).

- Institutional variable:

– To control for institutional restrictions on the flow of capital, I use the Financial Openness Index ($KAPOEN$) developed by Chin and Ito (2008). The index describes the financial "climate" in a country. It is derived by using the IMF's Annual Report on Exchange Agreements and Exchange Restrictions (AREAER), which contains information on countries having multiple exchange rates, restrictions on current account transactions, restrictions on capital account transactions, and on requirements for the surrender to the government of currency earned through exports (Chin and Ito, 2008).[24]

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[22]http://data.worldbank.org/indicator

[23]More details in Appendix 2

[24]For a complete discussion of how this index compares to other indices in the literature, please refer to Chin and Ito (2008).

- Geographical variables:

    – Geographical distance (*Distance*) and the common official language (*Common Language*) between sender and receiver countries belong to the group of geographical variables. If countries are further away, or if they do not have a common official language, then costs in time, transportation of goods, and maintenance are higher making the investment less attractive. Both variables are from the country bilateral dataset by Centre d'Etudes Prospectives et d'Informations Internationales (CEPII). [25]

5 Results

5.1 Base Model

Tables 5 to 10 show the estimation results of the sample selection correction model of the relationship between terrorism and investment. I jointly estimate "FDI flow" and "Selection" equations by a maximum likelihood estimation technique. Each specification in the output tables contains two columns: the estimation results of investment magnitude on the left and results of investment likelihood on the right.

5.1.1 Probability of investment

The dependent variable in the selection equation equals one if a country pair has an FDI flow recorded in the previous year and otherwise zero. In the following section, I discuss the variables that have a robust significant effect on the probability of investment from the estimation results shown in Table 6.

The accumulated FDI stocks in a host country increase the probability of receiving new investments. At the same time, the negative coefficient of the receiver's GDP per capita infers that larger host economies are less interesting for investors. This could be

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[25]www.cepii.fr

because investors look for destinations over which they have the comparative advantage in capital. Therefore, they are interested in countries where the accumulation of capital is lower and their advantage bigger.

A lower educational gap between the receiving and sending country decreases the probability of investment. By the same token, the comparative advantage over accumulated capital plays a major role in the likelihood of an investment. Investors search for countries over which they have a comparative advantage in human capital, hence, which have less educated labor.

Terrorism has a significant negative effect on the probability of investment between countries. Pair attacks significantly decrease the probability of investment. Incidents of domestic terrorism have no effect on the probability of investment, but it does not infer that domestic terrorism has no affect on the investment climate. The variation of this variable is in the fixed effect included in the estimation affecting all investors present in the host market by the same amount. International terrorism (excluding pair attacks) have a positive and significant effect on the probability of investment. This result infers that for the investors, in the country pair, the probability of investment increases at the time when others suffer attacks. The interpretation of this result is controversial because it suggests that attacks against some investors represent investment opportunities for others who are not directly jeopardized. More discussion about this result is provided in subsection 5.5.

Finally, the results from Table 6 show that if sender and receiver countries are closer, or share a common language, the probability of investment is higher.

Both exclusion restriction variables are significant for probability of investment ($p < 0.001$). If sending and receiving countries had a positive flow of FDI, and an investor's capital markets are more liberalized, the chances of investment between countries increase significantly (Table 6).

If I compare R-square from the selection estimations with and without the exclusion

restriction variables, I find that the goodness of fit measure improves by 65% when exclusion restriction variables are included ($R^2 = 0.201$) compared to ($R^2 = 0.131$). I also perform the Hausman test, where the null-hypothesis is that the difference in coefficients is not systematic when using a sample selection correction method. The test does not reject the null-hypothesis, suggesting that using instruments insures efficient estimated coefficients.

5.1.2   Investment size

Table 5 shows the estimation results of the effect of economic, institutional, geographic and terrorism variables on FDI flow given that investment between countries exist. The estimated model in all specifications is log-linear, and therefore, the interpretation of estimated coefficients is as semi-elasticities or elasticities.

Accumulated FDI stock significantly increases investment flow between countries. If stocks increase by one standard deviation (1.866), or by 25 percent of the average FDI stock in a receiving country, the share of FDI in GDP increases by 1.185 percent ($p < 0.001$).[26]

Table 5, columns (2) to (4), show that the coefficient *GDP per capita receiver* is negative and significant. It implies that the relative size of the investment in a receiver's GDP is larger for smaller economies. Section 4.2 offers a more detailed explanation of this result.

The results from Table 5 show that the "mass variables" significantly effect FDI flow between countries. The population size of an FDI receiving country has a negative significant effect, typical for larger economies. On the other hand, the size of the FDI sending countries' population has a positive significant effect on FDI flow (0.877, $p < 0.001$) implying that larger economies invest more.

The results from Table 5 show that more capital openness has a robust positive effect

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[26]Both variables are in log(.); therefore, $1.185 = 0.635 \cdot 0.866$

on the total volume and share of FDI in GDP. If receiving country capital openness increases by one standard deviation (1.423), or almost for five times the sample average, the share of FDI in GDP increases by 17%.[27]

Next, a shorter geographical distance between sender and receiver, or a common official language significantly increases investments.

The pair attacks have a negative significant effect on investment flow between countries. If terrorist incidents against FDI sending countries increase by one standard deviation (0.32), or over nine times the sample average, the share of FDI in GDP decreases by 14%. The 14% decrease of the average FDI share in GDP (0.002) is a decrease of 0.0003 points in the share of FDI in GDP. The magnitude of the impact remains similar across different specifications in columns (1) to (4) (-0.427, $p < 0.001$).[28]

The incidents of domestic terrorism decrease investment; if the attacks increase by one standard deviation (61), or for three times the sample average, the share of FDI in GDP falls for 6.1% ($p < 0.001$).[29]

Table 5 shows the correlation coefficient between the cross-equation error terms ρ ($U_{i,j,t}$ and $V_{i,j,t}$). The coefficient is significant, suggesting that the selection and FDI flow equations are indeed dependent. Fig 3 illustrates this dependency by showing a positive correlation between residuals from both equations of estimation.

The coefficient of the inverse Mill's ratio (λ) in FDI flow equations is significant, indicating that the probability of investment and the investment size are dependent stages of investment. The ratio serves to correct for sample selection bias, and it is therefore included as an additional variable in the FDI flow estimation equations.

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[27] $17\% = 0.117 \cdot 100 \cdot 1.423$

[28] I also estimate the model with the fatalities (number of killed or injured) in attacks and find those variables insignificant. This result is in line with previous results on the lack of evidence that a number of fatalities affect investors (Filer and Stanišić, 2012).

[29] $6.1\% = -0.001 \cdot 100 \cdot 61$

5.2 Robustness checks

In Table 6, I include additional variables to baseline model specification from Table 5, column (2), to test for the robustness of results against omitted variable bias.

In Table 6, columns (1) to (7), the estimated effects of economic, institutional, geographic and terrorism variables on FDI flows and selection do not change relative to earlier results.[30] The estimated coefficient of pair attacks remains negative and significant. The size of the estimated coefficient remains almost the same except when *Armed conflict* (controlling for civil war) is included as an additional variable (Table 6, column (1)). In that case, the coefficient falls for 15%, and the magnitude of the impact decreases to 12%, which is only a 2% change relative to an earlier estimated magnitude (14%).

Table 6, column (1) shows the estimation results of the baseline specification model extended by the dummy variable *Armed conflict*. This variable accounts for the occurrence of civil war, which is a different security measure from terrorism. The Peace Research Institute in Oslo (PRIO) produces UCDP/PRIO Armed Conflict Database for the period from 1946 to 2008, which defines armed conflict as: *"a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths"*.[31] I create the dummy variable *Armed conflict* that equals 1 if the FDI receiving country had civil war. Countries that had armed conflict from 1995 to 2008 are Cambodia (from 1995 to 1998); Colombia (from 1995 to 2008); India (from 1995 to 2008); Myanmar (from 1995 to 2008); Peru (from 1995 to 1999; and from 2007 to 2008); and the Philippines (from 1998 to 2008). The estimation results from Table 6 show that civil war decreases FDI flow between countries significantly (0.362, $p < 0.05$).

In Table 6, column (2), the baseline model is extended by the variable *Tertiary*

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[30]Interpretation of these results are discussed in more detail in section 5.2.
[31]*www.pcr.uu.se/research/ucdp/datasets/ucdp_prio_armed_conflict_dataset/*

that captures variation in the share of the receiver's population with a tertiary level of education. The results from column (2) show that increase in share of population with tertiary education increases FDI flows, while decreasing the probability of investment. In the selection equation the estimated coefficient is negative and significant inferring that larger shares of population with tertiary education deter investment probability. This result is explained by the comparative advantage hypothesis discussed in section 5.2. At the same time, in the case when investments exist, a larger share of the population with tertiary-level education increases the investment size. This result might be because of the higher costs associated with more educated labor in the host country.

Abadie and Gardeazabal (2008) show that natural disasters play a significant role in the distribution of international investments across countries. In Table 6, column (3) I include natural disasters as an additional control variable. The natural disasters data are from the EM-DAT dataset produced by the Center of Research on the Epidemiology of Disasters (CRED) from 1900 to 2008.[32] The results from column (3) confirm previous findings in the literature that natural disasters significantly decrease FDI flows.

In Table 6, column (4), I estimate the main specification model in the 5-to-95 percentile range to test for the robustness of results when outliers are excluded and find no significant changes in the results.

Razin, Rubinstein, and Sadka (2004) use three-year averaged variables in order to smooth out the variation in the variables. Applying averages decreases standard errors, and smaller standard errors imply "tougher" significance levels of coefficients. Table 6, column (5) shows the estimation results of the baseline specification model with three-year averages. The change in standard errors does not change the significance of most of the results. The negative significant result of pair attacks remain robust and nearly doubles (-0.942, $p < 0.01$). In this case, the current pair attacks are an average of

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[32]For a disaster to be entered in the dataset it has to meet one of three conditions: 1. Ten or more people killed; 2. A hundred or more people reported affected; 3. A declaration of a state of emergency; 4. A call for international assistance. For further details refer to www.emdat.be

attacks in the current and previous two years, while lagged pair attacks represent the average of the previous 4th, 5th and 6th years. I find that the coefficient of current attacks is significant, implying that the effect of pair attacks on FDI outflow dissipates after two years.

In order to test if any of investors are responsible for the significance levels of results, I estimate the main model specification 23 times, each time excluding one of the FDI sending countries. The estimation results regarding economic, institutional, geographic and terrorism variables remain similar with a similar size of coefficients and confidence levels. The estimated coefficient of the *Pair attacks* ranges from a minimum -0.288 ($p < 0.10$) to a maximum of -0.493 ($p < 0.01$). I find that none of the investors are responsible for the significance of results. Table 6, column (6) shows estimation results when the United States, as the investor with the most attacks, is excluded. I repeat the procedure with FDI receiving countries and estimate the model 52 times each time excluding one of the countries. The results of the negative effect of pair attacks on FDI share in GDP are robust. The coefficient ranges from -0.398 ($p < 0.10$) to -0.503 ($p < 0.05$). Table 6, column (7) shows the estimation results when Pakistan, as the country that perpetrated the most pair attacks, is excluded. [33]

In the next step, in order to analyze which factors are important for the distribution of investments across receiving countries, I change the dependent variable to the ratio between FDI flow and the sender's total investments ($FDI_{i,j,t}/FDI_{j,t}$). Table 1 reports the average share of total investment per FDI receiving country is 0.039 per year (s.d. 0.601).

Table 7, columns (1) to (3) show the estimation results of the baseline specification a model with modified dependent variable. The results imply that investment distribution across receiving countries depends on the same economic, institutional and geographic variables as in the case when the dependent variable is the share of FDI in the receiver's

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[33]In addition to these specifications, I extend the baseline model with 5-year regional growth rates and find no differences in the results.

GDP. The only difference is in the direction of the effect of the receiver's GDP per capita. In this case, the larger share of the sender's "investment pie" goes to bigger economies.

The results in Table 7 show that pair attacks remain a significant predictor of change in FDI flows. If attacks from receiver to sender increase by one standard deviation (0.320), or more than 9 times the sample average, the share of investments in the receiver's economy drop 11% of the average FDI share.[34]

The results from Table 7 show, given FDI flow between countries exists, incidents of domestic terrorism significantly decrease the share of a sender's investments in a host country. If incidents of domestic terrorism change for one standard deviation (61.313), or three times the sample average, the share of investments fall 12% (0.005 points).[35]

5.2.1 Spillover

The positive coefficient of *International attacks* in the selection equation in all specifications can be illustrated by the following example: If the United Kingdom suffer attacks in Algeria and withdraws it's investments, do other investors, Italian or Spanish, come instead? To fully answer this question more data are needed: the exact timing of investments, type of industry where investments are made, and quarterly or monthly data on terrorist attacks. At this point, I can only interpret this result as a positive spillover effect of international attacks on the probability of investment for those investors who are not directly jeopardized.

With the available data set, I can analyze the spillover effect among investors once the FDI flow between countries exists. Table 7, column (2) shows the estimation results with excluded country pairs where the United States is an investor. In addition, the specification includes the variable that counts for attacks against U.S. targets. In this way, I estimate the spillover effect of the attacks against the United States on other

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[34]The decrease is for 0.004 points.

[35]If a country receives an average of 0.039 of a sender's FDI, after a domestic terrorism increase, it gets 0.005 points less.

investors. The results show a negative significant coefficient inferring a negative spillover effect of attacks against the United States on the rest of the investors in the country. The reason for a strong negative spillover effect can be due to the publicity of these occurrences. To test this hypothesis, one would need data on both news coverage of attacks and types of industries where the United States and other investors invest.

I perform a similar estimation procedure to test for a spillover effect on other investors. Repeating the procedure for an additional 22 times, I find that countries with a negative spillover effect are those with the most pair attacks.[36]

Table 7, column (3) shows a positive spillover effect of attacks against targets from the United Kingdom. This result might be a statistical artifact because I estimate the model 23 times where coefficients are tested with a 5% probability, which leaves (on average) a chance for one false significant result. Future studies can examine this puzzle with better datasets and investigate if investments from the United Kingdom are particularly sensitive to attacks but in attractive sectors for those investors who are not directly jeopardized.

5.2.2 World Governance Indicators

In the following section, I extend the analysis with variables describing FDI receiving countries' governance quality from 1998 to 2008 by Kaufmann, Kraay and Mastruzzi (2009).

Table 8 column (1) includes *Political Stability* that describes the threat of terrorism and violence in a FDI receiving country.[37] Column (2) includes *Regulatory Quality* that measures clarity and transparency of the tax system. It also includes other policies that the host government brings in order to insure private sector development. In column (3) the indicator *Control of Corruption* controls for *both petty and grand forms of corrup-*

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[36]Germany (25), France (43), the Netherlands (16). In columns (5) and (6) and the rest of the 20 estimations, I deducted the spillover attacks from *International attacks*.

[37]The full name of the variable in WGI dataset is *Political Stability and Absence of Terrorism*

tion. In Table 9, column (1) the indicator *Voice and Accountability* measures the level of freedom of expression and media and how well the population can make their voices heard in the present political system. In column (2) the indicator *Rule of Law* controls for contract enforcement and property rights. In column (3), *Government Effectiveness* measures the quality of civil service and the quality of policy formulation and its implementation. Table 1 reports a indicator values range from -2.5 (weak) to 2.5 (strong): the higher the indicator, the better the countries' performance.[38]

Tables 8 and 9 show estimation results where significance, direction, and size of the coefficients of economic, geographic and institutional variables do not change compared to earlier results.[39]

In Tables 8 and 9, the negative significant coefficient of pair attacks is robust to all specifications in both stages of investment. The size of the coefficient ranges from -0.354 ($p < 0.05$) to -0.493 (0.05). Given that the investment flow between countries exists, if pair attacks change for one standard deviation, or for nine times the sample average, the share of FDI in GDP changes within the range from 11 to 13%.

The effect of domestic terrorism is ambiguous since in some specifications the estimated coefficient loses significance (Table 8, column (1)). The coefficient of international terrorist attacks remains significant and positive in the selection stage of investment (0.007, $p < 0.1$).

The results in Tables 8 and 9 show that the majority of the governance indicators are significant for investments. Table 8, column (1) shows a significant and positive effect of *Political stability* on FDI flow. Indicators *Regulatory Quality*, *Control of Corruption*, and *Voice and Accountability* affect both the size and the probability of an investment.

Since country indicators are calculated using different methodologies and sources, I find it suitable to test the robustness of the results against the indicators estimated by different agencies. Therefore, in Table 9, column (4) I extend the baseline model

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[38]A more detailed description of indicators is in Appendix B, Table B1.

[39]Here I refer to the results from Table 5.

with the variable *Overall risk* from IHS Global Insight for the period from 1999 to 2009.[40] The *Overall risk* represents an overall measure of host country risk, and it is composed of Political Risk (25%), Economic Risk (25%), Legal Risk (15%), Tax Risk (15%), Operational Risk (10%), and Security risk (10%). In Table 1, the value of the indicator ranges from 1 (weak) to 5 (strong). The estimation results from column (4) show no differences from earlier results and a lack of significance of country risk for investments. One of the reasons for the irrelevance of the variable might be in the fact that this risk combines the measures of general economic conditions in the markets and the particular security relationship between the host and investor.

Table 10 shows the impact magnitudes the pair attacks and governance indicators have on investment size, given that investment between countries exists. If *Political Stability* changes by one standard deviation (0.781), or for two times the sample average, it leads to more than a 46% change of FDI share in GDP. Given that the investment decision has already been made, this is the largest effect that any variable has on FDI flow. This result supports the hypothesis that terrorism risk is one of the most important factors for investment. The second largest influence is by *Voice and Accountability*, resulting in close to a 28% change of FDI share in GDP when it changes for one standard deviation (0.678), or for two times the sample average.

The next indicator by magnitude is *Regulatory Quality* that, among other things, describes the tax regulation system in a country (Table 8, column (2)). If *Regulatory Quality* increases by one standard deviation (0.66), or for four times the sample average, it leads to a 20% change of FDI share in the FDI receivers' GDP. The changes in *Rule of Law* in an FDI receiving country has no effect, either on the size of investment, or the prob-

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[40]There are no precise measures of a country's terrorism risk. "Terrorism risk is a number trying to describe a very complex phenomenon" (Abadie and Gardeazabal, 2008, pg 13). Therefore, different methodologies are used in order to estimate these indicators. For example, the World Bank produces World Governance Indicators (WGI, http://info.worldbank.org/governance/wgi/index.asp) uses public opinion surveys to estimate the perception of governance indicators. Others, like IHS Global Insight Country Risks (IHS, http://www.ihs.com) use different techniques (not available to the public) based on what they measure to being the similar dimensions of countries. IHS Global Insight does not disclose its methodology since their estimators are used in commercial purposes.

ability.

6 Conclusion

This study empirically investigates how terrorism influences investment flows among countries. It uses a UNCTAD country pair dataset of 23 investor and 52 host countries over the period from 1995 to 2010. To solve the missing observations problem, I apply the sample selection correction estimation model with the investment fixed setup costs as the exclusion restriction variable as in Razin, Rubinstein, and Sadka (2004). To proxy for fixed setup costs, I use a previous FDI participation dummy and the indicator of an investor's capital openness.

The results of the analysis show that terrorist attacks perpetrated by FDI receiving country nationals against FDI sending countries have a negative significant effect on size and the probability of investment. If attacks increase by one standard deviation, or for nine times the sample average, the share of FDI in a receiver's GDP decreases by 12% of the sample average. This result is robust to different specifications and modifications of the sample.

At the same time, I find that international terrorism has a robust positive effect on the probability of investment for investors who are not directly jeopardized. To test the hypothesis of opportunistic behavior between investors, in relation to different security conditions, requires more detailed (quarterly, monthly) FDI and terrorism data. For example, with available FDI industry data, researchers can study enter and exit strategies based on the occurrences of terrorist attacks. The hypothesis of the attractiveness of high risk countries for investors has been studied before. Lee and Powell (1999) argue that host countries with high political risks are attractive for investors if there is a chance of an extra return. According to the UN's investment report from 1995, investments in countries on African continent had 25.5% yearly average return on equity. This return

on investment was greater than the 16.6% return rate in developing countries, or from the 8.6% return rate in developed countries. In addition, Sanjo (2011) showed that foreign firms choose a host country based on the tax system and on the size of the markets rather than on country risks.[41] Therefore, future studies can examine how terrorist incidents affect an investor's presence on local markets and address the following questions: Have lost Canadian investment in Colombia, due to terrorist attacks, been substituted by Irish investments? The top graph in Fig 3 shows that after the 2003 attacks against Canadian entities by Colombian perpetrators, FDI in Colombia increased but not with Canadian investments. The bottom graph in Fig 1 shows Irish investments in Colombia that actually increased at the time when Canadian decreased. This observation opens further questions: Did Irish investments come instead Canadian, or the FDI industry structure in Colombia changed?

In this study, I also examine how investors distribute their "investment pie" between hosts, and I find that terrorism plays a significant role here as well. In addition, I show that investors who suffered the most attacks have a negative spillover effect on other investors.

The governance indicators, such as *Political stability* has the highest impact among the institutional factors. Future studies could explain what factors, apart from pair attacks, determine political stability between countries: foreign policies, historical relationships, territorial disputes, or something else. The results of this paper suggest that there is an essential difference between general market conditions that affect all investors in host countries in a similar fashion, and country-pair security conditions vary across different investors in the host country.

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[41]Sanjo (2011) measures country risk with corruption, geographical issues, internal and external conflict, terrorism, alteration of the economic situation, rapid changes in exchange rates, unstable infrastructure and natural disasters.

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A Appendices

A.1 Description

UNCTAD regularly collects published and unpublished national official FDI data directly from central banks, statistical offices or national authorities on an aggregated and disaggregated basis for its FDI/TNC database. These data constitute the main source for the reported data on FDI flows. These data are further complemented by the data obtained from other international organizations such as the International Monetary Fund (IMF), the World Bank, the Organization for Economic Co-operation and Development (OECD), the Economic Commission for Europe (ECE) and the Economic Commission for Latin America and the Caribbean (ECLAC), as well as UNCTAD's own estimates.

For the purpose of assembling balance-of-payments statistics for its member countries, the IMF publishes data on FDI inflows and outflows in the Balance of Payments Statistics Yearbook. The same data are also available in the International Financial Statistics of IMF for certain countries. Data from the IMF used here were obtained directly from the CD-ROMs of the IMF containing balance-of-payments statistics and international financial statistics. For those economies where data were not available from national official sources or the IMF, or for those where available data do not cover the entire period, data from the World Bank's World Development Indicators CD-ROMs were used. The World Bank report covers data on net FDI flows (FDI inflows less FDI outflows) and FDI inward flows only. Consequently, data on FDI outflows, which we report as World Bank data, are estimated by subtracting FDI inward flows from net FDI flows. For those economies in Latin America and the Caribbean for which the data are not available from one of the above-mentioned sources, data from ECLAC were utilized. Data from ECE were also utilized for those economies in Central and Eastern Europe, Central Asia and selected economies in Developing Europe for which data are not available from one of the above-mentioned sources. Furthermore, data on the FDI outflows

of the OECD, as presented in its publication, *Geographical Distribution of Financial Flows to Developing Countries*, and as obtained from their web databank, are used as a proxy for FDI inflows. As these OECD data are based on FDI outflows to developing economies from the member countries of the Development Assistance Committee (DAC) of the OECD, inflows of FDI to developing economies may be underestimated. In some economies, FDI data from large recipients and investors are also used as proxies. (http://www.unctad.org/en/Pages/Statistics.aspx)

B   Graphs and tables

Figure 1: FDI in millions of USD (current) from 22 FDI sending countries from 1995-2010, UNCTAD data.
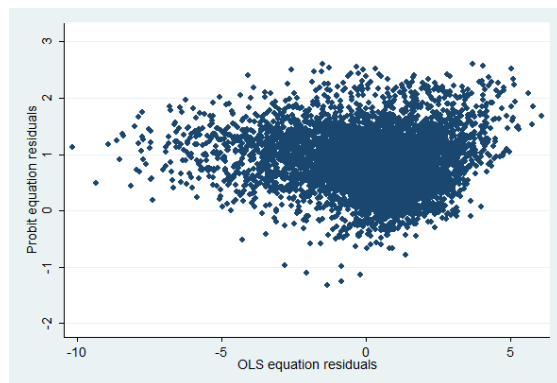
Figure 2: Correlation between standard errors of "FDI flow" and "Selection" equations
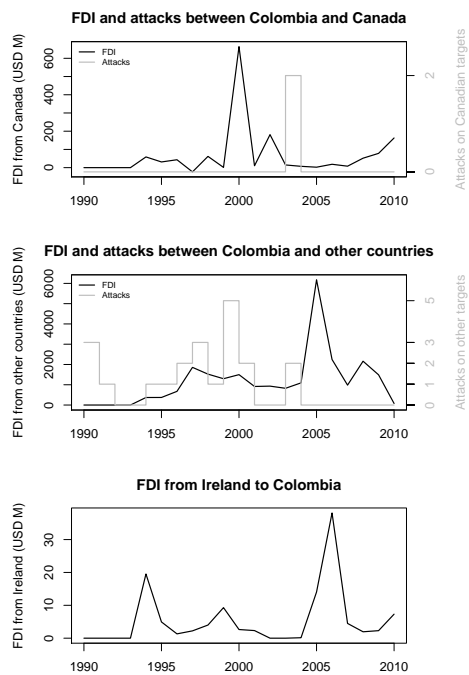
Figure 3: FDI and terrorist attacks in Colombia from 1990-2010

Table 1. Summary Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Dependent Variables					
FDI (ij)	7080	91.4139	175.1614	-8.8876	993
FDI (ij)/ GDP (i)	7080	0.0017	0.0049	-0.0062	0.0868
FDI (ij)/ FDI (j)	7080	0.0392	0.6011	-35.1308	34.7841
Control Variables					
FDI Stock (i, t-1)	17862	26981.63	56207.42	6.9528	491052
GDP per capita receiver (i)	18160	3657.2040	4883.3660	112.5174	43783.11
GDP per capita sender (j)	18345	0.0333	0.0161	0.0097	0.1182
Log population receiver (i)	18344	16.6235	1.7308	12.0333	21.0159
Log population sender (j)	18345	16.3975	1.4844	12.9206	19.5500
Educational gap (i,j)	15778	1.5360	0.5503	0.6625	4.1244
KAOPEN receiver (i)	17817	0.2536	1.4235	-1.8556	2.4557
KAOPEN sender (j)	17488	2.2390	0.6445	-1.1593	2.4557
Log distance (ij)	18345	8.7642	0.7382	5.6009	9.8497
GDP 5 yr growth rate (i)	18093	3.1729	2.0436	-4.3010	7.0758
Share pop tertiary edu* (i)	12555	25.3885	15.8427	0.4903	78.3649
Terrorism Variables					
Domestic attacks (i, t-1)	18344	19.8686	61.3131	0	645
International attacks (i, t-1)	18293	0.9074	4.3719	0	105
Pair attacks (i,j,t)	18345	0.0212	0.2845	0	22
Pair attacks (i,j,t-1)	14564	0.0275	0.3202	0	22
US attacks (i, t-1)	18345	0.2496	1.0856	0	22
UK attacks (i, t-1)	18345	0.0143	0.1539	0	3
World Governance Indicators in FDI receiving countries					
Political Stability **	17156	-0.4360	0.7814	-2.7049	1.4178
Regulatory Quality	17133	-0.1496	0.6604	-2.3450	2.2256
Control of Corruption	17133	-0.4096	0.6641	-1.7262	2.3911
Voice and Accountability	17156	-0.3046	0.6781	-2.2180	1.2245
Rule of Law	17133	-0.3761	0.6432	-1.6549	1.7629
Government Effectiveness	17133	-0.2280	0.6301	-1.6724	2.3740
(IHS) Overall Risk	12012	2.9308	0.5576	1.27	4

Note: (i) - denotes FDI receiving country and source country of terrorism,(j)- denotes FDI sending country and target country of terrorism. (*) full name of the variable is "Share of population with tertiary level of education"; (**) full name of the variable is "Political Stability and Absence of Violence/Terrorism". See Table A1 for complete definitions and sources of variables. GDP and FDI variables are in millions of US dollars. The variable "FDI Stock (i, t-1)" stands for total FDI stock in FDI receiving country, including the stocks of investment from any other investors besides the 23 in this study.

Table 2. Number of receiver- sender attacks and FDI by pairs of countries and list of the top receiving countries by number of pair attacks from the period of 1995 to 2010.

Top 5 pairs by attacks over 16 years			Top 5 pairs by FDI over 16 years			Top countries by attacks (1995-2010)					
Pair	FDI	Attacks	Pair	FDI	Attacks	FDI receivers	Attacks	% of total	FDI senders	Attacks	% of total
USA - Pakistan	5662.376	53	USA-Mexico	157084	2	Pakistan	68	17.48	United States	211	54.24
USA- Saudi Arabia	17320	29	Japan-China	61922.2	0	Algeria	51	13.11	France	43	11.05
USA-Nigeria	679.867	29	USA-Brazil	59890.7	2	Nigeria	41	10.54	Germany	25	6.43
France-Algeria	344.001	24	USA-China	57991.2	0	Saudi Arabia	33	8.48	Italy	17	4.37
USA-Philippines	5172.02	14	Cyprus -Russia	48921	0	Colombia	31	7.97	Netherlands	16	4.11
Average	5835.653	29.8	Average	77161.9	0.8	Egypt	28	7.20	Canada	14	3.60

Note: FDI is in millions of current USD. Attacks are country pair attacks that are perpetrated from the nationalities of FDI receiving countries against targets of FDI sending countries.

Table 3. The share of FDI flow in receivers' GDP by sender - receiver pairs and receivers ordered by average GDP from 1995 to 2010.

FDI senders

		Vanuatu	Fiji	Kyrgyzstan	Moldova	Armenia	Papua New Guinea	Cambodia	Georgia	Mauritius	Honduras	B&H	Paraguay	Bolivia	Trinidad and Tobago	Ethiopia	Tanzania	Myanmar	Panama
	Australia	2.44	0.18	0.40	0.00	0.10	4.88	0.18	0.25	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.12	0.00	0.00
	Austria	0.00	0.00	0.01	0.08	0.01	0.00	0.00	0.38	0.00	0.00	2.48	0.00	0.04	0.00	0.00	0.01	0.00	0.00
	Belgium	0.00	0.00	0.00	0.01	0.04	0.00	0.15	0.00	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
	Canada	0.00	0.03	1.11	-0.01	0.34	0.92	0.06	0.00	0.00	0.39	0.00	0.00	0.10	0.25	0.16	0.57	0.11	0.06
	Cyprus	0.00	0.00	0.05	0.84	0.18	0.00	0.08	0.28	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Denmark	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.03	0.00	0.01
	Finland	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	France	0.13	0.00	-0.01	0.11	0.63	0.00	0.20	0.36	0.58	0.08	0.06	0.04	0.28	0.00	0.00	0.03	0.29	0.06
	Germany	0.18	0.01	0.17	0.27	0.39	0.17	0.11	0.14	0.03	0.06	0.19	0.02	0.06	0.34	0.00	0.02	0.00	0.08
	Greece	0.00	0.00	0.00	0.02	1.06	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Ireland	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.08	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
	Italy	0.05	0.04	-0.04	0.81	0.06	0.00	0.00	0.29	0.00	0.09	0.12	0.02	0.63	0.00	0.00	0.03	0.00	0.00
	Japan	0.23	0.01	0.11	0.00	0.00	0.00	0.13	0.24	0.00	0.02	0.00	0.06	0.01	0.00	0.00	0.03	0.02	0.45
	Luxembourg	0.00	0.00	0.00	0.06	0.10	0.00	0.00	0.01	0.06	0.00	0.11	0.20	0.07	0.00	0.00	0.02	0.00	0.00
	Netherlands	0.00	0.10	0.06	1.08	0.04	0.00	0.21	0.07	0.00	0.23	0.14	0.17	0.53	0.00	0.00	0.10	0.00	0.30
	New Zealand	0.18	0.43	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
	Norway	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
	Portugal	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
	Spain	0.00	0.00	0.00	0.00	0.04	0.00	0.03	0.00	0.00	0.06	0.00	0.08	0.68	0.00	0.00	0.03	0.00	0.62
	Sweden	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.02	0.01	0.11	0.00	0.00	0.04	0.00	0.02
	Switzerland	0.00	0.00	-0.01	0.05	0.06	0.00	0.00	0.01	0.13	0.08	0.22	0.01	0.14	0.00	0.00	0.10	0.00	0.47
	United Kingdom	0.04	0.01	0.45	0.28	0.19	1.22	0.29	0.84	0.49	0.28	0.03	0.04	0.30	1.62	0.00	0.56	0.20	1.25
	United States	0.00	0.17	0.20	0.00	0.45	0.04	0.19	1.45	0.19	1.87	0.02	0.70	3.24	4.46	0.41	0.16	0.00	1.44
	Average	**0.14**	**0.04**	**0.11**	**0.16**	**0.17**	**0.31**	**0.08**	**0.21**	**0.07**	**0.17**	**0.15**	**0.06**	**0.27**	**0.29**	**0.02**	**0.09**	**0.03**	**0.21**
	Total FDI flow	**32**	**127**	**763**	**714**	**1790**	**970**	**1056**	**1215**	**1470**	**5087**	**2391**	**1890**	**7390**	**10007**	**350**	**2527**	**124**	**8195**

Table 3 (continued). The share of FDI flow in receivers' GDP by sender - receiver pairs and receivers ordered by average GDP from 1995 to 2010.

		El Salvador	Azerbaijan	Costa Rica	Bulgaria	Oman	Dominican Republic	Tunisia	Ecuador	Croatia	Kazakhstan	Morocco	Bangladesh	Peru	Romania	Algeria	Nigeria	Pakistan	Chile
FDI senders	Australia	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.08	0.00	0.01	0.00	0.00	0.03	0.19
	Austria	0.00	0.00	0.00	1.18	0.00	0.00	0.09	0.03	1.04	0.02	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.02
	Belgium	0.00	0.00	0.00	0.58	0.00	0.00	0.03	0.00	0.08	0.04	0.12	0.00	0.04	0.07	0.02	0.00	0.00	0.08
	Canada	0.08	0.00	0.25	0.02	0.08	0.70	0.11	0.45	0.00	0.39	0.00	0.00	0.04	0.04	0.01	0.00	0.00	0.59
	Cyprus	0.00	0.02	0.00	0.66	0.00	0.00	0.01	0.00	0.03	0.03	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
	Denmark	0.00	0.00	0.01	0.11	0.00	0.02	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00
	Finland	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.07
	France	0.30	0.15	0.02	0.28	0.07	0.24	0.35	0.06	0.07	0.36	0.66	0.02	0.09	0.44	0.17	0.00	0.00	0.13
	Germany	0.04	0.10	0.10	0.69	0.05	0.04	0.08	0.04	0.77	0.14	0.10	0.01	0.01	0.50	0.06	0.00	0.03	0.06
	Greece	0.00	0.00	0.00	0.90	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
	Ireland	0.00	0.04	0.00	0.26	0.00	0.00	0.00	0.00	0.03	0.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Italy	0.12	0.02	0.04	0.48	0.00	0.05	0.37	0.11	0.26	0.66	0.05	0.00	0.04	0.43	0.07	0.00	0.00	0.18
	Japan	0.01	0.08	0.00	0.04	0.05	0.00	0.04	0.01	0.00	0.17	0.02	0.05	0.02	0.01	0.02	0.00	0.03	0.15
	Luxembourg	0.00	0.00	0.00	0.59	0.00	0.00	0.02	0.00	0.30	0.01	0.03	0.00	0.01	0.08	0.00	0.00	0.01	0.01
	Netherlands	0.03	0.12	0.19	1.17	0.14	0.25	0.09	0.05	0.29	0.69	0.10	0.07	0.15	0.59	0.03	0.00	0.09	0.23
	New Zealand	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	Norway	0.00	0.05	0.00	0.02	0.00	0.00	0.02	0.00	0.02	0.04	0.00	0.06	0.00	0.01	0.00	0.00	0.08	0.04
	Portugal	0.00	0.00	0.00	0.01	0.00	0.00	0.21	0.00	0.00	0.01	0.14	0.00	0.01	0.00	0.00	0.00	0.00	0.00
	Spain	0.15	0.00	0.09	0.29	0.00	0.72	0.12	0.11	0.01	0.01	0.34	0.00	0.16	0.09	0.10	0.00	0.00	0.51
	Sweden	0.00	0.00	0.03	0.06	0.01	0.00	0.09	0.01	0.10	0.01	0.09	0.01	0.00	0.02	0.01	0.00	0.00	0.03
	Switzerland	0.01	0.06	0.08	0.38	0.00	0.06	0.03	0.03	0.11	0.13	0.10	0.02	0.02	0.24	0.00	0.00	0.07	0.12
	United Kingdom	0.01	0.36	0.03	0.53	1.01	0.19	0.63	0.05	0.10	1.03	0.11	0.19	0.39	0.14	0.04	0.90	0.18	0.40
	United States	1.10	0.49	2.39	0.57	1.26	1.09	0.26	1.04	0.70	1.89	0.16	0.14	0.27	0.09	0.43	0.53	0.27	0.52
	Average	0.08	0.06	0.14	0.38	0.12	0.14	0.11	0.09	0.17	0.25	0.09	0.03	0.05	0.16	0.04	0.06	0.03	0.15
	Total FDI	2662	2231	8899	29151	3480	14273	12559	6328	17879	14271	13446	4732	11598	13501	2040	1892	12912	36702

FDI receivers

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Table 3 (continued). The share of FDI flow in receivers' GDP by sender - receiver pairs and receivers ordered by average GDP from 1995 to 2010.

FDI senders

	Egypt	Philippines	Singapore	Malaysia	Colombia	Venezuela	Thailand	Argentina	Saudi Arabia	Turkey	Indonesia	Russian Federation	Mexico	India	Brazil	China	Grand Total
Australia	0.00	0.01	0.00	0.05	0.00	0.00	0.02	0.03	0.01	0.00	0.07	0.00	0.00	0.00	0.05	0.03	9.25
Austria	0.00	0.00	0.03	0.01	0.00	0.00	0.01	0.09	0.00	0.03	0.00	0.04	0.00	0.00	0.01	0.00	5.94
Belgium	0.00	0.00	0.11	0.05	0.00	0.00	0.03	0.07	0.01	0.03	0.00	0.02	0.01	0.00	0.04	0.00	1.67
Canada	0.00	0.00	0.54	0.06	0.08	0.03	0.01	0.11	0.01	0.01	0.00	0.00	0.07	0.00	0.05	0.03	7.84
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.19	0.00	0.02	0.00	0.00	2.61
Denmark	0.00	0.01	0.02	0.07	0.01	0.00	0.01	0.02	0.00	0.01	0.00	0.01	0.02	0.00	0.01	0.00	0.52
Finland	0.00	0.00	0.07	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.04	0.01	0.00	0.01	0.00	0.45
France	0.10	0.02	0.14	0.03	0.04	0.16	0.06	0.12	0.01	0.06	0.06	0.03	0.03	0.01	0.12	0.04	7.32
Germany	0.02	0.02	0.17	0.25	0.03	0.07	0.10	0.12	0.03	0.07	0.08	0.14	0.07	0.02	0.07	0.05	6.38
Greece	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	2.76
Ireland	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	1.45
Italy	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.11	0.06	0.04	0.00	0.02	0.01	0.01	0.04	0.02	5.35
Japan	0.00	0.31	0.49	0.54	0.01	0.06	0.43	0.04	0.00	0.01	0.17	0.03	0.04	0.02	0.04	0.00	4.22
Luxembourg	0.00	0.01	0.00	0.01	0.02	0.00	0.01	0.17	0.00	0.05	0.06	0.02	0.01	0.00	0.06	0.00	2.11
Netherlands	0.17	0.07	0.32	0.17	0.11	0.08	0.20	0.17	0.06	0.08	0.19	0.21	0.14	0.03	0.09	0.04	9.47
New Zealand	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
Norway	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.96
Portugal	0.04	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.06	0.00	0.60
Spain	0.10	0.00	0.00	0.00	0.23	0.21	0.01	0.18	0.10	0.04	0.00	0.02	0.05	0.01	0.06	0.01	5.27
Sweden	0.00	0.00	0.18	0.01	0.01	0.00	0.02	0.03	0.03	0.00	0.01	0.04	0.03	0.01	0.03	0.01	1.09
Switzerland	0.01	0.01	0.04	0.16	0.03	0.00	0.06	0.13	0.03	0.02	0.00	0.03	0.03	0.01	0.04	0.02	3.33
United Kingdom	0.03	0.07	0.19	0.30	0.08	0.16	0.12	0.15	0.05	0.05	0.05	0.07	0.05	0.03	0.04	0.04	15.83
United States	0.24	0.25	0.52	0.56	0.34	0.51	0.30	0.32	0.03	0.05	0.05	0.10		0.07	0.00	0.00	31.52
Average	**0.03**	**0.03**	**0.12**	**0.10**	**0.04**	**0.06**	**0.06**	**0.08**	**0.02**	**0.03**	**0.03**	**0.05**	**0.03**	**0.01**	**0.04**	**0.01**	
Total FDI	**1624**	**12162**	**17431**	**25841**	**15539**	**14481**	**24371**	**35905**	**13864**	**25619**	**11456**	**27690**	**38841**	**21437**	**54274**	**52025**	

Table 4. FDI receivers ordered by the highest total number of domestic (left column) and international (right column) attacks in period from 1995 to 2010.

	FDI receivers	# of domestic attacks	FDI receivers	# of international attacks
1	Pakistan	65835	Colombia	4487
2	India	64196	Pakistan	2123
3	Colombia	45255	Nigeria	1605
4	Algeria	42895	Saudi Arabia	1042
5	Philippines	24358	Algeria	919
6	Thailand	23166	Egypt	919

Note: The data is from Global Terrorism Database (START). The distinction between domestic and international incidents of terrorist attacks is done based on the criteria created for this study only. If nationalities of perpetrators and victims were of same nationalities attacks are counted as domestic, if they were of different nationalities they were counted as international attacks. These numbers are for total of 16 years.

Table 5. Heckman Maximum Likelihood model of FDI flow and Terrorist Incidents between pairs of countries from 1995 to 2010, clustered by country pairs and with year effects.

VARIABLES	(1) Dependent variable: FDI outflow from sender to receiver		(2) Baseline model specification (standard errors by country pairs)		(3) Standard errors clustered by FDI receivers		(4) Standard errors clustered by FDI senders	
	FDI flow	Selection	FDI flow	Selection	FDI flow	Selection	FDI flow	Selection
Log FDI stock*	0.633***	0.218***	0.635***	0.218***	0.635***	0.218**	0.635***	0.218***
	(0.088)	(0.044)	(0.088)	(0.044)	(0.166)	(0.092)	(0.089)	(0.043)
Log GDP per capita receiver*	0.171	-0.146**	-0.828***	-0.146**	-0.828***	-0.146	-0.828***	-0.146***
	(0.122)	(0.058)	(0.121)	(0.058)	(0.221)	(0.112)	(0.130)	(0.057)
Log GDP per capita sender*	-0.037	-0.004	-0.034	-0.004	-0.034	-0.004	-0.034	-0.004
	(0.078)	(0.035)	(0.078)	(0.035)	(0.069)	(0.033)	(0.091)	(0.044)
Log Population receiver	0.250***	-0.023	-0.751***	-0.023	-0.751***	-0.023	-0.751***	-0.023
	(0.085)	(0.041)	(0.085)	(0.041)	(0.169)	(0.088)	(0.064)	(0.033)
Log Population sender	0.877***	0.408***	0.877***	0.408***	0.877***	0.408***	0.877***	0.408***
	(0.056)	(0.026)	(0.056)	(0.026)	(0.067)	(0.033)	(0.125)	(0.055)
Educational gap	-0.015	-0.201***	-0.011	-0.201***	-0.011	-0.201	-0.0114	-0.201**
	(0.160)	(0.069)	(0.160)	(0.069)	(0.345)	(0.151)	(0.209)	(0.091)
KAOPEN receiver	0.117**	0.007	0.117**	0.007	0.117	0.007	0.117***	0.007
	(0.047)	(0.022)	(0.047)	(0.022)	(0.071)	(0.054)	(0.041)	(0.025)
Log Distance	-0.985***	-0.252***	-0.984***	-0.252***	-0.984***	-0.252***	-0.984***	-0.252***
	(0.093)	(0.045)	(0.092)	(0.045)	(0.187)	(0.098)	(0.169)	(0.06)
Common language	0.683***	0.335***	0.684***	0.335***	0.684**	0.335**	0.684*	0.335
	(0.227)	(0.118)	(0.227)	(0.118)	(0.266)	(0.145)	(0.391)	(0.205)
Domestic attacks*	-0.001	-1.04e-05	-0.001	-1.05e-05	-0.001	-1.05e-05	-0.001*	-1.05e-05
	(0.001)	(0.0003)	(0.001)	(0.0003)	(0.001)	(0.001)	(0.001)	(0.0003)
International attacks*	-0.006	0.008**	-0.006	0.008**	-0.006	0.008	-0.006	0.008***
	(0.006)	(0.004)	(0.006)	(0.004)	(0.008)	(0.006)	(0.005)	(0.003)
Pair attacks	-0.001	0.04	-0.002	0.04	-0.001	0.04	-0.002	0.04
	(0.186)	(0.082)	(0.187)	(0.082)	(0.154)	(0.102)	(0.108)	(0.095)
Pair attacks*	-0.431**	-0.157**	-0.427**	-0.157**	-0.427***	-0.157***	-0.427**	-0.157**
	(0.176)	(0.067)	(0.175)	(0.067)	(0.131)	(0.055)	(0.203)	(0.068)
KAOPEN sender		0.143**		0.143**		0.143***		0.143
		(0.060)		(0.060)		(0.055)		(0.137)
FDI dummy*		0.925***		0.925***		0.925***		0.925***
		(0.039)		(0.039)		(0.112)		(0.059)
rho	0.135(0.038)		0.167 (0.037)		0.167 (0.050)		0.167 (0.043)	
sigma	2.131 (0.045)		2.136 (0.047)		2.136 (0.075)		2.136 (0.095)	
lambda	0.289 (0.082)		0.356 (0.082)		0.356 (0.112)		0.356 (0.100)	
Constant	-15.68***	-5.747***	-1.866	-5.747***	-1.866	-5.747***	-1.866	-5.747***
	(2.064)	(1.000)	(2.065)	(1.000)	(3.870)	(1.789)	(2.682)	(1.623)
Observations	11,596	11,596	11,596	11,596	11,596	11,596	11,596	11,596

Note: In column (1) dependent variable is log(FDI(i,j,t)), and in columns (2) to (4) the dependent variable is log(FDI(i,j,t)/GDP(i,t)). In the column "Selection" dependent variable is a dummy variable that equals 1 if country pair is observed. Variable names with (*) are one year lagged. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 6. Heckman Maximum Likelihood model of FDI flow and terrorist incidents between pairs of countries from 1995 to 2010, clustered by country pairs and with year effect.

VARIABLES	(1) FDI flow	(1) Selection	(2) FDI flow	(2) Selection	(3) FDI flow	(3) Selection	(4) In 5 to 90 percentile FDI flow	(4) Selection	(5) Three year averages FDI flow	(5) Selection	(6) w/o United States FDI flow	(6) Selection	(7) w/o Pakistan FDI flow	(7) Selection
Log FDI stock*	0.591***	0.217***	0.678***	0.381***	0.599***	0.223***	0.604***	0.210***	0.841***	0.431***	0.658***	0.221***	0.633***	0.218***
	(0.0857)	(0.0445)	(0.0991)	(0.0495)	(0.088)	(0.045)	(0.087)	(0.045)	(0.077)	(0.055)	(0.0919)	(0.0454)	(0.0883)	(0.0446)
Log GDP per capita receiver*	-0.826***	-0.135**	-1.082***	-0.235***	-0.794***	-0.151**	-0.738***	-0.131**	-0.993***	-0.341***	-0.846***	-0.148**	-0.813***	-0.150**
	(0.120)	(0.0586)	(0.130)	(0.0621)	(0.123)	(0.059)	(0.118)	(0.058)	(0.096)	(0.073)	(0.126)	(0.0594)	(0.122)	(0.0585)
Log GDP per capita sender*	-0.0379	-0.00445	0.0507	0.0175	-0.0341	-0.004	-0.040	-0.006	0.929***	0.308***	-0.0233	-0.00119	-0.0333	-0.00607
	(0.0772)	(0.0356)	(0.0850)	(0.0418)	(0.078)	(0.035)	(0.078)	(0.036)	(0.180)	(0.110)	(0.0822)	(0.0363)	(0.0791)	(0.0358)
Log Population receiver	-0.684***	-0.0283	-0.736***	-0.174***	-0.685***	-0.033	-0.663***	-0.007	-1.058***	-0.166***	-0.749***	-0.0256	-0.745***	-0.0219
	(0.0850)	(0.0414)	(0.0912)	(0.0466)	(0.089)	(0.043)	(0.0830)	(0.041)	(0.066)	(0.051)	(0.0900)	(0.0417)	(0.0862)	(0.0413)
Log Population sender	0.872***	0.409***	0.882***	0.396***	0.878***	0.408***	0.833***	0.394***	0.948***	0.554***	0.806***	0.409***	0.882***	0.406***
	(0.0549)	(0.0260)	(0.0592)	(0.0287)	(0.056)	(0.026)	(0.0558)	(0.026)	(0.067)	(0.041)	(0.0652)	(0.0286)	(0.0565)	(0.0262)
Educational gap	-0.108	-0.194***	0.161	-0.113	0.035	-0.207***	0.0529	-0.201***	-0.526***	-0.364***	-0.0797	-0.218***	-0.0284	-0.199***
	(0.154)	(0.0689)	(0.191)	(0.0855)	(0.165)	(0.069)	(0.160)	(0.07)	(0.133)	(0.0931)	(0.178)	(0.0715)	(0.166)	(0.0712)
KAOPEN receiver	0.131***	0.00644	0.116**	0.0201	0.137***	0.005	0.116**	0.004	-0.077**	-0.072***	0.118**	-0.00581	0.112**	0.00794
	(0.0477)	(0.0223)	(0.0537)	(0.0257)	(0.048)	(0.022)	(0.0465)	(0.022)	(0.035)	(0.026)	(0.0496)	(0.0226)	(0.0474)	(0.0224)
Log Distance	-0.940***	-0.263***	-0.972***	-0.259***	-0.981***	-0.254***	-0.894***	-0.226***	-0.673***	-0.306***	-0.984***	-0.240***	-0.979***	-0.253***
	(0.0911)	(0.0456)	(0.0962)	(0.0490)	(0.092)	(0.045)	(0.0865)	(0.046)	(0.067)	(0.056)	(0.0935)	(0.0459)	(0.0921)	(0.0454)
Common language	0.774***	0.324***	0.787***	0.410***	0.706***	0.330***	0.667***	0.318***	-0.193	0.173	0.739***	0.371***	0.660***	0.350***
	(0.214)	(0.118)	(0.269)	(0.148)	(0.224)	(0.118)	(0.226)	(0.120)	(0.244)	(0.174)	(0.253)	(0.124)	(0.233)	(0.122)
Domestic attacks*	-0.0001	-0.0001	-0.00199**	0.000573	-0.001	-3.07e-05	-0.00121	1.47e-06	-0.003***	0.001	-0.00156*	-6.31e-05	-0.00235**	5.95e-05
	(0.001)	(0.001)	(0.00101)	(0.000508)	(0.001)	(0.0003)	(0.000832)	(0.0003)	(0.001)	(0.0005)	(0.000889)	(0.0004)	(0.00101)	(0.0004)
International attacks*	0.00509	0.00537	-0.00113	0.00898**	-0.005	0.008**	-0.00495	0.001**	-0.003	0.011**	-0.00444	0.008**	-0.00426	0.008**
	(0.006)	(0.004)	(0.00584)	(0.00400)	(0.006)	(0.00386)	(0.00636)	(0.004)	(0.005)	(0.005)	(0.007)	(0.004)	(0.006)	(0.004)
Pair attacks	0.0457	0.0402	0.0655	0.0438	-0.006	0.042	0.0254	0.046	-0.947***	0.039	-0.206	-0.0502	-0.140	0.0115
	(0.186)	(0.0811)	(0.179)	(0.0905)	(0.189)	(0.082)	(0.186)	(0.083)	(0.305)	(0.200)	(0.279)	(0.0826)	(0.174)	(0.0834)
Pair attacks*	-0.362**	-0.159**	-0.465**	-0.154**	-0.429**	-0.157**	-0.419**	-0.151**	-0.280	-0.669***	-0.471**	-0.154**	-0.460**	-0.164*
	(0.167)	(0.069)	(0.215)	(0.0739)	(0.172)	(0.067)	(0.175)	(0.065)	(0.507)	(0.223)	(0.185)	(0.0659)	(0.215)	(0.0849)
KAOPEN sender		0.142**		0.0916		0.143**		0.149**		0.287***		0.139**		0.145**
		(0.060)		(0.0638)		(0.060)		(0.06)		(0.094)		(0.0605)		(0.0609)
FDI dummy*		0.922***		0.907***		0.925***		0.921***		1.263***		0.910***		0.944***
		(0.04)		(0.0436)		(0.039)		(0.039)		(0.056)		(0.0399)		(0.0400)
Armed conflict	-1.012***	0.183*												
	(0.228)	(0.104)												
Tertiary			0.0223***	-0.00542**										
			(0.00641)	(0.00276)										
Natural disasters							-0.018*	0.003						
							(0.01)	(0.004)						
rho	0.157(0.037)		0.164(0.038)		0.167 (0.037)		0.183(0.037)		0.016 (0.063)		0.181 (0.039)		0.183(0.037)	
sigma	2.115(0.046)		2.122(0.050)		2.134 (0.046)		2.099(0.049)		1.351 (0.027)		2.172 (0.049)		2.099(0.049)	
lambda	0.332(0.080)		0.349(0.084)		0.357 (0.082)		0.385(0.080)		0.021 (0.085)		0.394 (0.088)		0.385(0.080)	
Constant	-2.636	-5.676***	-1.098	-3.397***	-2.986	-5.568***	-4.112**	-6.120***	3.100*	-5.461***	-0.694	-5.791***	-4.112**	-6.120***
	(2.060)	(1.004)	(2.093)	(1.070)	(2.163)	(1.031)	(1.954)	(1.008)	(1.806)	(1.413)	(2.197)	(1.043)	(1.954)	(1.008)
Observations	11,596	11,596	8,267	8,267	11,596	11,596	11,353	11,353	5,490	5,490	11,156	11,156	11,353	11,353

Note: In all specifications dependent variable in the "FDI flow" column is Log(FDI(i,j,t)/GDP(i,t)); while in the column "Selection" dependent variable is a dummy variable that equals 1 if the country pair is in the sample. Variable names with (*) are one year lagged. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 7. Heckman Maximum Likelihood model of FDI flow and terrorist incidents between pairs of countries from 1995 to 2010, clustered by country pairs and with year effects.

VARIABLES	(1)		(2) w/o United States		(2) w/o United Kingdom	
	FDI share	Selection	FDI share	Selection	FDI share	Selection
Log FDI stock*	0.617***	0.215***	0.616***	0.214***	0.594***	0.223***
	(0.0865)	(0.0443)	(0.0911)	(0.0456)	(0.0924)	(0.0456)
Log GDP per capita receiver*	0.226*	-0.144**	0.243**	-0.141**	0.288**	-0.147**
	(0.117)	(0.0585)	(0.121)	(0.0601)	(0.126)	(0.0599)
Log GDP per capita sender*	0.0151	-0.00548	0.0337	-0.00161	-0.00589	-0.00390
	(0.0752)	(0.0355)	(0.0787)	(0.0363)	(0.0792)	(0.0363)
Log Population receiver	0.292***	-0.0220	0.313***	-0.0188	0.310***	-0.0247
	(0.0838)	(0.0410)	(0.0886)	(0.0423)	(0.0890)	(0.0420)
Log Population sender	-0.0384	0.409***	-0.0732	0.411***	-0.0660	0.394***
	(0.0557)	(0.0261)	(0.0661)	(0.0287)	(0.0572)	(0.0264)
Educational gap	-0.159	-0.197***	-0.125	-0.205***	-0.0800	-0.180***
	(0.157)	(0.0689)	(0.178)	(0.0713)	(0.166)	(0.0700)
KAOPEN receiver	0.0779*	0.00712	0.0906*	-0.00277	0.0939**	0.00247
	(0.0452)	(0.0225)	(0.0477)	(0.0227)	(0.0475)	(0.0230)
Log Distance	-0.891***	-0.253***	-0.892***	-0.243***	-0.917***	-0.268***
	(0.0907)	(0.0456)	(0.0931)	(0.0461)	(0.0940)	(0.0463)
Common language	0.592***	0.332***	0.645***	0.373***	0.580**	0.323**
	(0.211)	(0.117)	(0.233)	(0.123)	(0.232)	(0.126)
Domestic attacks*	-0.00171**	1.96e-05	-0.00186**	-1.78e-05	-0.00175**	-0.000122
	(0.000705)	(0.000356)	(0.000739)	(0.000358)	(0.000748)	(0.000365)
International attacks*	-0.00446	0.00777**	0.00146	0.0107**	-0.00608	0.00395
	(0.00567)	(0.00388)	(0.00598)	(0.00442)	(0.00578)	(0.00358)
Pair attacks	-0.116	0.0415	-0.243	-0.0471	-0.102	0.0584
	(0.204)	(0.0819)	(0.255)	(0.0826)	(0.212)	(0.0849)
Pair attacks*	-0.331**	-0.174**	-0.308*	-0.147**	-0.336**	-0.168**
	(0.165)	(0.0726)	(0.183)	(0.0732)	(0.168)	(0.0743)
KAOPEN sender		0.141**		0.138**		0.223***
		(0.0622)		(0.0623)		(0.0456)
FDI dummy*		0.904***		0.888***		-0.147**
		(0.0395)		(0.0399)		(0.0599)
Attacks US*			-0.126**	-0.0273		
			(0.0495)	(0.0228)		
Attacks UK*					0.103	0.312***
					(0.201)	(0.106)
rho	0.102(0.038)		0.115(0.039)		0.101 (0.041)	
sigma	2.116(0.052)		2.154(0.054)		2.148 (0.054)	
lambda	0.215(0.081)		0.247(0.086)		0.218 (0.087)	
Constant	-7.686***	-5.778***	-7.510***	-5.932***	-7.798***	-5.443***
	(1.977)	(1.008)	(2.105)	(1.057)	(2.079)	(1.023)
Observations	11,530	11,530	11,090	11,090	11,030	11,030

Note: In all specifications dependent variable in the "FDI share" column is Log(FDI(i,j,t)/FDI(j,t)); while in the column "Selection" dependent variable is a dummy variable that equals 1 if the country pair is in the sample. Variable names with (*) are one year lagged. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 8. Heckman Maximum Likelihood estimation of FDI flow, Terrorist Incidents and World Governance Indicators from 1996 to 2008 between country pairs with standard errors clustered by country pairs and year effects.

VARIABLES	(1) FDI flow	(1) Selection	(2) FDI flow	(2) Selection	(3) FDI flow	(3) Selection
Log FDI stock*	0.535***	0.211***	0.579***	0.159***	0.596***	0.182***
	(0.0894)	(0.0469)	(0.0960)	(0.0466)	(0.0942)	(0.0470)
Log GDP per capita receiver*	-0.876***	-0.143**	-0.867***	-0.167***	-0.876***	-0.158***
	(0.122)	(0.0590)	(0.125)	(0.0599)	(0.127)	(0.0600)
Log GDP per capita sender*	-0.0218	-0.00251	-0.0295	-0.00535	-0.0283	-0.00405
	(0.0784)	(0.0368)	(0.0795)	(0.0368)	(0.0796)	(0.0368)
Log Population receiver	-0.593***	-0.0181	-0.698***	0.0223	-0.712***	0.00412
	(0.0902)	(0.0454)	(0.0920)	(0.0428)	(0.0907)	(0.0431)
Log Population sender	0.874***	0.405***	0.881***	0.407***	0.879***	0.407***
	(0.0555)	(0.0265)	(0.0564)	(0.0266)	(0.0570)	(0.0265)
Educational gap	-0.0346	-0.192***	-0.0127	-0.161**	-0.0660	-0.205***
	(0.161)	(0.0712)	(0.163)	(0.0715)	(0.166)	(0.0707)
KAOPEN receiver	0.125***	0.00445	0.0893*	-0.0231	0.113**	0.000899
	(0.0483)	(0.0227)	(0.0493)	(0.0239)	(0.0482)	(0.0228)
Log Distance	-0.955***	-0.263***	-1.005***	-0.264***	-1.009***	-0.268***
	(0.0894)	(0.0460)	(0.0926)	(0.0457)	(0.0939)	(0.0461)
Common language	0.662***	0.318***	0.663***	0.276**	0.647***	0.289**
	(0.232)	(0.120)	(0.233)	(0.124)	(0.234)	(0.122)
Domestic attacks*	0.000822	0.000153	-0.00158*	-0.000127	-0.00136	3.76e-05
	(0.000808)	(0.000378)	(0.000837)	(0.000358)	(0.000844)	(0.000361)
International attacks*	0.00362	0.00744**	-0.00549	0.00711*	-0.00514	0.00728*
	(0.00574)	(0.00366)	(0.00625)	(0.00377)	(0.00627)	(0.00378)
Pair attacks	0.0543	0.137	0.0150	0.149	0.0192	0.139
	(0.192)	(0.0975)	(0.189)	(0.0991)	(0.190)	(0.0995)
Pair attacks*	-0.354**	-0.137**	-0.400**	-0.133**	-0.403**	-0.140**
	(0.176)	(0.0646)	(0.176)	(0.0627)	(0.175)	(0.0654)
KAOPEN sender		0.136**		0.137**		0.136**
		(0.0621)		(0.0622)		(0.0620)
FDI dummy*		0.923***		0.904***		0.918***
		(0.0401)		(0.0400)		(0.0402)
Political Stability	0.595***	0.0301				
	(0.117)	(0.0586)				
Regulatory Quality			0.310**	0.272***		
			(0.154)	(0.0697)		
Control of Corruption					0.211*	0.129**
					(0.128)	(0.0623)
rho	0.172(0.037)		0.180(0.036)		0.174(0.037)	
sigma	2.125(0.047)		2.143(0.048)		2.142(0.047)	
lambda	0.366(0.082)		0.386(0.081)		0.373(0.083)	
Constant	-3.526*	-5.477***	-2.180	-5.651***	-1.827	-5.437***
	(2.006)	(1.037)	(2.012)	(1.017)	(2.050)	(1.016)
Observations	11,021	11,021	11,021	11,021	11,021	11,021

Note: In all specifications dependent variable in the "FDI flow" column is Log(FDI(i,j,t)/GDP(i,t)); while in the column "Selection" dependent variable is a dummy variable that equals 1 if the country pair is in the sample. Variable names with (*) are one year lagged. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 9. Heckman Maximum Likelihood estimation of FDI flow, Terrorist Incidents and World Governance Indicators from 1996 to 2008 between country pairs with standard errors clustered by country pairs and year effects.

VARIABLES	(1) FDI flow	(1) Selection	(2) FDI flow	(2) Selection	(3) FDI flow	(3) Selection	(4) FDI flow	(4) Selection
Log FDI stock*	0.686***	0.253***	0.642***	0.209***	0.623***	0.178***	0.638***	0.224***
	(0.0868)	(0.0445)	(0.0910)	(0.0459)	(0.0959)	(0.0471)	(0.116)	(0.0581)
Log GDP per capita receiver*	-0.939***	-0.215***	-0.851***	-0.148**	-0.853***	-0.154***	-0.925***	-0.217***
	(0.121)	(0.0593)	(0.127)	(0.0605)	(0.125)	(0.0596)	(0.135)	(0.0680)
Log GDP per capita sender*	-0.0190	-0.00127	-0.0278	-0.00308	-0.0287	-0.00473	-0.0611	-0.000605
	(0.0800)	(0.0371)	(0.0796)	(0.0368)	(0.0795)	(0.0368)	(0.0885)	(0.0438)
Log Population receiver	-0.760***	-0.0344	-0.757***	-0.0206	-0.744***	0.00186	-0.736***	0.00221
	(0.0849)	(0.0416)	(0.0878)	(0.0419)	(0.0910)	(0.0424)	(0.110)	(0.0537)
Log Population sender	0.885***	0.411***	0.874***	0.405***	0.876***	0.406***	0.848***	0.421***
	(0.0558)	(0.0266)	(0.0573)	(0.0265)	(0.0571)	(0.0265)	(0.0590)	(0.0284)
Educational gap	-0.00947	-0.164**	-0.0401	-0.199***	-0.0386	-0.198***	-0.0472	-0.0943
	(0.162)	(0.0717)	(0.167)	(0.0714)	(0.165)	(0.0708)	(0.189)	(0.0834)
KAOPEN receiver	0.0760	-0.0180	0.111**	0.00220	0.111**	-0.000298	0.142***	0.00815
	(0.0490)	(0.0233)	(0.0480)	(0.0229)	(0.0481)	(0.0227)	(0.0525)	(0.0257)
Log Distance	-1.049***	-0.306***	-0.994***	-0.262***	-0.996***	-0.264***	-1.050***	-0.303***
	(0.0909)	(0.0470)	(0.0927)	(0.0462)	(0.0928)	(0.0459)	(0.0942)	(0.0484)
Common language	0.643***	0.267**	0.668***	0.310**	0.660***	0.286**	0.732***	0.264**
	(0.231)	(0.121)	(0.234)	(0.121)	(0.234)	(0.122)	(0.245)	(0.129)
Domestic attacks*	-0.00149*	-0.000167	-0.00139*	5.70e-05	-0.00143*	1.92e-06	-0.00349**	-0.00118*
	(0.000845)	(0.000368)	(0.000847)	(0.000361)	(0.000841)	(0.000359)	(0.00143)	(0.000642)
International attacks*	-0.00280	0.0110***	-0.00545	0.00726*	-0.00545	0.00749**	-0.00242	0.00767**
	(0.00607)	(0.00413)	(0.00624)	(0.00377)	(0.00624)	(0.00379)	(0.00569)	(0.00353)
Pair attacks	0.0631	0.179*	0.0113	0.135	0.0152	0.142	0.0661	0.203
	(0.176)	(0.104)	(0.194)	(0.0983)	(0.191)	(0.0989)	(0.172)	(0.131)
Pair attacks*	-0.366**	-0.111*	-0.397**	-0.140**	-0.395**	-0.136**	-0.493**	-0.132*
	(0.183)	(0.0593)	(0.176)	(0.0654)	(0.176)	(0.0639)	(0.213)	(0.0673)
KAOPEN sender		0.133**		0.136**		0.137**		0.0896
		(0.0620)		(0.0621)		(0.0619)		(0.0668)
FDI dummy*		0.895***		0.922***		0.914***		0.884***
		(0.0396)		(0.0401)		(0.0400)		(0.0433)
Voice and Accountability	0.410***	0.287***						
	(0.0999)	(0.0518)						
Rule of Law			0.0483	0.0422				
			(0.133)	(0.0622)				
Government Effectiveness					0.103	0.144**		
					(0.138)	(0.0630)		
Overall Risk (IHS)							-0.162	-0.140
							(0.192)	(0.0925)
rho	0.187(0.036)		0.173(0.037)		0.174(0.037)		0.151(0.040)	
sigma	2.138(0.048)		2.144(0.048)		2.144(0.048)		2.145(0.052)	
lambda	0.399(0.079)		0.370(0.083)		0.373(0.082)		0.323(0.088)	
Constant	-1.239	-4.701***	-1.902	-5.388***	-1.919	-5.445***	0.167	-4.850***
	(1.991)	(1.022)	(2.048)	(1.018)	(2.043)	(1.016)	(2.212)	(1.119)
Observations	11,021	11,021	11,021	11,021	11,021	11,021	7,910	7,910

Note: In all specifications dependent variable in the "FDI flow" column is Log(FDI(i,j,t)/GDP(i,t)); while in the column "Selection" dependent variable is a dummy variable that equals 1 if the country pair is in the sample. Variable names with (*) are one year lagged. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 10. Comparison of magnitudes terrorist incidents and World Governance Indicators on FDI flows between country pairs.

Variable	Mean (Standard Deviation)	Percentage change of FDI/GDP once variable increases for one standard deviation
Pair attacks (i,j,t-1)	0.027 (0.32)	11.328 %
Political Stability (i,t)	-0.436 (0.781)	46.470 %
Regulatory Quality (i,t)	-0.149 (0.66)	20.460 %
Control of Corruption (i,t)	-0.41 (0.664)	13.944 %
Voice and Accountability (i,t)	-0.305 (0.678)	27.730 %
Rule of Law (i,t)	-0.376 (0.643)	3.086 %
Government Efficiency (i,t)	-0.228 (0.63)	6.426 %

Table B1. Descriptions and Sources of Variables

Variables	Description
FDI (ij)	Foreign Direct Investment outflow from FDI sending to receiving country in millions of current US dollars. Source: UNCTAD
FDI (ij)/ GDP (i)	Foreign Direct Investment outflow from FDI sending to receiving country in millions of current US dollars relative to FDI receiving country's' Gross Domestic Product in millions of current US dollars. Source: UNCTAD
FDI Stock (i, t-1)	Total Foreign Direct Investment in FDI receiving country in millions of current US dollars. Source: UNCTAD (www.unctad.org)
GDP per capita sender (j)	Log of Gross Domestic Product of FDI sending country. Source: World Development Indicators (WDI), World Bank
GDP per capita receiver (i)	Log of Gross Domestic Product of FDI receiving country. Source: WDI, World Bank.
Population receiver and sender (i) and (j)	Population of FDI receiving and sending countries. Source: WDI, World Bank.
KAOPEN	The Chinn-Ito index (*KAOPEN*) is an index measuring a country's degree of capital account openness. The index was initially introduced in Chinn and Ito (2006) http://web.pdx.edu/~ito/Chinn-Ito_website.htm
Armed Conflict	Dummy variable equals 1 if in FDI receiving country was armed conflict in a given year. Source: PRIO (www.prio.no)
Tertiary	Population share of those with tertiary level of education in FDI receiving country. Source: WDI, World Bank
Natural Disasters	Number of natural disasters in FDI receiving country in a given year. Source: International Disasters Database (www.emdat.be)

Terrorism Variables	
Domestic Attacks	Total number of domestic terrorist incidents occurred in the FDI host country. Source: Global Terrorism Database (http://www.start.umd.edu/gtd/)
International Attacks	Total number of international terrorist incidents originated from FDI host country. Source: ITERATE
Pair Attacks	Number of terrorist incidents originated from FDI receiving country towards entities of FDI sending country in the year of observation. Source: ITERATE
US; UK	Number of terrorist attacks against targets from US; UK; per FDI receiving country in given year. Source: ITERATE: (International Terrorism: Attributes of Terrorist Events, 1968-1977 [ITERATE 2] (ICPSR 07947)

World Governance Indicators	
Political Stability and Absence of Terrorism	Reflects perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.
Rule of Law	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
Government Effectiveness	Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Control of Corruption	Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.
Regulatory Quality	Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
Voice and Accountability	Reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
	*Indexes are available from 1996-2010. Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance). Source: World Development Indicators (*http://info.worldbank.org/governance/wgi/sc_country.asp*)*

| **IHS Global Insight** Overall Risk | Estimates political, social and asymmetric risk factors that affect key assets, supply chains and personnel in country. From 1999 to 2009. It has value from 1 to 5. Source: IHS http://www.ihs.com |

Note: For detailed description of the World Bank Development Indicators check: http://info.worldbank.org/governance/wgi/sc_country.asp. In the Tables variable *Pol. Stability and Absence of Terrorism/Violence* is labeled as *Pol. Stability*