

An Analysis on Political Risks and the Flow of Foreign Direct Investment in Developing and Industrialized Economies

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Abstract:

Do political risks discourage Foreign Direct Investment (FDI) in both developing and developed economies in a similar manner? In this paper, we examine whether and in what manner political risk affects FDI and compare its different effects in developing and developed economies. Using the 12 category Political Risk Index compiled by the International Country Risk Guide (ICRG), we find the following: First, political risk is a significant determinant of FDI in *both* industrialized and developing nations. Second, *not all aspects of political risk* affect FDI stocks in industrialized and developing countries in the same way. When we compare the effects of different political risk component, we find that since the 9/11 attacks, political risks have become *more important and significant* determinants of FDI flows, especially in industrialized nations.

Key Words:

Foreign Direct Investment, Political Risks, Multinational Corporations, Developing Nations, Industrialized Economy

Introduction

Do political risks discourage Foreign Direct Investment (FDI) in both developing and developed economies in a similar manner? Which particular aspect of political risks—political, societal, and economic risks at the domestic level and international problems—affect FDI flows and stocks more significantly in developing and developed countries? Already fierce competition for FDI among nations has become more intense due to the recent global economic downturn. Many economic determinants of FDI—a large domestic market, sustainable growth, sufficient economic and infrastructure development or high natural resources endowment—are beyond the control of government. Stable political and policy environments are also attractive investment determinants. Host countries can turn domestic economies into more attractive investment environments by reducing political risk and promoting stable and liberal policy to attract more foreign investment, although these are long-term changes. Thus, the goal of this paper is to provide a microscopic look at the effect of individual political risk components on FDI in both developed and developing markets. This, we believe, will provide a blueprint for long-term policy directions to shape a more friendly and favorable investment environment: what works and what doesn't when it comes to attracting FDI. Our paper will inform policy makers on which particular aspect of political risk has significant effect on attracting FDI and provide an outline on the long-term political and institutional development favorable for attracting more foreign investors.

As the literature on the determinants of FDI informs, political and institutional risk is one of the major concerns for foreign investors, especially in developing nations. Some political risks, e.g., “a resurgence of ‘resource nationalism’” (MIGA, 2010, p. 8) and unfavorable annulment or change of the terms of foreign investment (Barthel, Busse, & Neumayer, 2010), continue to pose a great challenge to foreign investors in developing markets. In addition, recent high profile and massive casualty terrorist attacks not only stress the prevalence of political violence and the importance of political risk as a challenge to foreign investors, but also highlight that even developed countries are not immune to political risk and violence. A question, thus, arises, how does political risk affect FDI flows in developed nations in the face of such a volatile political environment? How does a high profile incident of political violence affect how political risk shapes FDI flows and stocks?

In this paper, we examine whether and in what manner political risk affects FDI and compare its different effects in developing and developed economies. We also examine how political risk affects FDI since the 9/11 attacks, especially in developed nations, as we deem that the 9/11 attacks marked a watershed moment. The attacks were catastrophic events that shaped not only world politics but also the global economy dramatically. They had devastating effects on global FDI flows and stocks shortly after, although Enders et al. (2006) do not find any significant lasting effects of the 9/11 attacks on the global economy. Thus, we divide our analysis into before and after the 9/11 and compare the effects of political risk between these two

different periods. We find the following: First, political risk is a significant determinant of FDI in *both* industrialized and developing nations. Second, *not all aspects of political risk* affect FDI stocks in industrialized and developing countries in the same way. A host economy with good democratic accountability (*DEMO*) and a good investment profile (*INVT*) can attract significantly more FDI in both industrialized and developing countries. On one hand, other political risk components, such as ethnic tensions (*ETHC*) and military in politics (*MLTY*), significantly impact FDI in industrialized countries, but they do not have significant effects on FDI in developing nations. On the other hand, in developing nations, markets with better law and order (*Law*), low religious tension (*RLGN*), and more stable government (*GORN*) tend to attract more FDI. Third, since the 9/11 attacks, political risks have become *more important and significant* determinants of FDI flows, especially in industrialized nations. Since the 9/11 attacks, democratic accountability (*DEMO*), investment profile (*INVM*), and military in politics (*MLTY*) have significant positive effects on FDI, while ethnic tensions (*ETHC*) has a significant negative effect on FDI stocks.

Our contributions to the FDI literature are three fold: first, we investigate and compare the effects of political risks by using a larger and more comprehensive sample than previous studies, and our analysis includes *both* developing and developed nations over the period of 1984-2003; second, we investigate how high-profile and catastrophic terrorist attacks, especially the 9/11 attacks in the US, shape the importance of political risk as a determinant of FDI in industrialized countries afterwards; third, we use a more *complete* and *comprehensive* measure of political risk to better understand how each aspect of political risk affects FDI stocks in both developing and developed nations. We use a 12 category Political Risk Index compiled by the International Country Risk Guide (ICRG) to investigate the individual effect of each political risk component on FDI in both developing and industrialized countries.

This paper proceeds as follows. We first present previous research on determinants of FDI. Second, we examine how political risk, in particular, plays a role in determining foreign investment. Finally, we present empirical evidence on the relationship between FDI and political risk and conclude this paper with analysis and policy implications. Our analysis encompasses 116 countries (22 industrialized countries and 94 developing countries) during the period of 1984 and 2008. In addition, we measure political risk by using the political risk scores compiled by the ICRG.

Literature Review

FDI is a driving force behind the economic growth of a host economy and the rapid economic globalization of the global economy¹: To a hosting economy, FDI is “an

¹ There is inconclusive evidence that FDI inflows promote economic growth of the host country. The recent literature shows that the effect of FDI on economic growth of the host economy is contingent upon domestic conditions of the host economy. The host economy is able to take advantage of the

engine of employment, technological progress, productivity improvements and ultimately economic growth” and “a mechanism of technology transfer between countries, particularly to the less-developed nations” (Jensen, 2003, p. 587; see also Bengoa & Sanchez-Robles, 2003; Borensztein, De Gregorio, & Lee, 1998; Tarzi, 2005).² Thus, many nations, although at times ambivalent about the political and social impact of foreign investors and even somewhat fearful of dependency created by FDI, have adopted increasingly more liberal trade and economic policies and have been seeking to attract more FDI over time, especially since the 1990s (Bengoa & Sanchez-Robles, 2003; Brewer, 1995; Dutta & Roy, 2009; Jaffee & Stokes, 1986; Jensen, 2008; UNCTAD, 2009).³

Capital-poor developing nations engage in various FDI-related policy changes to attract foreign investors. They liberalize FDI-related policies (Bengoa & Sanchez-Robles, 2003; Biglaiser & DeRouen, 2007; Biglaiser & DeRouen, 2006; Nooruddin & Simmons, 2009; Tarzi, 2005), offer tax and other financial incentives to foreign investors (Barthel, et al., 2010; Becker, Fuest, & Hemmelgarn, 2006; Li, 2006), and/or join international and regional organizations and bilateral treaties as a mechanism to signal a liberal commitment to foreign investors (Barthel, et al., 2010; Berger, Busse, Nunnenkamp, & Roy, 2010a, 2010b; Büsse, Königer, & Nunnenkamp, 2010; Elkins, Guzman, & Simmons, 2006; Globerman, Shapiro, & Tang, 2006; Neumayer & Spess, 2005). To better compete against other potential FDI host countries, developing nations, at times, offer short-term, upfront subsidies to foreign investors (Elkins, et al., 2006; Janeba, 2002). Janeba (2002), however, argues that upfront subsidies may not work. Host nations with low credibility do not necessarily offer as high subsidies as they could offer to attract foreign investment, knowing that MNCs can move investment to another high-cost but high-credibility market when faced with unfavorable investment circumstances in developing economies. Thus, the problem of the lack of credible commitment exists in both MNCs and host markets and “upfront subsidies are not sufficient to fully overcome lack of commitment” (Janeba, 2002, p. 1128). Even when developing markets offer subsidies to overcome the lack of credibility and compensate for potential sunk cost losses, this might not be sufficient to win over MNCs and their investments.

These subsidies and incentives are popular policies to attract more FDI into host economies, but they are politically and economically costly and controversial. Li (2006) argues that “FDI promotion programs often cause rent-seeking behaviors in host countries where governments directly pick winners and losers in the market,

positive spillover effects of FDI when there is an adequate level of human capital (Borensztein et al. 1998), an adequate financial or market system and regulation (Alfaro et al, 2005; Durham, 2004; Hermes and Lensink, 2003), or a less restrictive business regulation (Busse & Groizard, 2008).

² For further discussion on the effects of technological transfer and domestic policies to augment such benefits associated with FDI, see Desmet, K., Meza, F., & Rojas, J. A. (2008). Foreign Direct Investment and Spillovers: Gradualism may be better. *Canadian Journal of Economics* 41(3), 29.

³ For further discussion on host economies’ anxiety and ambivalence toward FDI, see Abbott & Snidal (1998), Haftel (2006a), and Mayer, C. (2003). Foreign Direct Investment: Who Cares about Ownership? . *Foreign Direct Investment in the Real and Financial Sector of Industrial Countries*.

discriminate against small and local firms, and ... [these] incentives help MNCs strengthen their competitiveness and their ability to monopolize the host market" (Li, 2006, p. 62). Thus, Li (2006) recommends the following to attract more FDI: "The more cost-effective strategy to attract foreign capital is by building and strengthening the governance institutions in a country" and by improving the "investment environment" (p. 72). Examining the determinants of FDI in Africa, Asiedu (2006) recommends a similar solution as Li (2006) does: FDI inflow is not solely determined by certain exogenous factors, i.e., natural resources and large markets, but small countries without these location advantages can still attract FDI by improving their institutions and policy environment (Asiedu, 2006, p. 76; see also Biglaiser & DeRouen, 2006).

Political Risk Discourages Foreign Direct Investment

There are multiple factors that attract or deter foreign investment. Simply put, market opportunities and location advantages of the host economy help host economies attract more FDI: Such advantages include a large domestic market, sustainable growth, sufficient economic and infrastructure development and/or high natural resources endowment (Becker, et al., 2006; Bengoa & Sanchez-Robles, 2003; Fung, Garcia-Herrero, & Siu, 2009; Hill & Munday, 1995; Kolstad & Villanger, 2008; MacDermott, 2007; Sethi, Guisinger, Phelan, & Berg, 2003; Slaughter, 2003; UNCTAD, 2009). Bad investment and policy environments in host economies deter FDI. Political instability and violence—both domestic and international—discourage MNCs from investing in the host economy that is subject to such risk (Büsse & Hefeker, 2005; Büsse & Hefeker, 2007; Bussmann, 2010; Büthe & Milner, 2008; Daniele & Marani, 2010; Diamonte, Liew, & Stevens, 1996; Enders, Sachsida, & Sandler, 2006; Haftel, 2006b; Jensen, 2004, 2008; Ramamurti & Doh, 2004).

A host economy with high political risk tends to discourage FDI flows into its market, since political volatility hurts the profitability of foreign investment. Three major types of political risk discourage foreign investment since they damage its profitability and survival: first, nationalization or expropriation of foreign assets, which tends to be rare, and breach of contract, which occurs more often, threaten foreign investment; second, policy instability and arbitrary regulation in FDI-related policies create uncertain investment environments and hurt the profitability of foreign investments; and, third, war and political violence, including terrorist activities, can damage foreign assets immediately and discourage the productivity of a host economy in the long run (Jensen, 2008, p. 1043; MIGA, 2010).

One of the most extreme cases of political risk is nationalization and expropriation of foreign assets. Although nationalization of foreign assets has become rare even in developing nations since the 1990s, such a possibility still exists (Haftel, 2006a; Jensen, 2003a; Slaughter, 2003). For example, Chávez nationalized the last privately owned oil reserve in Venezuela in 2007, heightening tension with other foreign investors, such as BP PLC, ConocoPhillips, Exxon Mobil Corp., Chevron Corp., France's Total SA and Norway's Statoil ASA (Pearson, 2007). The real threat, however, Ramarmurti and Doh (2004) argue, is "administrative expropriation,"

which has become more frequent (p.164). The host government can ‘squeeze’ and hurt the profit of foreign investment by denying and delaying the development of investment and, thus, forcing foreign investors to renegotiate and change the terms of investment (Ramamurti & Doh, 2004).

Consequently, reducing the risk of nationalization helps host countries attract more FDI. For example, host countries can attract more FDI when they implement strong property rights and implement policies reducing expropriation risk (Biglaiser & DeRouen, 2006; Biswas, 2002; Haftel, 2006b; Jensen, 2008; MIGA, 2010; Tarzi, 2005). Among the host countries of US FDI, strengthening property rights has a strong positive effect on FDI inflows (Biswas, 2002). Examining the effects of economic reforms in Latin American countries, Biglaiser & DeRouen (2006) find that not all countries that implemented economic reforms were necessarily able to attract more FDI. Only countries that implemented both economic reforms and reduced expropriation risks were able to draw more FDI from foreign investors. For example, Indonesia was one of the most successful FDI hosting countries in Asia in the 1970s, largely due to its pro-business and pro-FDI policy measures. Such measures include the 1967 Foreign Investment Law that prohibited the government from nationalizing foreign investment (Tarzi, 2005). Thus, reducing expropriation risk is a key in securing more FDI, especially in developing nations.

The quality of institutions—political, legal, policy and investment—influences FDI inflows and stock in host countries. A sound business environment largely depends on the quality of governmental institutions, and, thus, good governance is an attractive location advantage for foreign investors (Barthel, et al., 2010; Berger, et al., 2010a, 2010b; Büsse & Groizard, 2008; Büsse & Hefeker, 2005; Büsse & Hefeker, 2007; Daniele & Marani, 2010; Dutta & Roy, 2009; Globerman, et al., 2006; Singh & Jun, 1995). First, a sound regulation and legal environment is essential for host countries to attract FDI (Globerman & Shapiro, 2003; Globerman, et al., 2006). Host countries with an adequate—not too restrictive but not too insufficient—regulation environment are able to attract more FDI (Dutta & Roy, 2009) and reap the benefit of FDI and achieve economic growth more effectively (Büsse & Groizard, 2008). Using the ICRG measure of political risk, scholars also show that a stable legal system and low corruption have a positive effect on FDI inflows (Asiedu, 2006; Büsse & Hefeker, 2005; Büsse & Hefeker, 2007; Harms, 2002; Li, 2006). Second, a sound investment environment, e.g., a more streamlined policy process and removal of arbitrary treatment of foreign investors, also promotes FDI inflows (Tarzi, 2005). Examining the effects of investment agreements on FDI, Berger et al. (2010a; 2010b) show that host countries receive more FDI when they agree to treat foreign and national investors equally by removing discrimination or arbitrary treatment and providing a more stable investment environment to foreign investors (Berger, et al., 2010a, 2010b). For example, Double Tax Treaties (DTTs) remove the “double-taxation of foreign-earned income” and make it easier for foreign investors to maximize profits from foreign investment (Barthel, et al., 2010, p. 368). DDTs, thus,

help host countries attract more FDI (Barthel, et al., 2010; Berger, et al., 2010a, 2010b).

War and political violence—on both the domestic and international level—deter foreign investment (Büsse & Hefeker, 2005; Büsse & Hefeker, 2007; Bussmann, 2010; Daniele & Marani, 2010; Desbordes, 2010; Haftel, 2006b; Jensen, 2008; Singh & Jun, 1995; Tarzi, 2005). Political violence, e.g., civil wars, insurrections, organized crimes and international conflicts, leads to “political instability, the disruption of the orderly economic process in the host country, and thus smaller profit,” and “such events may put host governments under political and economic pressure, which may result in nationalization and expropriation of foreign assets in order to alleviate short-term difficulties” (Haftel, 2006b, p. 6). First, international conflict deters FDI (Büsse & Hefeker, 2005; Büsse & Hefeker, 2007; Bussmann, 2010; Desbordes, 2010). Bussmann (2010) shows that the onset of fatal conflicts not only tends to reduce FDI stock with a delay of three years but FDI inflows, in turn, also decrease the war risk of host countries. Second, domestic instability and violence can also deter FDI. Ethnic tension (Büsse & Hefeker, 2005; Büsse & Hefeker, 2007) and religious tension (Desbordes, 2010; MIGA, 2010) deter foreign investment. The recent study on Italy shows that organized crime is strongly and negatively correlated with FDI inflows since organized crime tends to limit corporations’ business activities and profitability through corruption and violence (Daniele & Marani, 2010). Desbordes (2010) finds that MNCs weigh both the global, overall political risk of host countries measured by the ICRG, and diplomatic, dyadic political tension between a host country and the US when they make foreign investment. They increase the required return rate of investment as the overall political risk of a host country, measured by the ICRG, increases and diplomatic tension between the host country and the US worsens (Desbordes, 2010). Thus, host countries hoping to attract more FDI should avoid conflict and violence at home and abroad.

Political Risk in Developing Countries and Changing Political Environment

Foreign investors who expand into a foreign market, thus, have to worry about political risk of the host economy, since political volatility and violence may damage the investment, diminish the efficiency of overall market and, thus, hurt the profitability or survival of their investment. Political risk is an important determinant of foreign investors’ location decisions, also due to the nature of FDI. FDI, “while mobile ex ante, is relatively illiquid ex post” (Jensen, 2003a, p. 594; citing Vernon, 1971) For example, when affected by unfair trade policies, exporting MNCs can easily deflect—move their goods—to other markets. However, when protectionist pressure, for example, leads to an unfair policy change that hurts the profitability of foreign investment, MNCs cannot simply move out from the host market. The sunk cost of FDI makes it extremely costly for foreign investors to withdraw investments they have already made in the host market (Tarzi, 2005). Knowing that, the host country can ‘exploit or expropriate’ foreign assets, although they initially promised fair and favorable terms and policies to foreign investors to attract FDI (Berger, et

al., 2010a; Büthe & Milner, 2008; Jensen, 2008; Neumayer & Spess, 2005; Vernon, 1971). Foreign investors, thus, have to maximize the profitability of investment by taking advantage of the lower factor-costs and location advantages of the host economy but, at the same time, weigh the dangers and potential losses incurred by investing in politically unstable countries. Political risk, thus, is one of the major constraints on foreign investors who seek to expand into foreign markets.

Time-inconsistency problem—changing FDI-related policies to less favorable to foreign investors, and, thus, violating the initial terms of foreign investment—can occur in both developing and advanced economies. However, developing nations often suffer from the shortage of capital and resources, and they “have an even greater incentive than governments in advanced industrialized countries” to “change the terms of existing foreign investment” (Büthe & Milner, 2008, p. 743). Based on the data collected by the World Bank, “in Latin America since the late 1980s, 40% of all concessions were renegotiated, with the average time for renegotiation being only 2.2 years” (Ramamurti & Doh, 2004, p. 158). According to the UNCTAD, “10 per cent of all FDI-related regulatory changes were less favorable for foreign investors” in 2003 and by 2007 it was 25 per cent, and even before the recession in 2008 “in Latin America, as much as 60 per cent of policy measures taken in 2007 were less favorable to FDI” (UNCTAD, 2009, p. 41). Political instability and abrupt policy changes can handicap the productivity and profitability of foreign investment.

According to the survey of the Multilateral Investment Guarantee Agency (MIGA), foreign investors from both industrialized and developing nations chose political risks as one of the biggest challenges they face in developing and emerging markets (MIGA, 2010).⁴ Political risk is one of the most important challenges to MNCs, especially when they expand their business into developing nations, since many developing nations with lower factor costs tend to be the markets with higher risks in comparison to other more developed countries (Diamonte, et al., 1996; Haftel, 2006b; Mosley, 2003; Neumayer & Spess, 2005). Foreign investors, thus, encounter “a trade-off between investing in a low-cost and low-credibility country” and “a high-cost and high-credibility country” in making investment choices (Janeba, 2002; p. 1129).

It is no surprise that the research on FDI has studied the effects of political risk on FDI flows in developing and emerging markets (Bengoa & Sanchez-Robles, 2003; Büsse & Hefeker, 2005; Büsse & Hefeker, 2007; Büthe & Milner, 2008; Desbordes, 2010; Diamonte, et al., 1996; Globerman, et al., 2006; Harms, 2002; Janeba, 2002; Jensen, 2008; Ramamurti & Doh, 2004; Tarzi, 2005). The current research has done

⁴ The survey asked the following question: “In your opinion, which of the following factors will pose the greatest constraint on investments by your company in emerging markets this year and over the next three years?” Foreign investors named political risks most often; macroeconomic stability, access to funding, corruption, access to qualified staff, and limited market opportunities followed (World Bank Group, 2010).

so with the following implicit assumptions: first, political risk is more of a problem in developing and emerging markets, not in industrialized economies; and, second, thus, MNCs take political risk as a major consideration of investment location decisions in developing economies, but not, or to a lesser degree, in industrialized economies. While we do not argue against this conventional wisdom, we argue that political risk has become an increasingly important determinant even in developed and industrialized countries, as the recent high profile terrorist attacks and violence in these developed and industrialized countries show.(Asiedu, 2006; Globerman, et al., 2006; Haftel, 2006b; Harms, 2002; Singh & Jun, 1995)

High profile and high casualty terrorist attacks—such as the 9/11 attacks in the U.S., the Madrid train bombings, and the 7/7 London bombing—show that industrialized countries are not necessarily immune to volatile and even dangerous political circumstances.⁵ It is even more so, since these high profile attacks tend to target developed countries more than developing nations. For example, among the top ten countries that suffered the most international terrorist attacks from 1968 to 2006, six were advanced industrialized countries (Lee, 2011). These dramatic events appear to evince, what Diamonte et al. (1996) called, “a global convergence in political risk” (Diamonte, et al., 1996). They observe that “emerging markets have become politically safer and developed markets have become riskier” (p. 71). Has a convergence in political risk taken place? In this paper, we, thus, examine whether such convergence in political risk has occurred since then. To better understand how catastrophic events like the 9/11 attacks influence FDI flow and stock, we split industrialized samples into two periods of time—before and after the 9/11 attacks. We examine whether such an explosive incident affects how political risks affect FDI flows and compare how the effects of political risks on FDI flows have changed before and after the 9/11 attacks.

Terrorist attacks have “grave impacts” on economy by depressing “growth, investment, and trade flows.” Immediately, they cause “a loss of human and non-human capital,” “uncertainties,” and “retrenchment of certain industries” like travel and recreation industries. In the long run, they increase “uncertainties of any

⁵ These attacks caused the high number of casualties and political uncertainties not only in the targeted nations, but all around the world. The 9/11 attacks occurred on 11 September 2001. These attacks, carried out by the al-Qaeda Islamist extremists, killed closed to 3,000 people—killed 2,600 people at the World Trade Center, 125 at the Pentagon, and 256 on the four planes, according to 9/11 Commission (2004).

The Madrid train bombings, also known as the events of 11-M, occurred on 11 March 2004 in Madrid, Spain, and the coordinated attacks targeted commuters in four different trains, resulting in 191 people killed and 1,841 injured (BBC 2004). The al-Qaida claimed to be responsible for these train attacks, but the Spain court was unable to establish a link between the bombings and the al-Qaeda (Guardian, 2007).

The London attacks, also known as the 7/7 bombings, occurred on 7 July 2005 in London, the UK, during the morning rush hour and killed 52 people and wounded more than 770. Investigators, however, were not able to establish a link between the al-Qaeda and the attacks (BBC 2005).

permanent threat of terrorism" and cause "added anxiety, stress, and mental disorder" (Alomar & El-Sakka, 2011, p. 116). Terrorist attacks can further damage attacked countries by discouraging foreign investment flows into the countries (Alomar & El-Sakka, 2011; Büsse & Hefeker, 2007; Bussmann, 2010; Enders & Sandler, 1996; Gaibulloev & Sandler, 2009; Lee, 2011; Skaperdas, 2011).⁶ However, some find little to no lasting effects of terrorist attacks on FDI flows (Enders, et al., 2006; Gaibulloev & Sandler, 2011).

Some argue that terrorism deters FDI. Examining the impact of terrorist attacks in LDCs, Alomar and El-Sakka (2011) warn that there are multiple negative impacts of terrorist attacks on the host economy. They argue that foreign investors tend to "avoid investing in countries that are subject to frequent terrorist attacks," and, thus, terrorism discourages FDI inflows and "has a significant negative effect on [economic] growth, employment and technological advancement" (p. 124). For example, Enders and Sandler (1996) show that intense terrorism activities led to a 13.5 percent net FDI reduction in Spain and an 11.9 percent decrease in Greece during the 1970s. However, this negative effect of terrorism on FDI inflows and stocks appears to be more damaging in low-income and less developed nations (Gaibulloev & Sandler, 2009; Lee, 2011; Skaperdas, 2011). Examining the impact of terrorism on FDI in Asia for 1970-2004, Gaibulloev and Sandler (2009) show that poorer and developing countries were less able to absorb the negative impact of terrorism than rich countries (see also Skaperdas, 2011).⁷ Literature argues that it is because rich and more developed countries have dominant location advantages and, thus, they are better able to diversity foreign investment and appeal to other foreign investors. In addition, Lee (2011) shows that the negative impact of terrorism is mitigated by a strong military and, thus, terrorism can deter FDI in a host country only when strong military is absent.

Some scholars, however, find moderate to no impact of terrorism on FDI. Investigating the impact of the 9/11 attacks, Enders et al. (2006) show that the 9/11 attacks had little long-term effects on U.S. and "are not likely to influence the current and future U.S. FDI stocks" (p. 530). Terrorist attacks on U.S. interests have a small, but significant, effect only on the OECD countries and no significant effects on non-OECD countries. US investors were less likely to invest in the OECD countries where they were subject to terrorist violence with casualties. However, they also note that the impacts were small—lowering the stock of U.S. FDI in these countries by only 1 percent for their entire sample period (p. 531).⁸ Although the direct impact of

⁶ Büsse and Hefeker (2007), Bussmann (2010), and Skaperdas (2011) examine the overall economic costs of international conflict and war risk, including terrorist attacks rather than focusing exclusively on the effects of terrorism on FDI in host economies.

⁷ Studying the effect of terrorism on economic growth in African countries between 1970 and 2007, Gaibulloev and Sandler (2011) find that terrorism has a significant but moderate negative impact on economic growth in developing countries in Africa. They, thus, argue that developing economies "have been more resilient to terrorism than has been generally thought" (p. 1).

⁸ However, they note that smaller OECD countries, such as Greece and Turkey, experienced larger FDI losses – 5.7 percent and 6.5 percent respectively.

terrorism is beyond the scope of this paper, we split the sample into two periods—before and after the 9/11 attacks – to investigate how this high casualty event affects how much political risk plays a role as a determinant of FDI.

In this paper, we use the political risk scores measured by the ICRG. This political risk score is advantageous in three regards: First, it gauges a broad and relevant range of political and economic environments of host countries. Second, it “covers a large sample of countries for a long time-period” (Harms, 2002, p. 378). Third, it is “directly relevant for foreign equity investors” to the extent that MNCs use this measure (Harms, 2002, p. 378). The ICRG measure provides a broad range of political and economic conditions that shape the overall risks and costs of doing business in host countries. Its measure is not limited to one aspect of doing business in host countries, but it is more comprehensive, dealing with twelve aspects of business risks, encompassing political, financial, and economic risks, such as government stability, internal and external conflict, democratic accountability, corruption, and military involvement in politics in addition to socioeconomic conditions and investment profile.⁹ This also allows researchers to disaggregate the source of political risk, yielding “useful policy implications” by pointing to a political risk factor that shapes investors’ decisions (Kolstad & Villanger, 2008). Our analysis encompasses 116 countries (22 industrialized countries and 94 developing countries) during the period of 1984 and 2008. In addition, the ICRG measure is commercially available to and used by foreign investors (Kolstad & Villanger, 2008), and, thus, “clearly relevant for the effects of institutions and government regulations” to the extent it is used by these investors (Büsse & Groizard, 2008, p. 864).¹⁰ We believe that this 12-category political risk index is a more complete and direct measure of political risks involving foreign investment. Thus, we use the ICRG scores to dissect and investigate how different political risk aspects have differential effects on the international investment choices of multinational corporations.

Empirical Evidence: Nonparametric Analyses on FDI and Political Risks

1. FDI and Political Risks: Analyses on Descriptive Data

Most literature tends to focus on studying the effects of political risk on FDI in developing and emerging markets. It is largely because first, industrialized countries are deemed to be politically stable and immune to radical political changes and violence, and, second, political risks should affect the investment decisions of MNCs *more* when they consider investing in developing nations with high political risk and low credibility (Janeba, 2002; Jensen, 2003b, 2008). As Figure 1. FDI and Political Risk shows, there is a stronger relationship between political stability (i.e., low risk) and the amount of FDI flowing into emerging, developing nations than into

⁹ See Appendix A for the brief description of these 12 categories of political risks.

¹⁰ Büsse and Groizard (2008) criticize that the ICRG measure is based on “perceived” level of political risk rather than “factual information” (Büsse and Groizard, 2008).

industrialized countries. This concurs with the conventional wisdom that political risk should have greater effects on the MNCs that make investments in developing nations.

<<Figure 1 about here>>

We find the political atmosphere in the world has changed since the 9/11 attacks. Increasing terrorist activities in industrialized countries, such as the 9/11 attacks in the U.S. and the 7/7 London bombing, show the emergence of highly volatile political circumstances over recent years. To take another example, recent bombings in Russia, which is considered an emerging economy, show that both developing and industrialized countries are touched by political instability and violence. Our preliminary analysis on FDI and political risks show that, as Diamonte et al. (1996) foresaw, there is “a convergence in political risks” (p. 71). This convergence is caused by deterioration in political circumstances in developed nations. (Diamonte, et al., 1996) argued that such convergence occurs thanks to improvement in developing nations and also due to a decrease in political stability in industrialized countries. However, while we see that industrialized countries have become more dangerous politically since 2001, political situations in developing nations have remained more or less the same, following a drop in 2001 and a very slow recovery trend afterwards.

Overall, aggregate political risks for industrialized countries show a slight downward trend since 2001 and a slight upward trend for developing countries. As Figure 2 FDI and Political Risks in Industrialized and Developing Countries shows, it is worth noticing that in developing nations political environments have improved significantly and steadily (i.e., showing higher scores of political risks) over time. Higher Political Risk scores indicate low political risks: its score ranges between zero (i.e., very high risks) and 100 (i.e., very low risk) points. Countries scoring between 80 and 100 points are considered ‘very low risk,’ but nations with scores between zero and 49.9 are categorized as ‘very high risk’ (PRS). Particularly in the 1990s, we observe significant progress towards more stable and sound political environments in both developing and industrialized countries. In developing countries, this improvement in political risks occurred at a faster pace. In industrialized countries, in the beginning of the mid-1980s up to the early 1990s, the data shows a stable downward trend followed by a plateau. Starting from the mid-1990s, industrialized countries start to show improvement in political risk but experienced a visible drop in the late 1990s. Between 1999 and 2001, industrialized countries seem to recover from this fall in political risk scores and show improvement. However, since 2001 we see a clear descending trend in political risk scores in industrialized nations (i.e., lower scores indicating higher political risk). Immediately following 2001, political risks in industrialized countries show a very slight decrease, but they have not yet been able to recover from this downward trend.

<<Figure 2 about here>>

Coinciding with significant improvement in political risk, the FDI inward flow to developing countries also increased in the 1990s. The trade-off between low-costs but low-credibility versus high-cost but high-credibility markets has become less severe to MNCs, as low-cost but low-credibility markets have improved politically, thus improving their credibility. However, since the 1990s, at the aggregate level, the political risk of developing nations seems fairly stable over the past three decades.

FDI into industrialized countries appear to have more severe fluctuation than to developing nations. It is clear that FDI into developed nations plummeted significantly after 2001. This drop was probably caused by the 9/11 attacks in the U.S. It is possible that this decline failed to recover after 9/11, largely because of a decrease in FDI in the U.S. following major terrorist attacks and a significant redistribution of domestic resources during the US war efforts in the Middle East. Developing markets experienced such declines in FDI following 2001, but the drop was not as abrupt or grave as in industrialized countries. FDI in developing nations had recovered at a faster pace than in industrialized countries. It appears that FDI in industrialized countries in proportion to GDP experienced more ups-and-downs than in developing countries. This worrying trend also appears in their political stability: overall, there is a downward trend since 2001, while overall scores for developing nations show a slight upward trend and then a plateau.

At the aggregate level, comparing the FDI with political risk scores, as shown in Table 2, we cannot find an obvious association between them. In this study, we investigate how political risks affect FDI in industrialized and developing countries differently. We also compare whether and how the 12 different components of political risk affect the inflow of FDI in both industrialized and developing countries.¹¹

2. The Gravity Model: the Baseline Model

Although there is a plethora of empirical studies in FDI literature, there is a lack of good theoretical models that we can depend upon to set up our empirical function for FDI (See Blonigen, 2005, for a literature survey). The most commonly used empirical model is borrowed from international trade literature: the Gravity Model¹² built by Anderson and van Wincoop (2003). In trade theory, the Gravity Model assumes that “the volume of trade between any two countries is positively related to their size and negatively related to distance between them” (See also, Enders et al., 2006; p. 523). It has become “the standard in the empirical economics literature for analyzing bilateral trading relationships among nations because it is readily applied to a world of multinational firms in a multiproduct world” (Enders et

¹¹ For further information on the 12 components of the Political Risk Index compiled by the Political Risk Services, see Appendix A.

¹² See for example the following papers applying the Gravity model in studying FDI, Carr, Markusen, and Maskus (2003) and Blonigen and Davies (2004).

al., 2006; p. 523). Due to the similarity of international trade flow (goods flow) and FDI flow (capital flow) and the readily applicable nature of the Gravity Model, the gravity model has been borrowed and commonly used in the empirical FDI literature to investigate the international flow of FDI (Enders et al., 2006; Slaughter, 2003). Thus, we use the Gravity Model to construct our baseline model.

$$FDI_{i,t} = \alpha + \mu_i + \beta * MKT_{i,t-1} + \gamma * OPN_{i,t-1} + \lambda * RISK_{i,t} + \xi_{i,t} \quad (1)$$

Where $FDI_{i,t}$ is the FDI per capita in log value; we use per capita data to facilitate the data comparability across different countries. $MKT_{i,t-1}$ is a vector containing three market factors that affect the FDI behavior: GDP to represent the market size of a host country, $RGDPpc$, real GDP per capita, to represent the level of market development, and $GDPG$, GDP growth rate, to represent the market potential. All three market factors are expected to have positive effects on the FDI inflow of a host country. $OPN_{i,t}$ is the trade openness of a host country; since trade and FDI are highly correlated, we expect that the openness of the economy will have a positive effect on FDI inflows. All three market factors and the trade openness variable are lagged one period to deal with the endogeneity problem. $RISK_{i,t}$ is the variable to measure the overall political risk of a host country. A higher value for the $RISK_{i,t}$ variable means a lower level of political risk. We hypothesize that FDI tends to flow into a host country with lower political risk. Thus, we expect that the coefficient of $RISK_{i,t}$, λ , is estimated to be positive. The detailed variable definitions and the data sources are presented in Appendix B.

The data set is composed of cross-sectional (22 industrialized countries and 94 developing countries) and cross-time (1984 – 2008) panel data. A fixed effect¹³ panel regression is utilized. However, this method suffers a $AR(1)$ serial correlation problem in its error term, causing the results to be biased. We, therefore, use the Feasible Generalized Least Square ($FGLS$) to correct the bias problem. Following Prais and Winsten (1954), we correct the panel specific serial correlation and the $FGLS$ regression results are reported in Table 1.

<<Table 1 about here>>

To facilitate the results interpretation, we fit the model to the entire sample, the industrialized countries, and the developing countries. Furthermore, we split the industrialized countries into two samples – before and after the 9/11 terrorist attacks in 2001- to study the impact of the 9/11 attacks on the FDI behavior in industrialized countries. The results are reported in column All, IDC-1, IDC-2, and DEV of Table 1, respectively. In general, the results are consistent with the conventional wisdom. In column “All”, all three market factors are positive and significant, indicating the FDI flowing to both industrialized countries and

¹³ Hausman test rejects the random effect regression.

developing countries are motivated by the market-seeking behavior. The trade openness is found to promote the FDI inflows, confirming that a country with more trade attracts more FDI. We also find that FDI tends to flow to the countries where political risk is lower, a result that is in line with the conventional wisdom.

Recall that in Figure 2 our non-parametrical analysis suggests that FDI is less responsive to the political risk in industrialized countries than in developing countries. Our regression results in column IDC-1, IDC-2, and DEV echoes this result. As we can see, while both coefficients of political risk variables in industrialized countries before and after the 9/11 attacks are insignificant, the political risk factor is estimated to have a significant impact to the FDI flows into developing nations. Furthermore, the value of the coefficient to *Risk* variable (0.043) in the developing countries sample is much larger than that in the industrialized economies sample (averagely about 0.014), suggesting that FDI in developing nations is more responsive to the political risk than FDI in industrialized economies. In addition, when we look at the industrialized economies only, the effect of political risk on the FDI flow is different before and after the 9/11 attacks. Although both estimates are insignificant, the magnitude of the effect after the 9/11 attacks, 0.023 as reported in column IDC-2, is much higher than it was before the 9/11 attacks (0.005 in column IDC-1). This finding may indicate that the 9/11 attacks alter MNCs' perception of the political risk in industrialized countries and changes FDI behavior after the 9/11 attacks accordingly. We will study this change in the next section by dissecting the political risk variable into its 12 risk components.

There are a few more observations from Table 1: Before the 9/11 attacks, the market size was the major force for industrialized countries to attract more FDI, while industrialized economies with higher real purchasing power and high economic growth potential drew more FDI after the 9/11 attacks. We find the following: First, FDI tends to go to developing nations with larger market size, higher purchase power, and higher economic growth; Second, trade openness is always a significant and positive factor that attracts FDI both in developing and industrialized countries, before and after the 9/11 attacks; and, third, natural resource endowment, measured by *Raw*, in developing countries does not have any significant effect on the flow of FDI, according to our estimate. This is notable, since natural resource endowment is commonly considered as an important factor in determining FDI inflows into developing countries, especially in African and oil-producing nations (Asiedu, 2006; Büthe & Milner, 2008; Enders, et al., 2006; Fung, et al., 2009). However, this finding is consistent with the findings of Asiedu (2006): FDI inflow is not solely determined by exogenous factors, i.e., natural resources and large markets, but small countries without these location advantages can still attract FDI by improving their institutions and policy environment (Asiedu, 2006, p. 76).

3. Dissecting the Political Risks: An Extension of the Gravity Model

In the previous section, we find that political risk is a significant factor that affects FDI in developing countries. It would be interesting, however, if we can delve into the role and effects of political risks further by identifying which aspects of political

risks really affect FDI in developing nations. For instance, it may be democracy that mainly determines the behavior of FDI in developing countries (Jensen, 2003, 2008), rather than other aspects of political risk, such as ethnic tensions and internal and external conflicts. Moreover, as we discussed in the previous section, we speculate that the perception of MNCs on the impact of political risks might have been altered after the 9/11 attacks in industrialized countries. It also would be fruitful to discern whether and how the effects of certain political risks have significantly changed since 2001. This finding may motivate those industrialized countries that receive less FDI to improve their political environments, hence, to attract more FDI.¹⁴

To uncover the detailed effect of each political risk component, we dissect the political risk index into the 12 risk components. We follow the ICRG method to dissect the political risk index and that method is presented in Appendix A for reference.¹⁵ We, therefore, treat these 12 political risk components as 12 independent variables to replace the “Risk” variable in Equation (1) and replicate the FGLS regression. The estimate results are reported in Table 2.

<<Table 2 about here>>

In expecting that political risk affects FDI in industrialized and developing nations differently, we skip the interpretation in column “All”, where we report the results for all countries samples and directly compare the differences between industrialized and developing countries.

As showed in column “IDC-1”, “IDC-2”, and “DEV” of Table 2, we find that three market factors, *GDP*, *RGDPpc*, and *GDPG*, and the trade openness of a host market have the same expected results, namely positive effects on FDI, as we estimated in Table 1. Comparing across the results from the industrialized and developing countries samples, there are similarities in that FDI in both industrialized and developing countries responds to certain components of political risk. For instance, our estimates suggest that a host economy with good democratic accountability and a good investment profile can attract significantly more FDI inflows in both industrialized and developing countries.¹⁶ It appears that one unit of improvement of democratic accountability and investment profile in industrialized economies has a higher impact on FDI inflows than in developing countries (0.605 versus 0.177 and 0.666 versus 0.12, as displayed in column “IDC-2” and “DEV” in

¹⁴ For example, some low FDI recipient countries, such as Greece, New Zealand, and Portugal, only receive averagely about 0.6% of total FDI flow into industrialized countries.

¹⁵ Examining the effects of political risk in service sector FDI, Kolstad and Villanger (2008) argue that “a major drawback of composite indices is that they contain too many elements to provide useful policy implications” (Kolstad and Villanger, 2008; p. 522). Thus, they disaggregated the ICRG measure into four categories. We concur with Kolstad and Villanger (2008) that the disaggregated measure of political risk is better suited to provide more useful policy directions (See also Büsse & Hefeker, 2007).

¹⁶ The same results are also obtained by Jensen (2003, 2008).

Table 2). Our finding on democratic accountability is consistent with the previous research: democratic accountability is positively associated with FDI (Büsse & Hefeker, 2005; Büsse & Hefeker, 2007; Jensen, 2003a, 2008; Kolstad & Villanger, 2008).¹⁷ A higher degree of constraint on the executive body in democratic countries helps attract more FDI, since it discourages arbitrary FDI related policies (Jensen, 2008). Democratic accountability also helps reduce economic volatility (Klomp & de Haan, 2009), thus providing a more stable business environment for foreign investors.

Although there are some similar results, the differences in the effects of political risks on FDI are quite salient. Ethnic tensions (*ETHC*) and military in politics (*MLTY*) significantly impact FDI in industrialized countries, but they do not have significant effects on FDI in developing nations. Less military in politics is found to attract FDI in industrialized countries. Some may question this finding by pointing out the US and the UK, two major countries that account for about 45% of total FDI inflow to industrialized economies, are also the two biggest military spenders in the world. Admittedly, the US and the UK are the two biggest FDI recipients and military spenders; however, the *MLTY* variable measures not only military spending, but more importantly, it accounts for the dominance of military involvement in politics, which, in the case of the US and the UK, is not large. Indeed, if we compare the US and the UK with other industrialized nations, the scores in military in politics index (*MLTY*) have only a tiny difference (5.75 versus 5.67). While the result for military in politics is in line with the conventional wisdom, the ethnic tensions result is quite interesting. We find that an industrialized country with higher ethnic tension attracts more FDI. A probable cause may be that the US and the UK, where there are more ethnic problems than in other industrialized nations, while, at the same time, these two nations receive a majority of FDI to industrialized countries.

On the other hand, certain political risks affect FDI in developing countries, but not in industrialized economies. For example, better political environments, such as a high amount of government stability (*GORN*), better law and order (*Law*), and less religious tensions (*RLGN*), help developing countries bring in more FDI. This may be because government, law and order, and religious harmony are the three most significant factors that affect the overall stability, including political and economic stability, of a developing country. This in turn ultimately affects foreign investors' decisions to invest in FDI. Whereas in industrialized nations, drastic government changes and religious tensions are rare; even if there is a government change, the transition is usually smooth and peaceful. Besides more intuitive findings on *GORN*, *Law*, and *RLGN*, we find some counterintuitive results in our estimate. While we expect the same sign for bureaucracy quality (*BUQ*), corruption (*CRPT*), and socioeconomic conditions (*SOCL*), which is not surprising as all these

¹⁷ Büthe & Milner (2008) find neither significant relationship between democratic regimes on an increase in FDI nor any effects of freedom scores on FDI inflows in developing countries when participation in GATT or WTO is included in their empirical models.

three indexes are highly correlated with each other; we find a negative sign. In other words, a better condition in *BUQ*, *CRPT*, and *SOCL* deters FDI in developing nations. This is quite interesting and worthy of further investigation. Intuitively, a better condition in *BUQ*, *CRPT*, and *SOCL* welcomes FDI inflows as suggested by, for example, Gastanaga et al (1998), Kaufman et al (1999), and Wei (2000). However, some MNCs that seek low entry barriers and to avoid competition from other foreign investors, may turn to some developing countries where bureaucracy quality is low and, thus, corruption is high. In such countries, FDI may get in easily by bribery and face less competition from other MNCs, since few other MNCs tends to go to such corrupt countries. Indeed, according to Fung et al (2009), China's FDI tends to go to destinations with poor labor quality where the bureaucracy quality is bad and the corruption level is high.

Besides the different effects of political risks on the inflow of FDI in industrialized and developing countries, another finding is noteworthy. As we discussed in section 1, the MNCs in industrialized countries have experienced an abrupt change after the 9/11 attacks in 2001. We wonder whether the 9/11 attacks fundamentally changed how MNCs make international investment decisions, namely becoming more perceptive and cautious about the political risks in industrialized countries. Our conjecture is that the 9/11 attacks, one of the worst terrorist attacks in history, may not only amend world politics, but also alter investors' perception of political risks in a subtle way. To test our speculation that FDI behavior differed before and after the 9/11 attacks, we split our industrialized countries data sample into two samples, covering the period before and after the 9/11 attacks, and run an empirical regression. We locate the report of results before and after the 9/11 attacks in column "IDC-1" and "IDC-2", respectively. Before interpreting our results, we have to clarify that, in the current study, we are not trying to find out why and how the 9/11 attacks changed the FDI behaviors. Rather, we simply study what has changed after the 9/11 attacks in terms of how political risks affect FDI in industrialized countries. When interpreting the data, we temporary ignore the control variables, such as *GDP*, *OPN*, and so on, as they have an expected result, and solely focus on the political risk.

Before the 9/11 attacks, among the 12 political risks, only external conflicts (*XTNC*) is estimated to be significant. This is what we expected using the conventional wisdom that political risks rarely matter for FDI in industrialized countries, since industrialized countries are deemed to be politically stable and immune to radical political changes and violence (Janeba, 2002; Jensen, 2003, 2008). The only significant risks (*XTNC*) marked by a negative coefficient are again accounted for by two major FDI recipients, the US and the UK, which have been involved in multiple foreign conflicts. Even with wars involved, FDI still flows to the US and the UK; aside from that, they are fundamentally sound for FDI. However, after the 9/11 attacks, the situation has a significant change. According to our results in column "IDC-2", four out of the 12 political risks are significant and the external conflict is dwarfed by these four risks and becomes insignificant. Among these four significant risks, democratic accountability (*DEMO*), investment profile

(*INVM*), and military in politics (*MLTY*) garner an expected positive sign, while ethnic tensions (*ETHC*) gets a negative sign. To avoid the risk of repetition, we refer readers to the fifth paragraph of this section for the interpretation of results.

This shows that the 9/11 attacks had a lasting effect on FDI in an indirect manner. Although Enders et al. (2006) find that the 9/11 attacks had little enduring effects on FDI, especially among the OECD countries, our study shows that since the 9/11 attacks, political risk has become a more significant determinant of a host market's ability to maintain FDI stock in developed countries. Most interestingly, since the 9/11 attacks in developed markets, certain political risk factors become significant factors for determining FDI stocks, although they were not before the 9/11 attacks: Since the 9/11 attacks, democratic accountability (*DEMO*), investment profile (*INVM*), and military in politics (*MLTY*) have significant positive effects on FDI, while ethnic tensions (*ETHC*) has a significant negative effect on FDI stocks. This shows that the 9/11 attacks may not have direct and lasting effects on FDI, but some political risk components have become significant determinants of FDI stocks afterwards, especially in developed countries. Thus, the 9/11 attacks may have had an unexpected, long-term consequence in that they highlighted the importance of political risk in determining foreign investors' decisions to continue FDI in a host market in developed markets. Thus, the 9/11 attacks may not have a direct, long-term negative effect on FDI flows and stocks, but they might have changed the way FDI is distributed in developed markets.

In summary, by studying the 12 individual components of the political risk, we find that FDI responds to the different political risks in different ways in industrialized and developing countries. The 9/11 attacks have changed the behavior of FDI in industrialized countries with regards to political risks. There is, interestingly, only one political risk, internal conflicts (*INTC*), that seems to not matter at all for FDI in both industrialized and developing countries.

4. A Partial Stock Adjustment Model

In the previous section, we applied the Gravity model to investigate the relation between FDI and political risks. However, as Blonigen (2005) points out, the Gravity model in FDI has no theoretical model background. Therefore, we need to be cautious about our results before we find an alternative method that can confirm the robustness of our results. To serve this purpose, in this section, we adopt a partial stock adjustment model of FDI from Chow (1967) to help us do the empirical investigation again¹⁸. According to Chow (1967), the stock of FDI (notated as $Y_{i,t}$) adjusts itself to an optimal level (denoted as Y_{it}^*). The rate of adjustment of the FDI stock is proportional to the existing FDI stock, and the flow of FDI serves to adjust $Y_{i,t}$ toward Y_{it}^* . We, hence, can express the model in the following form:

¹⁸ See, for example, Cheng and Kwan (2000), who apply Chow (1967)'s partial adjustment model to study China's provincial FDI inflows.

$$y_{i,t} = (1-\alpha)y_{i,t-1} + \alpha y_{i,t}^* \quad (2)$$

Where $y_{i,t} = \ln Y_{i,t}$; for a stable adjustment process $(1-\alpha)$ must be between 0 and 1. Theoretically, the optimal level of FDI stock is the level where FDI achieves the maximized profit. Hence, this optimal FDI stock is determined by the factors that affect the profit of FDI. In the current study, we include three market factors (e.g., *GDP*, *RGDPpc*, and *GDPG*), trade openness, and 12 political risk components as those factors.

Therefore, we follow the partial stock adjustment model to setup a dynamic panel data regression model:

$$\begin{aligned} SFDI_{i,t} = & \alpha + \mu_i + \theta * SFDI_{i,t-1} + \beta * MKT_{i,t} \\ & + \gamma * OPN_{i,t} + \lambda * RISK_{i,t} + \xi_{i,t} \end{aligned} \quad (3)$$

Where $SFDI_{i,t}$ is the stock of FDI in a country, and $SFDI_{i,t-1}$ is the previous stock of FDI. All other variables are the same as in equation (1).

The partial stock adjustment model provides us an alternative way to check the robustness of our results. However, technically, we cannot simply use either the fixed effect or random effect panel data to run regression, because including a lagged dependent variable, $SFDI_{i,t-1}$, as an independent variable causes at least three issues that may generate misleading results: (1) in a dynamic panel regression, the choice between a fixed effect or a random effect formulation has different implications for the estimation process than that associated with a static model. Readers are referred to Anderson and Hsiao (1981, 1982) for details; (2) the issue of reverse causality causes endogeneity problems. Notably, the FDI usually causes a higher GDP as FDI brings more capital, technologies, and management know-how; and, (3) the issue of serial correlation in the error term of a panel regression can seriously bias the results.

To deal with all three problems, we utilize the system Generalized Method of Moments (GMM) proposed by Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998). We call it “the system GMM” thereafter for brevity. The system GMM is designed for a linear functional relation where (1) the dependent variable is dynamic and depending on its own past realization; (2) independent variables may be not strictly exogenous – either correlated with error terms or having a reverse causality; and, (3) heteroskedasticity and autocorrelation within individual panels but not across them. Hence, the system GMM could be an appropriate method to analyze our data set. However, the system GMM is better suited for a panel data with small T (cross-time dimension), but large N (cross-country dimension). To accommodate this feature, we have to reshape our data as our data set may have a relatively large cross-time dimension (25-year

observations) relative to its cross-country dimension (116 country samples). We thus modify our data by using a three-year moving average window to reduce the cross-time dimension of our data. In other words, we pick three consecutive years and use the average value of these three years as one observation. Starting from 1984 and ending at 2008, we have 8 cross-time units after the moving average data transformation. Therefore in this section, we use a panel data with 8 X 116 dimensions to do empirical analysis on FDI.

Although the system GMM provides us many advantageous ways to deal with problems that we encounter in running regression, it is complicated to implement and can easily generate an invalid estimate. To cope with the complexity, one needs to handle the following steps correctly: (1) obtaining proper instruments and the overall validity of the moment conditions; and (2) ascertaining whether there is any serial correlation in the error term of the level equation of the system GMM. We employ the Hansen Test (Hansen, 1982) to check the overall validity of the selected moment conditions and use the Arellano and Bond (1991) Test to check for a possible serial correlation problem in the level equation.

The system GMM regression results from equation (3) are presented in Table 3. In column “All”, we report the results of the sample of all countries. The column “IDC” contains the results for industrial countries. We do not split the industrial countries before and after the 9/11 attacks as we do not necessarily have enough observations to run the regression if we split¹⁹; we report the results of the developing countries sample at column “DEV”. The coefficients of lagged dependent variable are highly significant, and the value is relatively stable in all three columns, reflecting a significant partial stock adjustment mechanism, namely a self-adjustment effect of the past level of FDI stock to its current level.

In column “All”, all estimates are in line with intuition. Two market variables, GDP and RGDPpc have the expected positive signs: trade openness promotes FDI inflows. Also, three political risk components, namely, investment profile, law and order, and religion, are estimated to be positive and significant. This indicates host economies with lower risks in investment profile, law and order, and religion attract more FDI inflows. The Hansen Test has a Chi-square statistic value of 96.78, which suggests that the Hansen test does not reject the null hypothesis of no misspecification of the moment conditions. Moreover, significant results of the Arellano and Bond (1991) AR(1) test and insignificant results of the AR(2) test show no statistical evidence to reject our valid moment conditions due to serial correlation in the level equation of the system GMM procedure. Overall, the results are largely consistent with the results in column “All” of Table 2, except that the estimate of corruption, democratic accountability, government stability, and

¹⁹ We did, however, try to add 911-attack variable in the regression. But, the estimate of 911-attack is not significant. The reason might be that the moving average method smoothes out the 911-attack effect. We thus did not report the 911-attack results. Nonetheless, we use 911-attack as an instrument variable in the system GMM regression.

socioeconomic conditions are not significant any more. We, therefore, have some evidence that our result from the previous section is relatively robust.

<<Table 3 about here>>

For industrialized countries, interestingly, all three market factors have a negative, albeit insignificant, coefficient. The trade openness and investment profiles are at the expected positive sign and significant; the ethnic tension is negative. All these results are in accordance with the results in column “IDC-2” of Table 2. In addition, the government stability risk is estimated to have the same negative sign as it does in column “IDC-2” of Table 2; but it is significant in Table 3. This indicates that FDI tends to flow to an industrial country where the government is less stable.

With regard to the developing countries, the results are mostly within expectation and quite comparable to the results in column “DEV” of Table 2. There are a few differences, however. For instance, the estimates of GDP growth rate, bureaucracy quality, democratic accountability, and government stability are not significant in the system GMM regression. In both the industrial countries sample and the developing countries sample, the statistics of the Hansen test and the Arellano and Bond (1991) AR(1) and AR(2) test suggest the proper specification of the system GMM model. Overall, our results from the system GMM procedure are mostly in line with the results from the Gravity model setting, with a few exceptions. This suggests that our findings are robust in different model specifications.

Conclusion

We find that political risks are important considerations for foreign investors even in industrialized markets when we control for other economic factors: first, Political risk is a significant determinant of the flow of FDI in both industrialized and developing nations; second, not all political risk components affect the inflow of FDI in the same fashion in industrialized and developing countries in a similar manner; and, third, Since the 9/11 attacks, political risks have become more significant determinants of FDI especially in industrialized nations.

Our estimates suggest that a host economy with good democratic accountability (*DEMO*) and a good investment profile (*INVT*) can attract significantly more FDI in both industrialized and developing countries. On one hand, other political risk components, such as ethnic tensions (*ETHC*) and military in politics (*MLTY*), significantly impact FDI in industrialized countries, but they do not have significant effects on FDI in developing nations. On the other hand, in developing nations, markets with better law and order (*Law*), low religious tension (*RLGN*), and more stable government (*GORN*) tend to attract more FDI. This may be because government stability, law and order, and religious harmony are the three most significant factors that affect the overall stability, including political and economic stability, of a developing country.

FDI in industrialized countries has experienced an abrupt change after the 9/11 attacks in 2001. Before the 9/11 attacks, among the 12 components of political risks, only external conflicts (*XTNC*) is estimated to be significant. However, after the 9/11 attacks, this changes significantly. Among these four significant risks, democratic accountability (*DEMO*), investment profile (*INVM*), and military in politics (*MLTY*) have significant positive effects on FDI, while ethnic tensions (*ETHC*) demonstrates a negative effect on FDI in more developed and industrialized countries. Our study shows that since the 9/11 attacks, political risk has become a significant determinant of a host market's ability to maintain FDI stock in developed countries. Most interestingly, since the 9/11 attacks in developed markets, certain political risk factors become significant in determining FDI stocks, although they were not before the 9/11 attacks: Since the 9/11 attacks, democratic accountability (*DEMO*), investment profile (*INVM*), and military in politics (*MLTY*) have significant positive effects on FDI, while ethnic tensions (*ETHC*) has a significant negative effect on FDI stocks. This shows that the 9/11 attacks may have had an unexpected, long-term consequence in that they highlighted the importance of political risk in determining foreign investors' decisions to continue FDI in a host market in developed markets. Thus, the 9/11 attacks may not have a direct, long-term negative effect on FDI flows and stocks, but they might have changed the way political risk shapes foreign investors' location decisions.

In summary, by studying the 12 individual components of the political risk, we find that FDI responds to the different political risks in different ways in industrialized and developing countries. The 9/11 attacks have changed the behavior of FDI in industrialized countries with regard to political risks. There is, interestingly, only one political risk, internal conflicts (*INTC*), that does not appear to matter at all for FDI in both industrialized and developing countries.

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Figure 2 FDI and Political Risks in Industrialized and Developing Countries

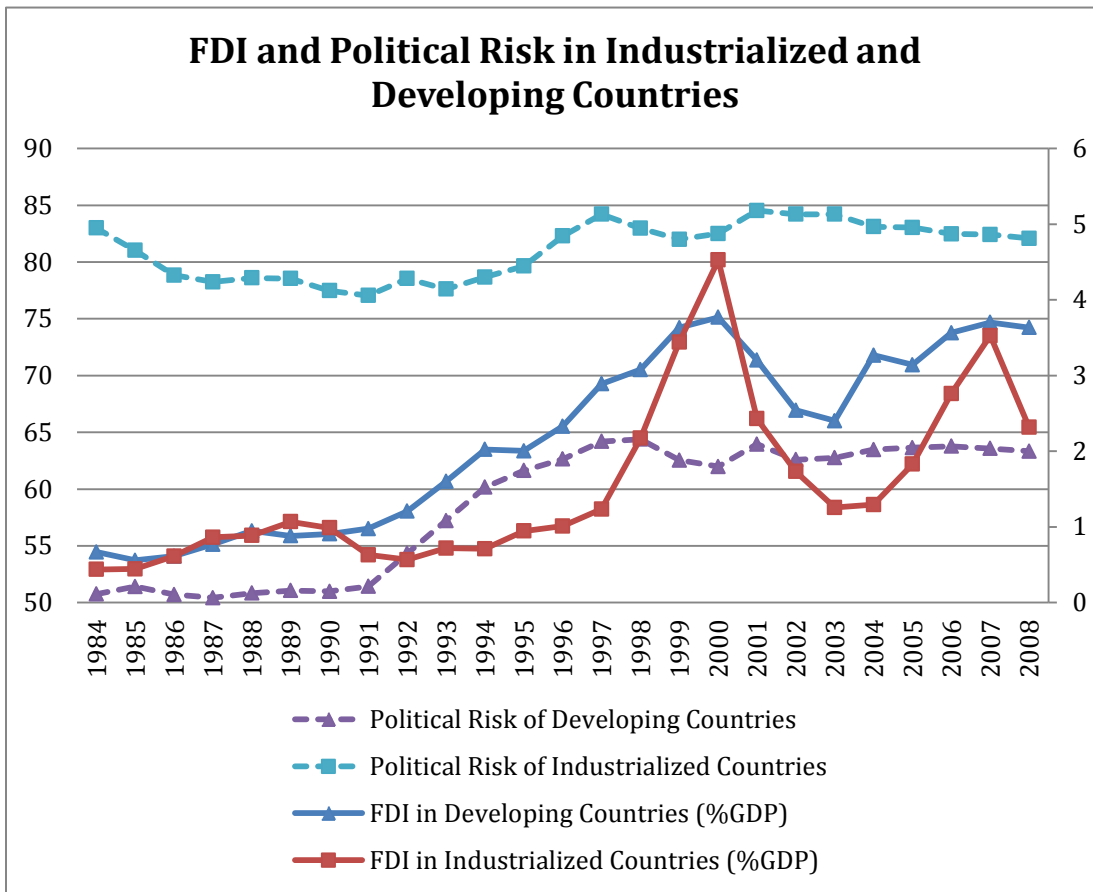


Table 1: The results of the Basic Gravity Model

	All	IDC-1	IDC-2	DEV
GDP	0.114***	0.246**	0.034	0.139***
	(0.04)	(0.11)	(0.12)	(0.05)
RGDPG	0.010**	-0.004	0.177***	0.011*
	(0.01)	(0.02)	(0.07)	(0.01)
RGDPpc	0.731***	0.438	0.755*	0.791***
	(0.06)	(0.43)	(0.42)	(0.07)
Risk	0.037***	0.005	0.023	0.043***
	(0.01)	(0.02)	(0.03)	(0.01)
OPN	0.016***	0.027***	0.018***	0.016***
	(0.00)	(0.01)	(0.00)	(0.00)
Raw				-0.001
				(0.00)
Constant	-8.574***	-7.701*	-5.553	-9.857***
	(0.75)	(4.07)	(4.76)	(1.05)
Adj.R ²	0.30	0.09	0.48	0.29
Durbin-Watson	1.95	1.91	1.62	1.84
Obs.	2366	344	135	1432

Note: The table reports the results of estimating equation (1). The column labeled “All” gives results based on data from both developing and developed countries. The “IDC-1” and “IDC-2” columns, respectively, give results based on data from industrialized countries before and after the 9/11 attacks. The column labeled “DEV” gives results based on data from developing and countries. See the text for detail. Robust standard errors are in the parentheses. “***,” “**,” and “*” denote significance at the 1%, 5% and 10% levels, respectively.

Table 2: the Results of the Gravity model with 12 Political Risk Components

	All	IDC-1	IDC-2	DEV
GDP	0.065*	0.202*	-0.191	0.121***
	(0.04)	(0.11)	(0.13)	(0.05)
RGDPG	0.010*	-0.001	0.258***	0.012*
	(0.01)	(0.03)	(0.06)	(0.01)
RGDPpc	0.848***	0.103	1.687***	0.883***
	(0.06)	(0.46)	(0.44)	(0.07)
OPN	0.016***	0.028***	0.014***	0.016***
	(0.00)	(0.01)	(0.00)	(0.00)
BUQ	-0.028	0.130	-0.489	-0.137*
	(0.07)	(0.32)	(0.37)	(0.08)
CRPT	-0.165***	-0.079	0.072	-0.092*
	(0.04)	(0.13)	(0.18)	(0.06)
DEMO	0.162***	-0.053	0.605**	0.177***
	(0.04)	(0.16)	(0.28)	(0.04)
ETHC	0.002	-0.074	-0.278**	0.018
	(0.04)	(0.12)	(0.11)	(0.05)
XTNC	0.005	-0.149*	-0.101	0.008
	(0.02)	(0.08)	(0.11)	(0.03)
GORN	0.043**	0.061	-0.039	0.042*
	(0.02)	(0.05)	(0.08)	(0.02)
INTC	0.013	-0.117	-0.159	0.000
	(0.03)	(0.08)	(0.16)	(0.03)
INVM	0.142***	-0.078	0.666**	0.120***
	(0.02)	(0.05)	(0.28)	(0.03)
Law	0.205***	0.280	0.001	0.250***
	(0.05)	(0.17)	(0.24)	(0.06)
MLTY	-0.063	0.111	0.488**	-0.006
	(0.04)	(0.20)	(0.24)	(0.05)
RLGN	0.122***	0.216	0.053	0.144***
	(0.04)	(0.19)	(0.16)	(0.05)
SOCL	-0.079***	0.098	-0.097	-0.084***
	(0.03)	(0.07)	(0.12)	(0.03)
Raw				0.001
				(0.00)
Adj.R ²	0.38	0.10	0.46	0.36
Durbin-Watson	1.92	1.87	1.40	1.79
Obs.	2366	344	135	1432

Note: The table reports the results of estimating equation (1). The column labeled “All” gives results based on data from both developing and developed countries. The “IDC-1” and “IDC-2” columns, respectively, give results based on data from industrialized countries

before and after the 9/11 attacks. The column labeled “DEV” gives results based on data from developing and countries. See the text for detail. Robust standard errors are in the parentheses. “***,” “**,” and “*” denote significance at the 1%, 5% and 10% levels, respectively. The result of Constant is omitted for brevity.

Table 3: the Results of the System GMM Model

	All	IDC	DEV
SFDI(-1)	0.685***	0.709***	0.632***
	(0.06)	(0.09)	(0.05)
GDP	0.105*	-0.012	0.132***
	(0.06)	(0.06)	(0.05)
RGDPG	0.004	-0.020	-0.003
	(0.01)	(0.04)	(0.01)
RGDPpc	0.177**	-0.400	0.312***
	(0.08)	(0.64)	(0.08)
OPN	0.009***	0.007*	0.006***
	(0.00)	(0.00)	(0.00)
BUQ	-0.081	-0.214	-0.054
	(0.06)	(0.33)	(0.05)
CRPT	-0.003	0.024	-0.107*
	(0.03)	(0.05)	(0.06)
DEMO	0.019	0.071	0.009
	(0.03)	(0.08)	(0.03)
ETHC	0.001	-0.086*	-0.021
	(0.03)	(0.05)	(0.03)
XTNC	-0.019	-0.095	-0.015
	(0.02)	(0.06)	(0.02)
GORN	-0.019	-0.030*	-0.025
	(0.02)	(0.02)	(0.02)
INTC	0.003	0.025	0.021
	(0.02)	(0.06)	(0.02)
INVM	0.085***	0.095**	0.072***
	(0.02)	(0.05)	(0.03)
Law	0.112***	0.237	0.128***
	(0.04)	(0.23)	(0.04)
MLTY	-0.031	0.028	-0.032
	(0.02)	(0.10)	(0.03)
RLGN	0.056***	-0.042	0.080***
	(0.02)	(0.08)	(0.02)
SOCL	-0.025	0.003	-0.054**
	(0.03)	(0.05)	(0.03)
Hansen Test†	96.78	2.57	86.28
AR(1) Test‡	-2.64	-2.21	-2.40
AR(2) Test	-1.29	-0.58	-1.02
Obs.	731	146	585

Note: the table reports the results of Equation (3) with the Dynamic Panel System GMM

regression. The column labeled "All" gives results based on data from both developing and developed countries. The "IDC-1" and "IDC-2" columns, respectively, give results based on data from industrialized countries before and after the 9/11 attacks. The column labeled "DEV" gives results based on data from developing and countries. See the text for detail. Robust standard errors are in the parentheses. "***," "**," and "*" denote significance at the 1%, 5% and 10% levels, respectively. The result of Constant is omitted for brevity.
† It reports the Chi-square statistics. ‡ It reports the Z statistics.