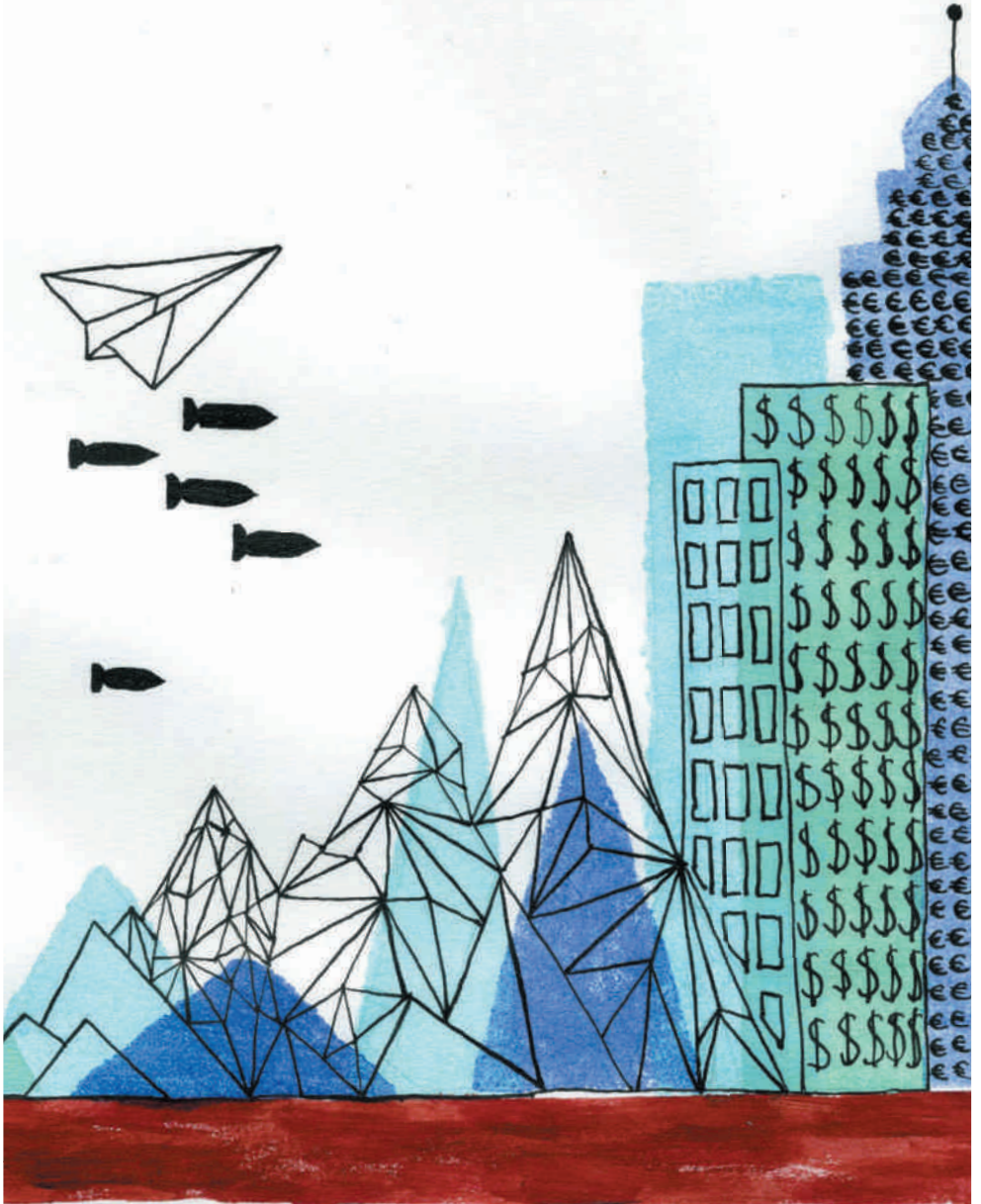


CAROLINE WITTE

Bloody Business:

Multinational investment in an increasingly conflict-afflicted world



**Bloody Business:
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conflict-afflicted world**

**Bloody Business:
Multinational investment in an increasingly
conflict-afflicted world**

Bloederige zaken:
Buitenlandse investeringen in een wereld
getroffen door conflict.

Thesis

to obtain the degree of Doctor from the
Erasmus University Rotterdam
by command of the
rector magnificus

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and in accordance with the decision of the Doctorate Board.

The public defence shall be held on
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In December 2012 I celebrated the completion of a research seminar and the start of the Christmas holidays together with my fellow students in the campus bar the Smitse. While time passed and several beers were enjoyed, I got talking to Martijn Burger, the course coordinator of the research seminar. It turned out we had some things in common: a bachelor obtained from a university college, an interest in the role of multinationals in economic development and a fondness of Winnie the Pooh. A few months later I received an email from Martijn with a PhD proposal that build on this casual conversation. Although I had not given any serious thought to doing a PhD before, I was immediately enthusiastic. The project had my name all over it: an interdisciplinary study about private sector development in fragile economies in partnership with the World Bank. And the rest, as they say, is history.

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with articles and books to read, a head full of new ideas that needed to be explored and a big smile on my face.

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One of the highlights of my PhD trajectory was my research visit to the University of Oxford in the winter of 2017. Prof. Beata Javorcik, thank you so much for hosting me. Your research and career advice has been most helpful. Viviana, I will never forget how welcome you made me feel. I wish you all the luck in your new job at the World Bank and I am sure we will see each other again soon. Lynn, you made my time in the U.K. truly memorable. Your coffee machine, our glasses of wine, the shopping expeditions, Byron burgers, the rainy trip to Bath and most importantly, all our wonderful conversations made my time in the U.K. fantastic. BTW, did I tell you that Copenhagen is a wonderful place to

live? And that it is unlikely that the Danes are going to exit the E.U. any time soon? O, and that it is a great place to do a PhD?

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Pap, do you remember taking me to the open day at the Erasmus University when I was 17 years old? And me saying that I would never ever go study there? Well, I guess I was wrong and you were right; it is a pretty cool place in the end.

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Caroline Witte
Copenhagen, November 2017

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Chapter 1

Introduction

This dissertation evaluates the causes of political conflict and its consequences for investments by multinational enterprises (MNEs). The studies that are part of this thesis aim to better understand the relationships between political conflict, investment and ultimately human prosperity. These three concepts are interdisciplinary in nature and the different chapters included in this thesis reflect this. By combining conceptual frameworks and methodologies from economics and business research, they shed light on the increasing levels of political conflict and the reaction of firms to this development. The papers in this dissertation are inspired by the movement within business research to address ‘Grand Challenges’, which is reflected not only in the interdisciplinary approach, but also in the phenomena-driven perspective (Buckley, Doh & Benischke, 2017). Section 1.1 of this introductory chapter sketches the problem of an ‘increasingly conflict-afflicted world’ and the phenomenon of widespread multinational activity in conflict-afflicted regions. Section 1.2 elaborates on the motivation behind this research project. Section 1.3 provides an outline of this dissertation. This section includes a graphical representation of the concepts studied (Figure 1.3) and an overview of the different chapters (Table 1.2). Finally, to ensure that my co-authors in this dissertation get credit for their work, their contributions are discussed in Section 1.4.

1.1 THE CONTEXT

1.1.1 An increasingly conflict-afflicted world

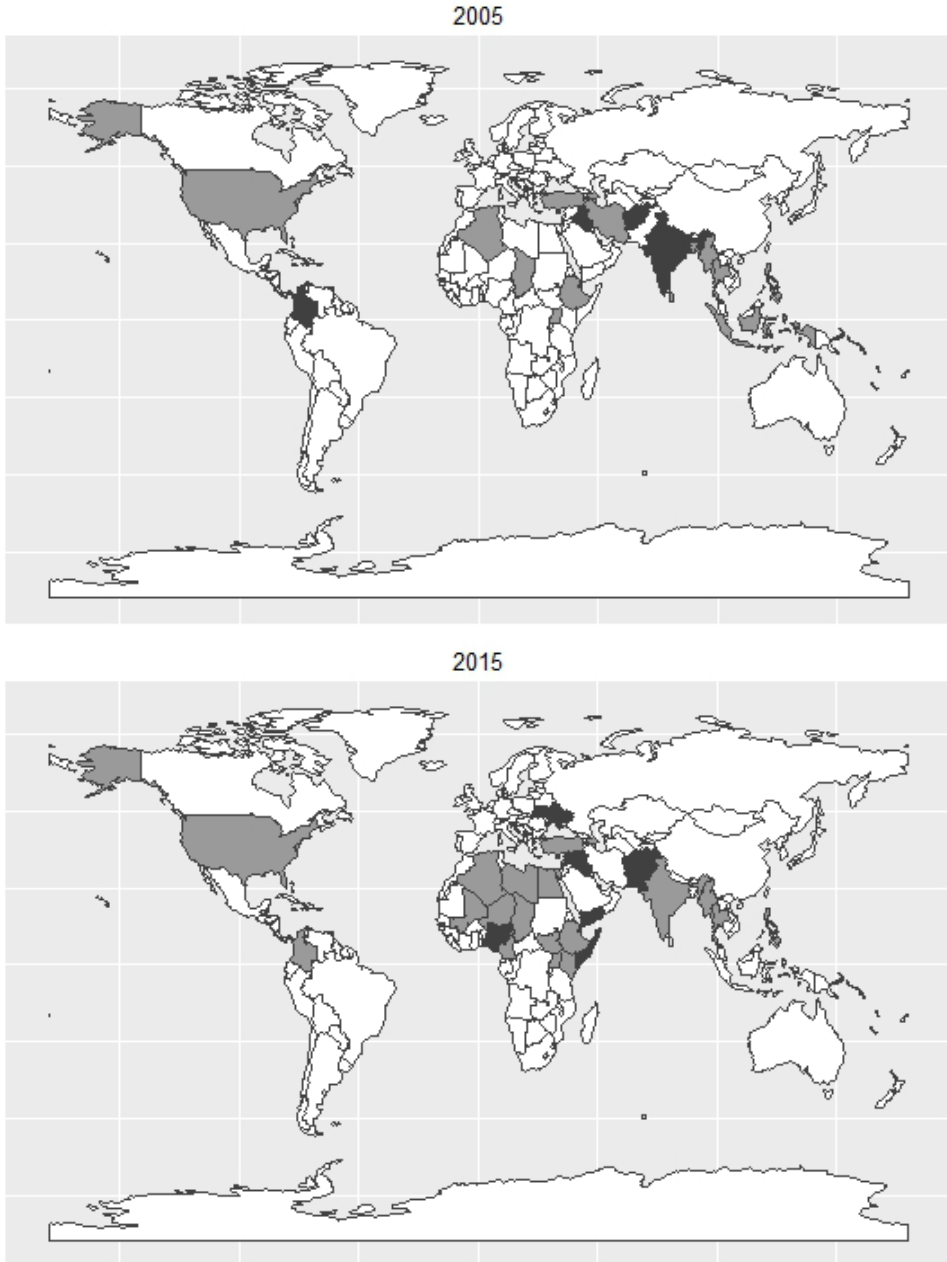
On December 17, 2010 at noon Mohammed Bouazizi set himself – and indirectly Tunisia, Libya, Egypt, Yemen and Syria – on fire. It is unlikely that he could have predicted the consequences of his final act of despair. Yet, it became the last straw that broke the camel's back and eventually led to the ousting of four dictators and the outbreak of several large scale armed conflicts. In the first months of the Arab Spring, there was hope of democracy and social justice. However, at the start of my PhD trajectory, in summer 2013, the Arab Spring had turned in an Arab Winter; there was a full-scale civil war in Syria which had left nearly 100.000 death and in Egypt General Abdel Fattah el-Sisi had just removed Mohammed Morsi from power and suspended the constitution (Black, 2013; Kingsley & Chuloy, 2013). In the years that followed and in which I fully developed the articles in this dissertation, human rights remained under attack across the Arab region and the conflicts in Syria, Yemen and Libya merely escalated (Amnesty International, 2016). This also had a major consequences for the rest of the world, as the conflicts lead to the largest refugee crises of the 21st century and created fears of terrorist attacks across the globe.

Since the end of the Cold War there had been a discernible downward trend in the number and intensity of armed conflicts, defined 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 in one calendar year” (Pettersson & Wallensteen, 2015, p. 1)¹. The global decline in conflict brought about optimism that wars are waning (e.g. Goldstein, 2011). However, in recent years the number and severity of conflicts has increased again (See Figure 1.1). In 2015 UCDP recorded a total of 50 armed conflicts relative to 32 in 2005; an increase of 56.3% within a decade (Gleditsch, Wallensteen, Eriksson, Sollenberg, & Strand, 2002). The conflicts that resulted from the Arab Spring can to a large extent account for this increase, but political violence has also escalated in Iraq, Afghanistan, Nigeria, and Ukraine. Unfortunately, due to the consequences of climate change we can expect to see an even further increase in the number of armed conflicts in the future (Harrari & La Ferrara, 2012; Hendrix & Salehyan, 2012; Hsiang, Meng & Cane, 2011).

The current wave of armed conflict is different from those that plagued previous eras. Few of these conflicts are interstate, i.e. fought between two state actors. Instead the majority of present-day armed conflicts are intrastate, although often international actors are involved such as the U.S. interference in Syria, Afghanistan and Iraq. Despite the fact that almost all armed conflicts are located in middle and low income countries, several of these conflicts have also lead to a renewed fear of terrorist attacks, refugee crises or nuclear attacks in

¹ The terms armed conflict and violent (political conflict) are used interchangeable throughout this PhD dissertation.

Figure 1.1 Armed conflict in 2005 and 2015 (UCDP PRIO, 2017).

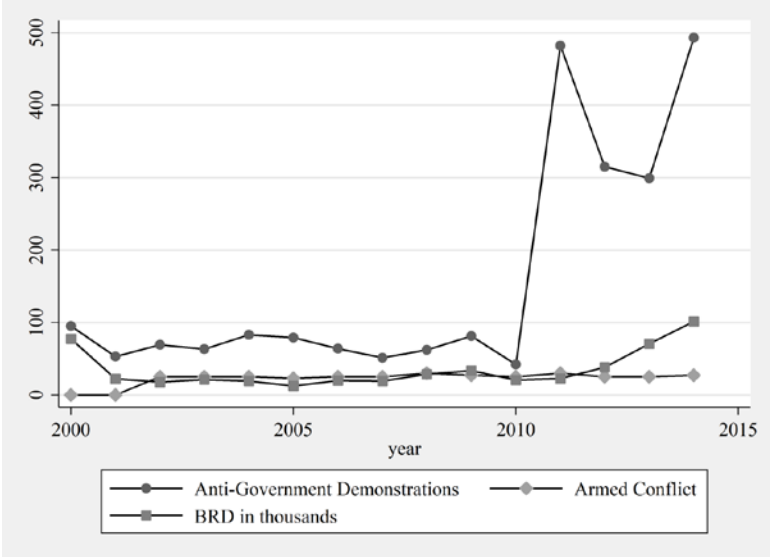


Conflicts with more than 25 battle-related deaths (BRD) and less than 1,000 (BRD) in one calendar year are colored light grey, whereas wars defined as armed conflicts that caused at least 1,000 BRD are colored dark grey

high income economies. In addition, there is preliminary evidence that the origins of the current conflicts are different and that existing models of civil war are unable to fully explain their causes (Duffield, 2014). For example, both the Arab Spring and the Ukrainian uprising can hardly be explained with traditional models of civil war which focus merely on GDP growth and ethnic fractionalization (Arampatzi et al., 2017; Kurkov, 2014). This begs for renewed attention to both the causes and the consequences of these conflicts.

Also non-violent political conflict remains an important factor in today’s world. Non-violent political conflict refers to civil resistance campaigns against the political regime which are typically coordinated and organized by activists, public figures or civilians (Chenoweth & Ulfelder, 2017). Non-violent conflict is different from armed conflict to the extent that non-violent conflict per definition excludes actions that have a violent nature, but they are similar to the extent that in both conflicts the government or state is involved. In addition, not unlike armed conflict, non-violent conflicts are a major source of political instability, regularly leading to the replacement of a regime and a transition to democracy (Chenoweth & Stephan, 2011). When non-violent resistance fails, opposition groups often use this as a justification to escalate to civil war (Regan & Norton, 2005). To a large extent the early Arab Spring protests could be classified as non-violent conflict, leading to successful democratization in Tunisia but also major violent conflicts in Syria, Libya and Yemen. In Figure 1.2 we depict the change in demonstrations and strikes, two prominent non-violent conflict events, over the 2004 to 2014 period. There is a large increase from 2011 onwards, which is partly due to the Arab Spring.

Figure 1.2 The number of demonstrations relative to the frequency of armed conflict over 2000-2015.



1.1.2 Multinational investment in conflict zones

A firm becomes an multinational (MNE) – a firm present in more than one country - by undertaking Foreign Direct Investment (FDI) (Barba Navaretti & Venables, 2004). FDI is a flow of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. Compared to short-term credits and portfolio investments, FDI signals a long-lasting commitment. As a result, there is less of a risk of divestment if economic conditions deteriorate or investors' perception of a country's prospects change, reducing the risk of sudden capital flight. In addition, FDI is associated with several positive effects on the host economy, including transfer of technology and managerial know-how, formation of capital, creation of employment and better access to international markets (Jensen, Biglaiser & Li, 2012). It is therefore not surprising that many developing countries try to attract FDI. According to the World Bank (2017), developing countries received on average FDI inflows amounting to 2.4% of their GDP, while FDI inflows to developed nations equaled only 3.1% of GDP in 2015.

Trade economists and international business scholars (IB) have extensively analysed how political risk² - most notably risks related to expropriation and corruption - can explain variation in the distribution of FDI flows. They have reached a general consensus that political risk negatively affects these flows, although the effect is clearly heterogeneous across firms and depends among other things on the sector in which they are active and the firm's experience (e.g. Brouthers, Gao & McNicol, 2008; Brunetti & Weder, 1998; Burger et al., 2015; Busse & Hefeker, 2007; Cuervo-Cazurra, 2006; Feinberg & Gupta, 2009; Garcia-Canal & Guillén, 2008; Habib & Zurawicki, 2002; Henisz, 2000; Holburn & Zelner, 2010; Meon & Sekkat, 2012; Schneider & Frey, 1985).

Political conflict is considerably less well understood. Political conflict, and armed conflict in particular, differs from political risk, because it leads to a direct destruction of physical and human capital and is less predictable. Yet, on the conceptual level there is a general consensus that also political conflict can be expected to increase the cost of doing business and accordingly reduce FDI flows, because setting up a subsidiary in a conflict country is associated with a high risk of bombardment of assets, disruptions in the supply chain, extreme volatility in currency value, disorder in the market system and violence against employees (Dai et al., 2013; Li & Vashchilko, 2010).

Nevertheless, for a number of firms political violence might actually signal an investment opportunity. Guidolin and La Ferrara (2007) propose three reasons why some firms might profit from conflict. First, violent conflict can reduce the transparency required from firms.

² In this thesis political risk is defined as the risk that a government unexpectedly changes 'the rules of the game' to which firms ought to adhere (Butler & Joaquin, 1998).

As such, firms might profit from unofficial activities, such as tax evasion. Guidolin and La Ferrara show that during the Angolan war (1975-2002) private investors were able to profit from unofficial business, since necessary institutional reforms were not implemented until as a result of the government's 'state of emergency'. Second, in times of conflict entry of new firms is limited, as companies that are less able to function in a risky environment are less likely to invest. Consequently, competition is less fierce, which can raise profits. Hence, companies that have a competitive advantage in operating in conflict countries can benefit considerably from war. Third, political violence can pressure governments to obtain revenues to finance military expeditions, security arrangements and rebuilding efforts. As a result, bargaining power might shift in the favor of foreign investors. Especially investors with the right connections might be able to secure very low corporate tax rates or obtain operating licenses for nominal fees.

In line with these arguments, there is plenty of anecdotal evidence that not all MNEs are deterred by conflict (Driffield, Crotty & Jones, 2012). For example, Eni SpA announced major investments in Egypt's oil and gas industry during the Arab Spring (fDi Markets, 2013). Likewise, a British company invested in petroleum facility in Syria after the outbreak of the civil war, while Chinese, Indian and Arab investors have major stakes in South Sudan's oil fields. Not only MNEs active in the natural resource industry invest in countries marred by conflict, also manufacturing and services firms locate in such countries. For example, General Motors and Coca Cola announced expansions of their production facilities in Egypt during the midst of the Arab Spring and companies such as Volvo, Deloitte and the Citigroup invested in Iraq during the previous few years.

These anecdotes are representative for a larger set of investments. In terms of value more than 13% of all greenfield FDI flowing to developing countries in the period from 2003-2012 went to countries experiencing a political conflict with at least 25 battle-related deaths per year, and nearly 5% went to countries experiencing a war (fDi Markets, 2013). According to the World Bank (2017), FDI flows make up 3.9% of GDP of conflict-afflicted economies over this time period. The study of FDI is particularly insightful, because it signals that the investing firm expects a new subsidiary in a conflict country to be profitable. Although conflict causes uncertainty and increases security costs, sustained FDI flows indicate that multinationals can flourish in this environment, possibly gaining a sustainable competitive advantage and obtaining great profits.

1.2 MOTIVATION

Although scholars in the fields of political science, economics and management have paid considerable attention to the relationship between political conflict and FDI, the empirical results remain mixed (Table 1.1). One explanation for these mixed results is that there is considerable heterogeneity in how MNEs are affected by political conflict. Accordingly, the sample selection criteria could have a large impact on the findings. For example, if

MNEs in the manufacturing industry were to be more deterred by armed conflict than MNEs in the resource sector, I would find a particularly strong negative effect of conflict on FDI if I were to only include manufacturing investments. Or if only wars, i.e. armed conflicts that cause over 1,000 deaths, affect FDI, the results found depend to a large extent on whether I measure wars or armed conflict in general.

In the International Business (IB) literature there have been some first explorations of the heterogeneous responses of MNEs to political conflict. These studies examine why some firms are more likely to invest in conflict areas than others. Driffield et al. (2012) find evidence that MNEs firms with more concentrated ownership and firms from home countries with relatively weak institutions are most likely to own a subsidiary in a conflict zone. Dai et al. (2013) analyse how political conflict affects exit decisions of Japanese MNEs and demonstrate that, contrary to expectations, geographically clustering with peers reduces firm survival in conflict zones. Using the same data, Dai et al. (2017) also find that subsidiaries' exposure to political conflict increases exit rates, particularly for those subsidiaries that are most central in the firm's network. Oh and Oetzel (2017) focus on the role of experience and show that only country-specific experience about how the government deals with insurgents reduces a subsidiary's sensitivity to armed conflict.

Nevertheless, there is much unknown about what drives MNEs to conflict areas. The challenges posed by the increase in violent conflict require a greater understanding of how firms react to periods of unrest. Such an understanding is needed to improve regulations and possibly create public-private partnerships. The Sustainable Development Goals (SDGs) adopted by the UN General Assembly (2015) explicitly recognize the importance of peace and the role of partnerships in two separate goals: Peace, justice and strong institutions (SDG16) and partnerships for the goals (SDG17). The introduction of the SDGs has been followed by calls for more research on these topics (Kolk, Kourula & Pisani, 2017; Witte & Dilyard, 2017). Kolk et al. (2017) note: "*[The lack of IB research on peace] is all the more remarkable as 'business for peace' and 'peace through commerce' (terms often used interchangeably) have given risen to a multidisciplinary body of work. This is thus another area that deserves further research attention.*" Hence, whilst it impossible to open a newspaper without being faced with the terrible consequences of armed conflict *and* whilst there is ample anecdotal evidence that despite conflict commerce goes on, little is still known about multinational investment in this increasingly conflict-afflicted world.

Table 1.1 Articles on the relationship between FDI and political conflict published in Economics (ECON), Political Science (PolSc) and Management (MANA) journals.

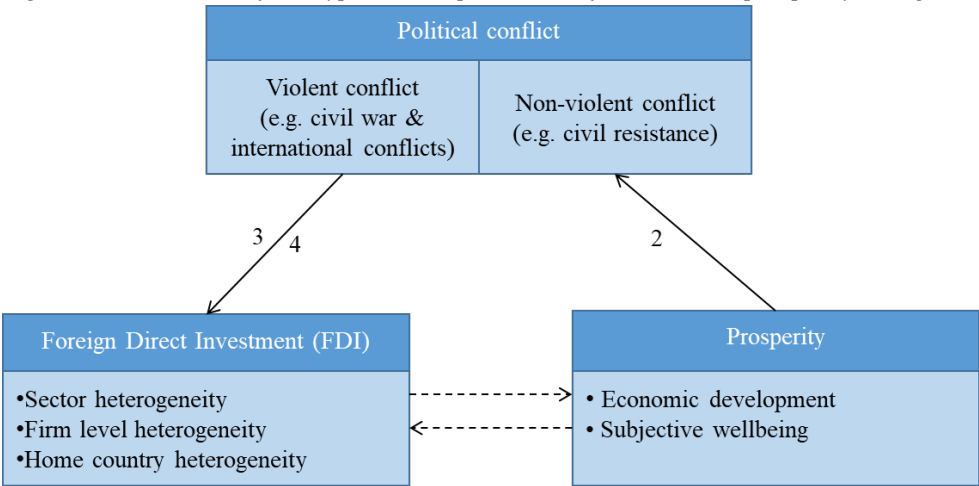
Author	Field	Sample	Measure of political violence	+/-
Asiedu & Lien (2011)	ECON	Developing countries	ICRG Internal and external conflict	+
Biglaiser & DeRouen (2006)	PolSc	Latin-America	Marshall's "Societal Effects of Warfare" Data	+
Biglaiser & DeRouen (2007)	PolSc	126 developing countries	Marshall's "Societal Effects of Warfare" Data	0
Brunetti & Weder (1998)	ECON	60 countries	Political executions & war casualties (CNTS)	-
			Assassinations, strikes, riots, armed attacks, violent social change & terrorism (CNTS)	0
Busse & Hefeker (2007)	ECON	83 developing countries	Internal conflict (ICRG)	-
			External conflict (ICRG)	0
Dai, Eden & Beamish (2013)	MANA	Japanese FDI in 25 conflict-afflicted host countries	Armed conflict (UCDP PRIO)	-
Dai, Eden & Beamish (2017)	MANA	Japanese FDI in 25 conflict-afflicted host countries	Armed conflict (UCDP PRIO)	-
Li (2006)	MANA	129 countries	Unanticipated interstate war	-
			Civil wars and terrorist incidents	0
Li & Vashchilko (2010)	MANA	29 OECD and 29 non-OECD	Military interstate disputes	0
Oh & Oetzel (2017)	MANA	FDI from 379 MNCs to 117 host countries	Violent conflict (UCDP PRIO)	-

1.3 THESIS OUTLINE

1.3.1 Political conflict, FDI and prosperity

In my dissertation I address the relationships between political conflict, FDI and prosperity. The triangle in Figure 1.3 schematically shows the three concepts and their interrelationships. Political conflict (Figure 1.3, top box) has two components. Whereas violent conflict, most notably civil war and to a lesser extent international conflicts, might be the most salient types of political conflict, in my dissertation I also pay attention to civil resistance, the non-violent counterpart of armed conflict. In terms of FDI (Figure 1.3, bottom left), I move beyond whether FDI flows are on the whole affected by political conflict and will focus on different sources of heterogeneity that affect how FDI flows react to political conflict. These sources of heterogeneity include sector, firm and home country characteristics. The final concept in the triangle is prosperity (Figure 1.3, bottom right), which focuses on healthy societies and thriving citizens. Prosperity could hence be regarded as the ultimate life goal. Whereas prosperity is often seen as a synonym for economic development, I am particularly concerned with the relationship with subjective wellbeing (i.e. citizen’s happiness).

Figure 1.3 Illustration of the hypothesized political conflict, FDI and prosperity triangle.



The solid lines represent the relations studied in this dissertation, while the dashed lines correspond to relations established in the literature. The numbers indicate the chapters of this dissertation in which the relationship is discussed.

The relationships between the concepts in Figure 1.3 are depicted by arrows. The two solid arrows are addressed in this dissertation, whereas the dashed arrows between FDI and prosperity depict a relationship that has received considerable scholarly attention before and is hence not analyzed in the following chapters. That is not to say, that there is

consensus on the relationship between these two concepts. As depicted in Figure 1.3, the relationship goes two ways with FDI - and particularly the market-seeking kind - being attracted to flourishing markets and FDI also been thought to benefit the domestic economy by creating knowledge spillovers for domestic firms (Borensztein, De Gregorio & Lee, 1998; Javorcik, 2004; Newman, Rand, Talbot & Tarp, 2015). This makes it troublesome to identify the direction of the relationship and hence, skepticism about the existence of these relationships remains. This is exemplified by the current anti-globalization movement (e.g. Brexit, Trump's election), that questions the benefits that multinationals bring to a host economy (Economist, 2017).

The three chapters in this dissertation address the relationships depicted by the two solid arrows in Figure 1.3. First, I analyze how changes in prosperity are related to non-violent conflict. The first task of my PhD project was to perform an extensive literature review on the political conflict literature. After all, to be able to explain how variations in conflict affects MNEs, it is necessary to understand how variation in conflict emerges (Angrist & Pischke, 2008; Reeb, Sakakibara & Mahmood, 2012). Although conflict scholars produced several insightful explanations of armed conflict (for an overview see Blattman & Miguel, 2010), I was puzzled by the inability of many of their models to explain the non-violent conflicts that are to a large extent to blame for the instability and armed conflict at the beginning of the 21st century. Chapter 2 is aimed at filling this gap in the literature, whilst also providing the background information for the other two chapters in my dissertation.

Chapter 3 and 4 look at the relationship between armed conflict and FDI, depicted by the left-hand side solid arrow in Figure 1.3. These chapters focus on why some firms are willing to invest in countries afflicted by armed conflict, whereas other would not even consider these locations. As such, these chapters shed light on what type of investment is attracted to conflict countries. In Chapter 3 I analyze variations in investment responses to political conflict on the basis of the type of conflict, characteristics of the sector and the MNE's ability to diversify the risk. Chapter 4 looks at how political conflict moderates the effect of home-host ties on investment decisions. Can MNEs from a home country that has a historical connection with a host country benefit from the uncertainty created by conflict?

Although this dissertation enhances theory on country risk in several ways, its main goal has not been to develop theory, but to improve our understanding of a phenomenon: the increase in political conflict in recent years and the large number of MNEs that choose to operate in challenging environments. As such, it takes a more solution-oriented approach, inspired by the literature on 'grand challenges' (Buckley, Doh & Benischke, 2017; Watts, 2017). Rather than developing theory for the sake of 'making a theoretical contribution'³, we enhance theory with the aim of answering two pressing questions:

³ For a discussion of management's devotion to theory see Hambrick (2007).

- (1) Can we explain and predict non-violent conflicts like those during the Arab Spring?
- (2) Why would multinationals be willing to invest in countries afflicted by conflict?

1.3.2 Economics and IB: A happy marriage?

The topic of this thesis is interdisciplinary; grand challenges like political conflict do not adhere to disciplinary boundaries (Buckley, Doh & Benischke, 2017). Political conflict is studied by political scientists, sociologists, psychologists, business scholars and economists, while FDI is studied by economists and business scholars. In line with Beugelsdijk et al.'s (2010) call for a more interdisciplinary approach to MNEs' location choice, this research project takes place on the interface between economics and business. This interdisciplinary approach was partly intended at the outset of this project, and has partly been due to a shift in my interests from development economics to IB. Whilst Chapter 2 is primarily written for an audience of (development) economists, Chapter 3 and 4 are targeted at the IB community. Chapter 2 provides recommendations to government agencies, whereas in Chapter 3 and 4 I also discuss implications for managers of multinationals.

Notwithstanding the praise given to interdisciplinary research in social science and IB in particular (e.g. Cheng, Henisz, Roth & Swaminathan, 2009; Buckley, Doh & Benischke, 2017; Watts, 2017), I have learned that doing interdisciplinary research is hard and getting it published is even harder. I felt an economist when at an IB conference and a management scholar at an economics conference. The two disciplines speak different languages and there were times that I felt neither was my native language. Over time, I started to identify more as an IB scholar and, fortunately, I got the one of the chapters in this dissertation published in an IB journal. Although most economics-inspired elements were replaced with their management counterparts during the review process, the methodology kept its economics flavor. In all three chapters the statistical tests and models (e.g. 2SLS, GMM models, LSDVC and mixed logit) are inspired by my background in economics. Even if real interdisciplinary research is difficult, a crossover in methods is feasible and valuable. In my fifth chapter I conclude my dissertation with some directions for future research. Here I also return to how economists and IB scholars can cooperate to work on topics related to 'grand challenges'.

1.3.3 Findings per chapter

Chapter 2: Unhappy Rebels: The Role of Subjective Wellbeing in Civil Uprisings

Motivated by the inability of existing models of grievances – which mainly rely on traditional socioeconomic indicators - to explain and predict the recent wave of political conflicts, we test whether wellbeing data can be used to better explain variation in these

events. We focus on non-violent civil conflict and construct a database combining data on non-violent uprisings and subjective wellbeing covering 118 countries over the period 2007 to 2014. Consistent with the grievance-based approach to rebellion, we find that a decrease in average subjective wellbeing – and particularly an increase in self-reported *suffering* – leads to an increase in non-violent uprisings, but not violent political conflict. We find evidence that this negative effect of overall wellbeing on non-violent uprisings is to a large extent the result of changes to satisfaction with living standards and the perceived capability to have a purposeful and meaningful life.

Chapter 3 Dodging Bullets: The Heterogeneous Effect of Political Violence on Greenfield FDI

The relationship between political violence and greenfield foreign direct investment is contingent on the *type of violence, the characteristics of the investment-receiving sector, and the international scope of the investing firm*. Analysis with a dynamic fixed effects model for a panel of 90 developing countries shows that nationwide political conflict is negatively associated with total and non-resource-related greenfield FDI, but not with resource-related greenfield FDI. The insensitivity of resource FDI to political conflict is explained by the high profitability of natural resource extraction and geographic constraints on location choice. In the non-resource sector, the least geographically diversified firms are most sensitive to conflict. Other types of political violence, including intermittent violence in the form of terrorist acts and assassinations, or persistent but low-impact events, such as political terror, have no effect on the location choice decisions of multinational enterprises. These findings inform the strategies of multinationals with a nuanced and much needed understanding of the effects of political violence and the risks it poses to their businesses.

Chapter 4 When political instability destroys historical ties

Although institutional and cultural distance evolve slowly, historical home-host ties can swiftly wear away as a result of political shocks. We investigate how shocks related to political instability, i.e. armed conflict and regime changes, affect the importance of historical ties for location choices of multinational enterprises (MNEs). We exploit firm-level variation in a unique dataset comprised of FDI flows to all low income countries in Sub-Saharan Africa from 2003 to 2013 and estimate a mixed logit model. The results show that violent conflict eliminates the positive effect of colonial relationships on the probability of MNE investment. This effect is confined to large conflicts where the probability of government takeover is largest. We also find that regime transitions erode the positive effect of colonial relationships on MNE location decisions. This implies that MNEs originating from a country with historical ties to the host country face incentives to prevent political shocks, whereas MNEs from countries without such home-host ties might actually benefit from threats to the status-quo.

1.4 INDIVIDUAL CONTRIBUTIONS

For all chapters in this dissertation, I am the leading author and have been responsible for most of the literature review, data collection, analyses and writing. I have done the work for the introduction (Chapter 1) and the conclusion and discussion (Chapter 5) independently, although I received valuable feedback from my promotor prof. Harry Commandeur.

The idea of Chapter 2 on unhappy rebels resulted from discussions with my co-authors on this paper, Dr. Elena Ianchovichina and Dr. Martijn Burger, while we were working on a World Bank policy brief on the Arab Spring in Washington DC. Hence, all three of us have contributed to the research idea and conceptual framework. I have been responsible for the writing, the data collection and analyses, although I have received some support from my supervisor Martijn Burger with the GMM estimations presented in this chapter. Martijn Burger, who is an expert in subjective wellbeing research, also assisted with the literature analyses and formulating the contribution of the paper. Elena Ianchovichina provided the data on non-violent uprisings, gave suggestions for sensitivity analyses and assisted in presenting and contextualizing our findings.

Of the chapters in this dissertation, Chapter 3 ‘Dodging bullets’ required most time and efforts. The co-authors on this paper, Dr. Martijn Burger, Dr. Elena Ianchovichina and Prof. Enrico Pennings, contributed during different stages of development of the paper. Martijn Burger was mainly involved in the first stages, including the formulation of the initial research idea, the formulation of the hypotheses and the first analyses. Elena Ianchovichina helped address concerns in the data analyses and contextualize our findings. She has also been a great help in the writing process, particularly in structuring and framing the study. Enrico Pennings, the only co-author that published in IB journals before, has been invaluable in terms of theory development and addressing the comments of referees. I am also grateful for the constructive comments by Journal of International Business editor, Mona Makhija, and three anonymous referees. Early versions of this paper were presented at the Center for the Study of African Economies (CSAE) Conference 2015 and the 2015 AIB Annual Meeting in Bangalore. I would also like to thank seminar participants at Ivey Business School, Copenhagen Business School, the University of Groningen and the Erasmus School of Economics for their useful suggestions.

For Chapter 4 on historical ties I came up with the research idea and conceptualized the study independently. I received useful feedback from my supervisors Martijn Burger and Enrico Pennings, particularly in terms of methodology and framing of the study. I am also grateful for the feedback received at the European Trade Study Group (2015) in Paris, the World Bank lunch seminar (2017) in Washington DC and the Annual Meeting of the Association of International Business (2017) in Dubai.

Table 1.2 Overview of the individual dissertation chapters.

Ch.	Title	Co-Authors	Research Question	Conclusion	Keywords	Status	Outlet
1	Introduction						
2	Unhappy rebels: The role of subjective wellbeing in civil uprisings	Martijn Burger & Elena Ianchovichina	Can a decrease in subjective wellbeing explain variation in non-violent uprisings going beyond what is captured by traditional monetary and financial indicators?	A decrease subjective wellbeing leads to an increase in non-violent uprisings.	Political conflict, Civil Resistance, Subjective Well-being, Happiness, Political Economy, Grievances	To be submitted	Oxford Economic Papers
3	Dodging Bullets: The Heterogeneous Effect of Political Violence on Greenfield FDI	Martijn Burger, Elena Ianchovichina, Enrico Pennings	How is the effect of political violence on greenfield FDI heterogeneous across sectors, types of violence and firms?	The relationship between political violence and greenfield FDI is contingent on the type of violence, the characteristics of the investment-receiving sector, and the international scope of the investing firm.	Political Violence, Foreign Direct Investment (FDI), Political Risk, Heterogeneity, Political Conflict, Economic Geography.	Published	Journal of International Business Studies
4	When political instability destroys historical ties	Martijn Burger & Enrico Pennings.	How does political instability, i.e. war and regime changes, affect the importance of historical ties for location choices of multinational enterprises (MNEs)?	Violent war and regime transitions eliminate the positive effect of colonial relationships on the probability of MNE investment.	Foreign Direct Investment, Home-Host Country Relationships, Business History, War & Political Violence, Africa.	Submitted	Journal of World Business
5	Conclusion & discussion						

Chapter 2

*Unhappy Rebels: The Role of Subjective Wellbeing in Civil Uprising**

Abstract

Motivated by the inability of existing models of grievances – that mainly rely on traditional socio-economic indicators - to explain and predict the recent wave of political conflicts, this study tests whether wellbeing data can be used to better explain variation in these events. It focuses on non-violent civil conflict to construct a database combining data on non-violent uprisings and subjective wellbeing covering 118 countries over the period 2007 to 2014. Consistent with the grievance-based approach to rebellion, this study found that a decrease in average subjective wellbeing – and particularly an increase in self-reported suffering – leads to an increase in non-violent uprisings, but not violent political conflict. We found evidence that this negative effect of overall wellbeing on non-violent uprisings is to a large extent the result of changes to satisfaction with living standards and the perceived capability to have a purposeful and meaningful life.

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2.1 INTRODUCTION

Although non-violent uprisings are relatively prevalent phenomena in both the developing- and developed world, there is limited knowledge about their systematic causes, making them difficult to predict. This is exemplified by the Arab Spring uprisings, which took most economists by surprise. In the years leading up to both the large scale protests in the Arab world, GDP was growing, poverty rates dropped and most countries in the Middle East were making strides to meet the Millennium Development Goals. However, despite these improvements, life satisfaction levels in many Arab Spring countries were declining; a phenomenon known as the ‘unhappy development paradox’ (Arampatzi et al., 2017).

Can a decrease in subjective wellbeing explain non-violent uprisings? Non-violent uprisings refer to civil resistance campaigns against the political regime that are typically coordinated and organized by activists, public figures or civilians (Chenoweth & Ulfelder, 2017). A decrease in subjective wellbeing is associated with feelings of grievance and injustice and if citizens’ hold the government responsible for their hardship, a widespread feeling of dissatisfaction could promote mass mobilization against this government.

Although the relationship between subjective wellbeing and political conflict (violent or non-violent) has not been extensively analyzed before, the idea that personal hardship increases the likelihood of uprisings is not new. Gurr (1970) argued that feelings of relative deprivation, defined as the gap between expectations and achievement, increase the likelihood of (violent) rebellion. Gurr’s theory of relative deprivation has inspired numerous empirical studies on the effect of grievances on the probability of violent conflict, distinguishing between two types of grievances: identity-based deprivations (e.g. Esteban & Ray, 2008; Garcia-Montalvo & Reynal-Querol, 2004) and economic deprivations (e.g. Ciccone, 2011; Miguel, Satyanath, & Sergenti, 2004). Early studies relied mostly on basic financial and demographic indicators to measure grievances, using proxies such as infant mortality and GDP growth for economic grievances and measures of ethnic and religious fractionalization for identity-based deprivations. Recent studies use more sophisticated objective measures, including between-ethnicity income inequality (Alesina, Michalopoulos & Papaionannou, 2016) and ethno-political discrimination (Buhaug, Cederman & Gleditsch, 2014). The results of these studies are mixed with some authors providing evidence for the effect of economic factors such as poverty rates on armed conflict (see Collier & Hoeffler, 2004 and Collier, Hoeffler & Rohner, 2009), while others arguing for the effect of identity-based grievances on armed conflict (Esteban & Ray, 2008; Fearon & Laitin, 2001; Garcia-Montalvo & Reynal-Querol, 2004; Hegre & Sambanis, 2006).

At the same time, very little is known about the relationship between grievances and civil resistance, the non-violent counterpart of armed political conflict. This is surprising, as non-violent uprisings can have major consequences, often leading to the replacement of a

regime and a transition to democracy (Chenoweth and Stephan 2011). When non-violent resistance fails, opposition groups often use this as a justification to escalate to civil war (Regan and Norton, 2005). It can also be expected that the relationship between grievances and conflict is stronger for non-violent uprisings than for its violent counterpart. The reason for this is that participation in acts of civil resistance does not require the resources to buy weaponry and is thus less risky in terms of government retaliation than armed conflict. As civil resistance is a less costly form of rebellion, success expectations are likely to play a smaller role than in the case of armed conflict (Klandermans, 1996). In addition, participation in civil resistance does not require the legitimization of the use of violence.

To our knowledge, Chenoweth and Ulfelder (2017) provide a first systematic examination on the extent to which grievances can explain non-violent uprisings. They find that a simple poverty measure (i.e. infant mortality) can explain a marginal amount of the variance in non-violent uprisings, whereas political discrimination and repression have no predictive power. Nevertheless, the authors argue that overall neither grievance-based explanations, nor other models of violent conflict provide reliable predictions of non-violent uprisings. Recognizing that modest performance of extant theories “may be partly a function of the limitations of available data” (p. 318), they conclude that there is little evidence that structural models are informative on the causes of popular uprisings.

This lack of conclusive findings might not be surprising, as Chenoweth and Ulfelder (2017) focus merely on objective indicators, including infant mortality, GDP growth and inflation, whereas it might be considered impossible to reasonably capture grievances among the population using such indicators. Grievances refer to a perception of deprivation or unfair treatment, resulting from a discrepancy between the goods and conditions of life to which people consider that they are rightfully entitled, and those they perceive they can obtain and maintain (Gurr, 1970). As grievances refer to perceptions rather than objective circumstances, they are inherently subjective. So-called ‘objective measures of grievances’, like GDP growth and poverty measures, are at best noisy proxies for these perceptions, as progress on objective measures does not necessarily translate to a decrease in perceived hardship (Diener & Biswas-Diener, 2002; Easterlin, 1976; Oswald, 1997). Measures of subjective wellbeing might be a more valid measure of grievances, as variation in subjective wellbeing has been directly related to the difference between actual achievement and expectations (Bell, 1985; Knight & Gunatilaka, 2010; Senik, 2008). Below we elaborate on three reasons why measures of subjective wellbeing could complement traditional objective indicators in models of civil uprisings.

First, progress on objective indicators tends to rise expectations and aspirations which in turn reduces subjective wellbeing. This phenomenon is known as the ‘tunnel effect’ and describes how unmet expectations can result in frustrations using the parable of a traffic

congestion in a tunnel (Hirschman, 1973). If one of the lanes starts moving while the other lanes are still jammed, the people that are stuck initially feel hope as the end of the traffic jam seems to be in sight. However, if their lane continues to be stuck, hope will give way to envy and frustration. In response, these drivers will – perhaps against the law – try to change lanes. The tunnel effect ties in with modernization theory (Inglehart & Welzel, 2005; Lipset, 1959), which posits that income growth leads to changes in values and fosters expectations of political and civil freedom. When these expectations are not met, this can lead to feelings of great disappointment and resentment, which can in turn mobilize citizens to demand changes within the political system (Gurr, 1971). In these cases, objective indicators reveal signs of optimism, whereas subjective indicators could indicate anti-government sentiments are on the rise. This mechanism is also exemplified by the Arab Spring, which was preceded by a period of unhappy development that led to large scale non-violent conflict, ultimately giving rise to large scale armed conflicts.

Second, although the measurement of subjective data comes with its own problems related to validity and reliability (Bertrand and Mullainathan, 2001), in the absence of perfectly measured objective information, subjective measures convey useful complementary information (Jahedi & Méndez, 2014). For example, measures of political terror, such as the political terror scale developed by Gibney, Corbett, Wood, Haschke, and Arnon (2016), reflect variation in actual violations of physical integrity rights rather than general oppression. Yet, the mere threat of political terror might suffice in limiting political opposition, so that actual acts of political terror are actually rare. Accordingly, subjective data on how individuals perceive political oppression might complement objective data on actual acts of political terror as to provide a more complete picture on general oppression.

Third, whilst objective indicators such as income and education merely indicate the conditions for a good life, measures of subjective wellbeing provide information on whether these conditions have also translated into a good life (Veenhoven, 2000). The effect of improvements in objective indicators on subjective wellbeing most likely varies across individuals, countries, and time (Deaton et al., 2009). Whilst for some individuals or groups in society a lack of civil liberties is a key source of grievances, others might put more weight on a poverty-related issues. Hence, given that grievances are broadly-defined and essentially value- and preference-based, subjective measures might be more relevant and valid than objective indicators for predicting political conflict.

To test this premise additional indicators of subjective wellbeing are added to a model of (non-violent) political conflict along with traditional variables that measure grievances and the ease of mass mobilization. Using subjective wellbeing data gathered by the Gallup World Poll, we construct a large database combining data on non-violent uprisings and subjective wellbeing covering 118 countries over the period 2007 to 2014. Consistent with the grievance-based approach to rebellion, we find that a decrease in subjective wellbeing

– and particularly an increase in self-reported suffering – positively affects non-violent uprisings, approximated by the number of demonstrations and strikes. A one percentage point increase in suffering increases non-violent conflict events with 2.1%. For comparison, this effect is similar to that of a percentage point decrease in GDP growth.

We address endogeneity concerns by instrumenting our subjective wellbeing measure with the ratio of deaths due to infectious diseases, complemented by a lag structure in a system GMM model. This study further analyzes how satisfaction with different life domains affects non-violent resistance, uncovering that a lack of life capabilities to lead a purposeful and meaningful life and a decrease in standards of living can to a large extent explain the channels through which subjective wellbeing affects non-violent uprisings. The results are robust to using a more inclusive measure of non-violent uprisings that also includes acts such as government boycotts, sit-ins and non-violent takeovers of buildings on condition that they are characterized by mass mobilization. Finally, we estimate the effect of subjective wellbeing on violent political conflict; the result supports the notion that the determinants of violent and non-violent conflict differ. Grievances themselves might not necessarily legitimize the use of violence as to bring about the removal of a regime, and hence, the extent to which a decrease in subjective wellbeing causes violent political conflict, is likely to depend on the institutional context.¹

This study contributes to the literature on subjective wellbeing and the political economy (e.g. Di Tella & MacCulloch, 2005; Flavin & Keane, 2012; Frey, 2012; Liberini, Redoano & Proto, 2017). Whereas early studies on subjective wellbeing merely focused on which factors contribute to an individual's happiness, several recent studies show that measures of subjective wellbeing are well suited to complement financial and social indicators as independent variable in research on human development (e.g. Helliwell, Layard & Sachs, 2017; Graham & Nikolova, 2015; Manki, 2004; Oswald & Wu, 2010). Along these lines, political economists have established how subjective wellbeing affects political outcomes, most notably election outcomes (Flavin & Keane, 2012; Liberini et al, 2017). This study expands this literature by showing how changes to subjective wellbeing lead to non-institutional dissent.

This study expands on the emerging literature on how subjective wellbeing explains variation in state outcomes that goes beyond what is captured by traditional monetary and financial indicators. Although economists have traditionally been reluctant to include data on subjective wellbeing in econometric analyses (e.g. Olken, 2009; Banerjee, Hanna & Mullainathan, 2012), recent studies provide growing evidence that these measures are

¹ The Arab Spring has demonstrated that the response of the government to acts of non-violent resistance might influence whether a decrease in subjective wellbeing constitutes ground for a violent conflict.

reasonable proxies for experienced utility and are associated with traditional measures of physical and psychological health (Blanchflower & Oswald, 2008; Diener & Chan, 2011; Steptoe & Wardle, 2005). Our findings suggest that both objective and subjective indicators influence non-violent uprising and both must be included as regressors in econometric models of civil resistance.

Moreover, we add to the literature on political conflict. To the best of our knowledge, we are the first to directly analyze the effect of subjective wellbeing indicators on uprisings. Our findings contrast previous work on civil conflict. Previous studies that rely on cross-sectional dataset and exploit variation in objective data, such as poverty and GDP growth rates, find little evidence for a grievance-based approach to non-violent uprisings nor for any other structural model (Chenoweth & Ulfelder, 2017). We find support for structural grievance-based explanations for non-violent uprisings, although not for armed political conflict. This is particularly important in light of recent political conflicts – most of which have started out with unanticipated acts of civil resistance. For example, the Arab Spring was initiated by acts of non-violent resistance, which could hardly be explained with objective data alone. Keeping track of subjective wellbeing is useful as changes in overall life satisfaction might not only help explain these uprisings, but also make them easier to anticipate. Hence, our results provide support for recent initiatives taken by governments and international organizations to integrate measures of wellbeing with standard economic measures to track progress and create informed policies.

In the next section, we explain the data used for this study and our methodology. Here we also provide some descriptive statistics on our measure of subjective wellbeing and how it correlates with objective indicators of grievances. Thereafter, the results are discussed. We also provide extensive robustness analyses, including a 2SLS and a system GMM model. The last section presents the conclusions and limitations of our research.

2.2 METHODOLOGY AND DATA

We analyze the relationship between subjective wellbeing and uprisings on the country-year level, estimating the following regression model:

$$\text{Non - Violent Uprisings}_{it} = \beta_0 + \beta_1 SWB_{it} + \beta_2 X_{it} + \mu_i + \mu_t + \varepsilon_{it}$$

The model links the number of non-violent resistance events in country i in year t to subjective wellbeing indicator SWB_{it} for country i in the year t ; a set of control variables X_{it} which capture time-varying conditions that might confound the relationship between civil resistance and subjective wellbeing; a set of country dummies for time-invariant country characteristics μ_i and a vector of time dummies μ_t for global shocks.

Reliable and comparable cross-country time series data on uprisings are hard to come by. Preferably, we would have a panel with data on subjective wellbeing and civil resistance at the individual level, allowing us to study the relationship between an individuals' propensity to engage in non-violent conflict and their level of life satisfaction. However, asking individuals about their engagement in conflict is problematic, because respondents in many countries run the risk of being prosecuted for their engagement in these types of activities. In addition, by asking respondents about their participation in non-violent conflict retrospectively, we would have to make the assumption that the level of subjective wellbeing is constant in the period between the participation and the survey date. Finally, it is likely that the effect of a reduction of subjective wellbeing on civil conflict does not only come from the increased propensity of 'unhappy' civilians to rebel, but also from the fact that civilians that might not take the streets themselves can support and legitimize an uprising. Therefore, we use as our dependent variable the number of events of resistance within a country in a year.

Data on events of civil resistance is obtained from the CNTS (2015). We calculate the sum of strikes and demonstrations, which we transform using the hyperbolic inverse sine. This data is collected through New York Times newspaper articles and is used in several other studies to measure strikes and demonstrations (e.g. Braha, 2012; Collier & Rohner, 2008; Schatzman, 2005). Demonstrations are included in the CNTS dataset if they are (1) peaceful public gathering, (2) with at least 100 participants, (3) that have the primary purpose of displaying or voicing opposition to government policies or authority, (4) and do not have a distinctly anti-foreign nature such as anti-globalization protests. Strikes are included if 1,000 or more industrial or service workers participate, they involve more than one employer and are aimed at national government policies or authority. Our country fixed effects absorb differences in the number of non-conflict events due to the biases in the U.S. press coverage.

We define subjective wellbeing, also known as happiness or life satisfaction, as the degree to which individuals judge the overall quality of their lives as favorable (Veenhoven, 1984). Biologically, high levels of subjective well-being are a signal that we are thriving and indicate the presence of good life chances in society, such as income, education, access to infrastructure, and high quality institutions. When our basic human needs are satisfied and there is a good fit between opportunities in a society and our capacities, this will be translated into higher levels of subjective wellbeing (Veenhoven, 2000).

Thus defined, subjective wellbeing is something on one's mind that can be measured using surveys. In this research, we measure subjective wellbeing using the life evaluation index developed by the Gallup World Poll, which surveyed a national representative sample in

more than 160 countries from 2006 onwards.² In most developed countries the interviews are conducted over the phone, whereas in developing countries the surveys are administered face-to-face. The sample size is typically 1,000 respondents per country-year and 2,000 for larger countries such as China, India and Russia. In the case of small island states such as Haiti, Trinidad and Tobago, Iceland and Malta, the sample size is between 500 and 1,000. The answers to the Gallup questions are aggregated to the country-year level and weighted to match the national demographics of each selected country and account for under sampling of certain groups.

The life evaluation index measures an individual's evaluation of their life as a whole both now and in the future. This is in contrast to questions about the pleasantness of people's emotional lives, which is usually measured using *experiential* questions about for example smiling a lot or feeling happy (Diener, Kahneman, Arora, Harter & Tov, 2009). The life evaluation index is based on the Cantril ladder and is constructed from the answers to the following two questions:

Please imagine a ladder with steps numbered from zero at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time? On which step do you think you will stand about five years from now?

Accordingly, the life evaluation index is a two item ordinal scale (Cronbach's alpha of .91), accounting for both current and expected future life evaluation. Current and expected life satisfaction are combined, as it is reasonable to expect that not only current evaluations, but also expectations for the future influence an individual's actions. As the answers to the Cantril ladder are ordinal, and can hence not be treated as continuous, Gallup categorizes respondents into suffering³ (current and future life ≤ 4), struggling ($5 \geq$ current life ≥ 6 , $5 \geq$ future life ≥ 7) and thriving (current life ≥ 7 , future life ≥ 8). A respondent must have answered both questions to have indexes calculated. The final country-level index represents the percentage of respondents in each category. Country-level weights are applied to this calculation⁴.

² Samples are not representative for regions where safety of the interviewing staff is threatened or scarcely populated islands in some countries. For Cuba, Chad, the Central African Republic, the DR Congo, Madagascar and Sudan, the excluded regions represent more than 15% of the population.

³ These individuals are also referred to as the unhappy or dissatisfied people.

⁴ To ensure that the results are not driven by the way the Gallup categorizes respondents into *suffering* and *struggling*, we rerun our baseline model with the average life evaluation as obtained with the Cantril ladder, which confirms the results reported here.

Table 2.1 Countries with the lowest and highest percentage of citizens that report to be 'suffering' according to the Gallup World Poll (2005-2015).

Countries with lowest suffering index		Countries with highest suffering index	
Country	Suffering	Country	Suffering
Norway	1.2	Bulgaria	39.1
Denmark	1.3	Afghanistan	34.9
Canada	1.6	Burundi	34.5
Netherlands	1.7	Haiti	32.5
United Arab Emirates	1.8	South Sudan	32.5
New Zealand	1.8	Armenia	29.2
Switzerland	1.8	Tanzania	29.0
Sweden	1.8	Yemen	28.5
Oman	2.0	Hungary	26.7
Luxembourg	2.0	Georgia	26.7
Australia	2.1	Serbia	25.9
Brazil	2.3	Ukraine	25.8

For the purpose of this article, we are mainly interested in the percentage of respondents that are categorized as *suffering* as this is most closely related to perceived hardship and grievances and hence is expected to have a direct effect on non-violent resistance, although we also control for the percentage of people that report to be *struggling*. People who identify themselves as *suffering* are likely to lack the capabilities that allow them to make autonomous decisions and to pursue a fulfilling life (Graham & Nikolova, 2015). The percentage of *suffering* individuals is negatively correlated with GDP per capita ($\rho = -0.46$), GDP growth ($\rho = -0.10$) and child mortality ($\rho = -0.24$). Table 2.1 lists those countries with the lowest and highest percentages of suffering people. Not surprisingly, most of the countries with the lowest percentage of *suffering* individuals are high income economies, whereas those with the highest percentage of *suffering* individuals are low income economies, most of which are fragile countries. Bulgaria and to a lesser extent Serbia stand out with both countries reporting a very high percentage of *suffering*, something that is difficult to explain through objective economic indicators alone.⁵

Figure 2.1 shows how the percentage of suffering depends critically on the income quintile in which respondents are located. Income quintiles are based on self-reported income in

⁵ Sardamov (2007) argues that the level of suffering in Bulgaria can largely be explained by unrealistically high expectations for development and a general distrust in public institutions.

the Gallup World Poll and are calculated at the country level. For the poorest people in society the percentage of *suffering* has a median of 18%, whereas for the richest 20 percent *suffering* has a median of only 5%. This suggests that there is a positive relationship between welfare and wellbeing, at least at the within-country level.

Figure 2.1 Average percentage of respondents categorized as suffering by income quintile over the period 2007-2014.

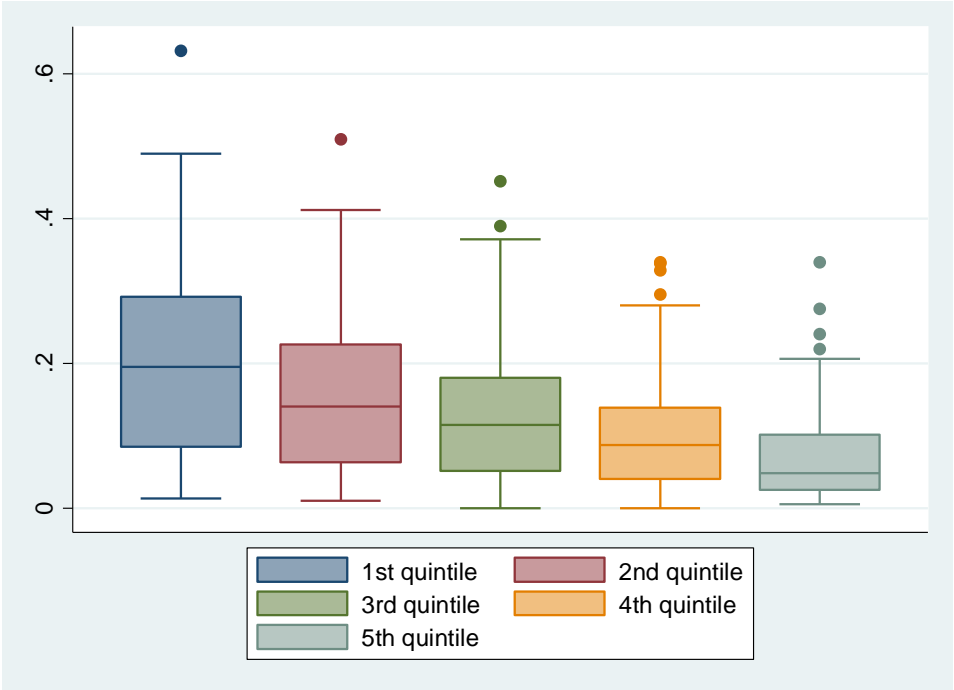


Figure 2.2 shows the correlation between the average GDP growth per capita rate between 2006 and 2014 and the average change in the percentage of *suffering* over the same time period. Surprisingly, there is no significant correlation between these variables ($\rho = -0.07$). Hence, at the between-country level there is little evidence of a relationship between GDP growth and subjective wellbeing. Several countries with an average GDP growth rate of more than 4%, most notably Sudan, Rwanda and India, actually saw a substantial increase in the percentage of *suffering people*, consistent with the existence of the so-called ‘unhappy development’ paradox (Arampatzi et al., 2017). Angola also stands out, with an average increase of 7% in the percentage of *suffering* despite a positive GDP growth rate.

Figure 2.2 Scatterplot of average GDP growth per capita and the change in the percentage of suffering over the period 2006/2007 to 2014.



The model includes a set of control variables that are standard to the conflict literature, as to test whether suffering can explain variance beyond what is captured by traditional institutional and financial indicators. In selecting control variables, we face a trade-off between maximizing the number of controls and taking full advantage of the number of countries for which Gallup’s subjective wellbeing data is available. For many of the low-income countries data are scarce, and excluding these economies would not only significantly reduce statistical power, it would most likely also lead to sample selection bias. Therefore, data on income inequality and literacy rates are not included. In our short time period, ethnic fractionalization and geographical features can be regarded time-invariant and are part of our country fixed effects. Hence, they are not included as separate control variables.

The financial controls which include *GDP* (ln), *oil rents* (% of GDP) and *inflation*;⁶ all of the aforementioned are obtained from the World Bank. The effect of *GDP* is theoretically ambiguous. On the one hand, an increase in *GDP* tends to increase standards of living and hence, decrease grievances and accordingly anti-government sentiments. On the other hand, increases in *GDP* might also set off modernization to the extent that citizens who are no longer preoccupied with addressing their basic needs take to the streets to demand more civil liberties. The effect of oil rents is also theoretically uncertain, as they increase the government’s capacity to provide public services and exercise a divide and rule strategy, as

⁶ The inflation variable contains several outliers. Therefore, we winsorized it at the 1st and 99th percentile. We also estimated regressions with a non-winsorized inflation coefficient, which shows very similar results for the suffering variable. However, in these models is the inflation coefficient is unrealistically large.

well as citizens' expectations of the public goods they are entitled to. Inflation is expected to increase non-violent uprisings, because increases in food and energy are generally regarded as an important source of dissatisfaction with regimes (Chenoweth & Ulfelder, 2017).

Poverty is often regarded as the most important source of economic grievances, yet, poverty data is not sufficiently available for most low income countries. Therefore, we follow Chenoweth and Ulfelder (2017) and use *infant mortality* per 1,000 live births (World Bank) as a proxy. In addition, we control for several institutional characteristics. We include a measure of the extent to which a country is an institutionalized autocracy as derived from the polity dataset (Marshall & Jagger, 2002). This measure ranges from 0 to 10, where 0 indicates that there are no autocratic policies in place, whereas a 10 indicates that a regime is a formal autocracy. Autocracies tend to be less tolerant to non-violent public dissent than democracies and are likely to take stronger actions to prevent and restrict them, which should reduce civil resistance. On the other hand, the tendency of autocracies to restrict civil rights, might also just be a reason to take to the streets. Because we include country fixed effects in our regression models, the autocracy variable merely captures variation in autocratic policies over time rather than variation between countries. We also control for cronyism using the World Governance indicator control of corruption, which combines different corruption indices (Kaufmann et al, 2010). The corruption variable is measured as a z-score and higher values refer to a lower level of corruption. We include a measure of *political terror* derived from the political terror scale (Gibney et al., 2016). The scale ranges from 1 to 5, where a 5 indicates that terror has expanded to the whole population. Although political terror might deter civil resistance, it also increases perceived injustices and hence might facilitate mass mobilization. We control for the number of *mobile phones* per 1,000 inhabitants recorded by the World Bank to capture the effect of information technologies and infrastructure. Finally, we include urbanization, measured as the percentage of the population living in an urban area, to control for ease of mobilization. A correlation matrix is provided in Appendix 2.1.

2.3 ESTIMATION RESULTS

To examine the relationship between subjective wellbeing and non-violent conflict, we estimate an ordinary least squares regression on the number of non-violent conflict events, which we transform using an inverse hyperbolic sine information. This transformation resembles a normal logarithmic transformation and can be interpreted as such, but can take zeros into account. Standard errors are robust, clustered at the country level. We also estimated a Poisson model, but because the results were qualitatively similar, we report the more parsimonious OLS regression here. The results of the Poisson regression are reported in Appendix 2.2 (Column 1-2).

Although the Hausman test supports the use of the more efficient random effects model, we report the results of the model including country fixed effects here and those of the random effects model in Appendix 2.2 (Column 3-4). We do so because there are some doubts about the comparability of subjective wellbeing scores across countries due to linguistic and cultural differences (e.g., Argyle, 2001; Kahneman and Riis, 2005) In addition, the fixed effects coefficients can be more easily compared with those obtained with the GMM estimators in the robustness checks. Coefficients are estimated with Ordinary Least Squares.

Results

Table 2.2 shows the results of the OLS estimations including country and year fixed effects regression with strikes and demonstrations as the dependent variable. In the first column, we show the results of a baseline model where only the traditional covariates of conflict are included. In this model only GDP growth is significant at the 5% level, confirming the negative relationship between growth and uprisings found by Chenoweth and Ulfelder (2017). The effect of oil rents is positive and significant at the 10% level. A one percentage point increase in oil rents increases non-violent conflict with 2.5 %. This is in contrast to findings by Costello, Jenkins and Hassan (2015) who found that oil rents were negatively associated with the Arab Spring protests, although they do not control for GDP or include country fixed effects. Yet, it is in line with the literature on violent conflict, which has found some evidence for a so-called resource conflict curse (Collier & Hoeffler, 2004). None of the other control variables are significantly different from zero.

In the second column we add the *suffering* and *struggling* variables. This shows that without including any other covariates the effect of *suffering* on the number of non-violent conflict is highly significant. A one percentage point increase in the percentage of people suffering leads to a 3.5% increase in the number of non-violent conflict events. The effect of *struggling* - i.e. those that moderate views of their life situation - also has a positive and significant effect on the number of non-violent conflict events, although this effect is considerably smaller than the effect of the percentage of *suffering*. A one percentage point increase in the percentage of people struggling increases events of non-violent resistance with 1.8%.

In the third column we add all other controls. The effect of subjective wellbeing remains highly significant and the coefficients are similar to those coefficient obtained in the model without covariates. Also the effects of the controls do not change meaningfully as compared to those reported in Column 1. The political terror coefficient becomes significant at the 10% level, providing some support for the idea that political terror can increase feelings of injustice, which in turn increase willingness to take anti-government actions. The within R-squared increases meaningfully compared to the model with only the traditional covariates of conflict. This suggests that our subjective wellbeing measures

explain another source of variation that cannot be explained by the conventional indicators. In this model, a one percentage point increase in suffering increases non-violent conflict events with 3.2%. For comparison, this effect is slightly larger than the effect of a one percentage point decrease in GDP growth, which increases non-violent uprisings with 2.8%.

Table 2.2 OLS regression with the number of anti-government demonstrations and strikes (transformed using the inverse hyperbolic sine transformation) as the dependent variable⁷.

	(1)	(2)	(3)
Suffering (%)		0.035*** (0.009)	0.032*** (0.009)
Struggling (%)		0.018* (0.008)	0.017* (0.007)
GDP (ln)	-0.364 (0.333)		-0.078 (0.306)
GDP Growth (%)	-0.034** (0.011)		-0.028** (0.010)
Inflation (%)	0.001 (0.009)		-0.005 (0.009)
Oil Rents (% of GDP)	0.025+ (0.013)		0.029* (0.013)
Infant Mortality	0.004 (0.023)		0.006 (0.022)
Autocracy	0.034 (0.071)		0.046 (0.069)
Corruption	-0.012 (0.010)		-0.009 (0.009)
Political Terror Scale	0.136 (0.084)		0.154 [□] (0.080)
Mobile phones	0.000 (0.003)		0.000 (0.003)
Urban population (% of total)	0.035 (0.044)		0.036 (0.043)
Constant	2.406 (4.628)	-1.129* (0.561)	-2.558 (4.484)
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	862	862	862
Number of Countries	118	118	118
R ² overall	0.003	0.096	0.068
R ² within	0.258	0.260	0.285
R ² between	0.009	0.017	0.042

Robust standard errors in parentheses
 *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

⁷ We also estimated regression models for strikes and demonstrations separately and the results of the two separate models are similar to each other and the results reported here.

2.4 SENSITIVITY ANALYSES

Addressing endogeneity

An obvious concern when analyzing the relationship between suffering and non-violent conflict is that suffering is not exogenous. Non-violent conflict cannot just be the consequence of human suffering but also the cause of it, albeit to a lesser extent than violent conflict. Therefore, we instrument suffering with the number of people dying from infectious and parasitic diseases per 1.000 inhabitants, obtained from the WHO statistics office. These diseases tend to be difficult to control, while being able to cause considerable human suffering, as they lead to fear of contracting the disease, suffering due to the disease itself and grief caused by losing loved ones. As such, it reflects the strategy taken by Liberini et al. (2017), who instrument subjective wellbeing with the deaths of loved ones. It is reasonable to expect that deaths due to infectious and parasitic diseases is a valid instrument as these diseases tend to be difficult to manage and when we control for GDP and poverty and include country fixed effects, the deaths they cause can be regarded as relatively exogenous.

Table 2.3 Robustness analyses: regression models with instrumental variables.

	(1) 2SLS	(2) 2SLS	(3) 1-step System GMM	(4) 1-step System GMM	(5) 2-step System GMM	(6) 2-step System GMM
Suffering	0.069 ⁺ (0.041)	0.118 ⁺ (0.070)	0.019* (0.009)	0.019* (0.009)	0.021* (0.010)	0.021* (0.010)
Struggling		0.041* (0.002)		0.007 (0.008)		0.008 (0.009)
Non-violent Conflict ₋₁			0.269*** (0.059)	0.263*** (0.058)	0.238*** (0.055)	0.228*** (0.056)
Constant			-3.347** (1.066)	-3.821*** (1.140)	-3.296** (1.170)	-4.015** (1.223)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Control Var	Yes	Yes	Yes	Yes	Yes	Yes
Observations	859	859	862	862	862	862
Countries	115	115	118	118	118	118
Instruments	17	17	99	107	99	107
Kleibergen-Paap LM statistic	4.505*	3.444 [□]				
Weak identification F-statistic	7.187	4.601				
Sargan test			90.49	96.65	90.49	96.65
Hansen J statistic			74.94	77.16	74.94	77.16
AR1 test			-6.430***	-6.393***	-4.869***	-4.853***
AR2 test			0.192	0.211	0.065	0.048

Instrument is the number of deaths due to infectious diseases (per 1.000 inhabitants), complemented with the lag of difference of the independent variables for the GMM models. Robust standard errors in parentheses.

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

In Table 2.3 (Column 1-2) we report the results of the 2SLS model including robust standard errors. The coefficient of the *suffering* variable is positive and significant at the 10% level, although the standard error is large. The coefficient is also considerably larger than the coefficient estimated with the OLS regression (Table 2.2). The coefficient on the *struggling* variable remains positive and significant at the 5% level. Yet, both the standard error and the coefficient seem to be inflated, which could be explained by a weak instrument problem. We obtained a Kleibergen-Paap F-statistic of 7.19, which following the conventional rule of thumb for relevance of instruments (F-statistic > 10), indeed indicates a weak instrument problem. Whilst this does not necessarily bias the estimates, it decreases the precision with which they are estimated.

Besides an endogeneity problem, the OLS-regression has three other limitations - none of which are solved by the 2SLS regression. First, our panel is unbalanced. Whereas for most countries data are available from 2006 to 2014, Gallup only started collecting data in later years for some others. This could lead to sample attrition bias. Second, non-violent conflict is most likely dynamic in the sense that current values of non-violent conflict are affected by past ones. In an OLS-regression with country fixed effects, the inclusion of a lagged dependent variable would automatically lead to a correlation between this lagged variable and the error term; a statistical violation that has been named the Nickell bias (Nickell, 1981). This bias is more problematic in settings with a large N (number of countries) and a small number of time periods such as in our dataset⁸.

The system GMM estimator has been widely used to address these concerns (Arellano & Bover, 1995; Blundell & Bond, 1998; Roodman, 2009a). In addition to including deaths due to infectious diseases as an exogenous instrument, the system GMM creates instruments internally by using lagged differences of the variables. Hence, we are able to exploit variation on a large set of instruments. Relative to the 2SLS model, the system GMM has the advantage that it can solve the weak instrument problem as efficiency increases, while allowing us to also instrument the *struggling* variable and the (endogenous) control variables because there are now many more instruments. Moreover, this makes it possible to test whether the set of instruments is valid using a Sargan test.

One of the problems with the system GMM is that the results are sensitive to specification decisions, particularly the too many instruments problem as identified by Roodman (2009b). To limit this problem we use all lags (up till 7 years), but collapse the instrument count to minimize the number of instruments included in the estimation. The time dummies reduce the probability of no correlation across individuals in the idiosyncratic

⁸ In Appendix two we provide the results of an LSDVC model (Bun and Kiviet, 2003) to correct for this Nickell bias.

disturbances (Roodman, 2009a). We put all independent variables into the instrument matrix, and apart from *oil rents*, we treat all of them as non-strictly exogenous.

We first estimated the standard one-step system GMM model with clustered robust standard errors (Table 2.3, Column 3-4). *Suffering* continues to have a significant positive effect on the number of non-violent conflict events and the size of the coefficient is similar to those estimated with the standard OLS regression. The coefficient of the *struggling* variable is positive, but no longer statistically significant. The lagged dependent variable is large and highly significant, indicating that the past level of non-violent conflict indeed influences the current level. The Sargan test is not statistically significant, indicating that overidentifying restrictions are valid and the AR2 test finds no evidence of second order autocorrelation.

In Column 4 and 5 (Table 2.3) we provide the results of a two-step estimation process that is more asymptotically efficient than the one-step procedure. Windmeijer-corrected cluster-robust standard errors are reported (Windmeijer, 2005). These results are similar to the results obtained with the one-step procedure. Again, the diagnostic tests do not show any specification issues. Hence, these results confirm that changes to subjective wellbeing affect non-violent uprisings in addition to the effect of traditional objective indicators.

Drivers of the relationship between well-being and non-violent conflict

One of the advantages of our subjective wellbeing measure is that respondents are asked to take into account their lives as a whole, and accordingly this measure implicitly includes the assessment of several life domains (e.g. income, freedom), without putting an explicit fixed weight on these domains. However, the disadvantage of such an indiscriminate measure is that it is difficult to isolate the mechanism through which subjective wellbeing affects willingness to participate in civil resistance campaigns. To solve this problem, we estimate models where instead of an overall subjective wellbeing indicator, we include indicators for particular domains of wellbeing. In Table 2.4 we list descriptive statistics of these variables and report the correlations between these and the *Suffering* and *Struggling* variables.

Table 2.4 Correlation of suffering and struggling with other subjective indicators.

	Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 Suffering (% pop.)	11.6	8.90	0	61	1							
2 Struggling (% pop.)	59.49	14.29	17	90	0.27	1						
3 Standard of Living (SoL)	61.10	18.53	11	95	-0.63	-0.56	1					
4 SoL getting better (% pop.)	0.428	0.16	0.04	0.85	-0.42	0.05	0.41	1				
5 Freedom of life (% pop.)	70.54	14.68	24	96	-0.58	-0.42	0.66	0.37	1			
6 Get ahead (% pop)	76.88	16.12	27	99	-0.39	0.07	0.37	0.61	0.46	1		
7 Community Basics (CB) Index	60.53	11.61	20.3	84.7	-0.41	-0.43	0.7	0.19	0.66	0.26	1	
9 Food and shelter (FS) Index	73.62	15.71	24.5	99	-0.44	-0.56	0.61	-0.1	0.35	-0.17	0.52	1

We focus on three different domains of subjective wellbeing: (1) individual capabilities, (2) perceived standard of living, and (3) the provision of community basics. Capabilities are defined as the capacity to fulfill a purposeful and fulfilling life (Graham, 2011) and following Graham and Nikolova (2015), we measure the extent to which they are present in society with (i) the percentage of people that perceive they can *get ahead* by working hard and (ii) the percentage satisfied with their *freedom of life*. These two variables correlate negatively and strongly with *Suffering*, and to a lesser extent, *Struggling* (Table 2.4). When we include these two measures of perceived capabilities in a regression on non-violent uprisings (Table 2.5, Column 1-2), the coefficients of both variables are negative and statistically significant, indicating that a percentage point increase in perceived capabilities, decreases the number of non-violent resistance events with about 2 percentage points.

Table 2.5 The effect of other subjective indicators on the number of protests and strikes.

	(1) Incl. Freedom of life	(2) Incl. Get ahead	(3) Incl. SoL	(4) Incl. Sol getting better	(5) Incl. FS index	(6) Incl. CB index	(7) Incl. all variables
Freedom of life (%)	-0.018** (0.006)						0.003 (0.005)
Get ahead (%)		-0.017* (0.007)					-0.011 (0.007)
Standard of living (SoL) (%)			-0.016* (0.007)				-0.005 (0.008)
SoL getting better (%)				-0.013* (0.006)			-0.000 (0.006)
FS Index					0.008 (0.006)		0.018* (0.008)
CB Index						-0.016 (0.010)	-0.008 (0.010)
Suffering (%)							0.026** (0.010)
Struggling (%)							0.013+ (0.007)
Constant	4.535 (4.312)	4.380 (4.488)	1.910 (4.260)	0.526 (4.467)	4.381 (4.424)	4.898 (4.147)	1.190 (4.359)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control Var	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.270	0.267	0.266	0.258	0.258	0.259	0.293
Observations	847	855	861	788	856	847	814
Countries	118	118	118	118	118	118	118

Note: dependent Robust clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

As established in the data section, subjective wellbeing is related to objective income measures, yet it correlates even more strongly with perceived materialistic benefits, proxied by the percentage of people that are satisfied with their *standards of living* (SoL). In addition, expectations for future materialistic benefits, proxied with the percentage of people agreeing that their *standard of living is getting better* correlates moderately with *suffering, though not with struggling* (See Table 2.5). Also Gallup's *food and shelter (FS) index*, a two-item indicator measuring whether people have enough money to buy food and shelter for their families (alpha=0.86, range 0-100), has a strong negative correlation with *suffering* and *struggling*, confirming the importance of being able to fulfill basic needs for an individual's subjective wellbeing. In Table 2.5 (Column 3-5) these three measures are included in the OLS regression where the dependent variable is again the number of demonstrations and strikes. The effect of satisfaction with *standards of living* and the expectation that *standards of living are getting better* are negative and statistically significant, whereas the coefficient of the FS index is not statistically significant. This is not surprising, because individuals that live below a certain subsistence level as indicated by a low FS index, might be unlikely to engage in civil resistance even if they are *suffering*, because their first priority is to survive on a day-to-day basis.

We also include a measure of the provision of community basics. The provision of these basics is often regarded as one of the core responsibilities of the state. Hence, individuals that experience grievances due to inadequate provision of these goods can hold the state responsible by participating in non-violent uprisings. We measure the perceived quality of community basics with the *Community Basics (CB) index* developed by the Gallup World Poll. This index combines satisfaction rates of 7 different basic goods: the public transportation system, roads and highways, quality of air, quality of water, the availability of good affordable housing, the educational system and the availability of quality healthcare (alpha= 0.90, range 0-100). When included in the OLS model (Table 2.5, Column 6), the coefficient is negative but insignificant. Hence, we find no evidence that dissatisfaction with the provision of basic public goods affects non-violent resistance.

In the last column of Table 2.5 (Column 7) we include all domain specific variables and our overall subjective wellbeing indicators. *Suffering* remains significant at the 5% level and *struggling* at the 10% level, whereas *standard of living*, *freedom of life*, and *get ahead* cease to be significant, suggesting that the overall subjective wellbeing variables capture the variation in satisfaction in the individual capabilities and perceived standard of living, which in turn affects non-violent uprisings. Interestingly, the FS index turns significant in the model, indicating that, when overall subjective wellbeing is controlled for, the percentage having food and shelter actually has a positive effect on non-violent uprisings, supporting that a certain subsistence level needs to be reached before citizens are willing to take the streets.

Country heterogeneity

In Figure 2.3 we plotted the percentage of suffering for developing and developed countries in the period 2006-2014. Whilst in developing countries the median percentage of suffering over our time period is 14.3%, it is only 5.3% in developed countries. Among developing countries Bulgaria and South Sudan stand out, reaching an average suffering rate of 38.1% and 37.3% respectively. Among developed economies, Hungary, where 25.6% of the population is categorized as suffering, is an outlier. However, most developed countries experience a very low fraction of suffering and also very small changes to this rate. Hence, it is probable that the effect of suffering found in the previous models is purely identified from the developing countries. To test this, we estimate two separate models for high income and low and middle income following the classification of the World Bank.

Figure 2.3 The average ratio of suffering for both developing (middle and low income) and developed (high income) countries.

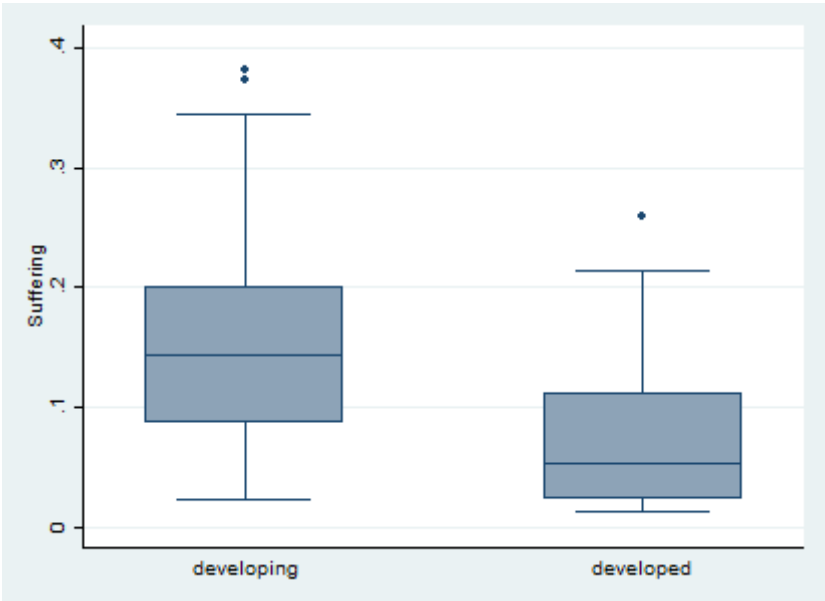


Table 2.6 (Column 1-2) reports the results of the two separate models for high and low and middle income countries, respectively. The effect of *suffering* on the number of non-violent events of civil resistance is statistically insignificant for high income countries, but statistically significant for low and middle income countries. This suggests that the effect of *suffering* found in previous models is mainly identified from the variation in this rate in low and middle income countries. This is in contrast to the results for the *struggling* variable. The *struggling* coefficient is positive and highly significant for the high income

countries, indicating that an increase in the percentage of struggling increases non-violent resistance in those nations. Yet, for low and middle income countries an increase in struggling does not have a significant effect. This might be seen as surprising, because it suggests that whereas struggling might be seen as acceptable in low and middle income countries, in high income countries an increase in *Struggling* seems to be a sufficient reason to challenge the regime. Nevertheless, it supports that wellbeing is a relative concept, i.e. how an individual's subjective wellbeing compares with the average level of happiness in a society, influences the extent to which one feels aggrieved.

Table 2.6 Alternative samples: high versus low and middle income economies and democracies versus anocracies and autocracies.

	(1) High income countries	(2) Low and middle income countries	(3) Democracies	(4) Anocracies & Autocracies
Suffering (%)	0.030 (0.025)	0.022* (0.010)	0.034* (0.015)	0.033** (0.011)
Struggling (%)	0.040*** (0.009)	-0.002 (0.010)	0.003 (0.010)	0.027* (0.010)
Constant	-9.631 (9.942)	-3.344 (4.774)	5.347 (5.980)	-10.504 (5.623)
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Control Var	Yes	Yes	Yes	Yes
R-squared	0.405	0.262	0.295	0.354
Observations	337	525	522	340
Countries	44	74	65	53

Note: R-squared refers to pseudo R-squared for the logit models in Column 3-4. Cluster robust standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Related to income, we also test whether the effect of subjective wellbeing on non-violent uprisings is different for democracies than for anocracies and autocracies. Whereas in democracies dissatisfaction can be raised at the ballot box, in undemocratic societies it is difficult or impossible to change policies by voting, which might encourage citizens to participate in non-violent uprising to voice their grievances. In Column 3, we only include countries that had a democratic regime at the beginning of our sample period and in Column 4 we only include countries with non-democratic regimes.⁹ *Suffering* increases civil uprisings independent of whether we look at democracies or autocracies/anocracies. *Suffering* only has a significant effect in our sample of non-democratic countries, which could suggest that although *suffering* affects non-violent uprisings independent of the

⁹ Following convention in political science, we classify a country as a democracy if the polity score, which ranges from minus ten to plus ten, is a seven or higher. All other nations are classified as anocracy/autocracy.

political system, *struggling* only has an effect if concerns cannot be expressed at the ballot box.

Alternative measure of non-violent uprisings

Our measure of non-violent uprisings based on the CNTS dataset is collected through the New York Times and the coverage of non-violent uprisings is relatively limited in small, low income countries with few ties to the U.S.. Systematic time-invariant differences in coverage are filtered out by the country fixed effects, but the quality of New York Times news coverage might change over our sample period and such changes could be correlated to widespread human suffering in these countries, leading to selection bias.

For robustness we also estimate our models using the data on non-violent uprisings from the Major Episodes of Contention (MEC) dataset (Chenoweth, 2015; Chenoweth & Ulfelder, 2017). Because non-violent uprisings are identified through a review of global media (i.e Associated Press and Agence France Press news stories within Factiva and LexisNexis) selection bias should be minimized.

The MEC measure of non-violent uprisings differs from the CNTS variable on several dimensions. First, it measures whether an episode (i.e. more than one event, occurring within a week of one another) is ongoing in a certain year. Hence, their variable is a dummy instead of a count variable. This is disadvantageous, because we lose considerable variation in the intensity of non-violent uprisings. Second, in order for events to be considered they need to have at least 1,000 participants (instead of 100 participants for protests in the CNTS dataset), and hence they only include *mass* non-violent uprisings. Third, for an episode to be included, an uprising should not only be anti-government, but the explicit goal of the event should be to seek the removal of the incumbent. Hence, whereas the CNTS data also includes acts of resistance as to demonstrate opposition to certain policies, the MEC data only includes them if they have the maximalist aim of bringing about a regime change. Fourth, the dataset covers episodes until 2013 and hence our period of analysis was shortened to 2007 to 2013. Fifth, whereas the CTNS dataset only covers protests and strikes, MEC also includes all noninstitutional acts of civil disobedience such as sit-ins and non-violent occupations, as long as they include at least 1.000 participants and aim to replace the government. In 79.45% of the cases where MEC identifies an ongoing non-violent uprising, the CNTS dataset also records at least one demonstration or strike.

Because non-violent uprisings are measured binary in the MEC dataset, we estimate a logistic regression with clustered robust standard errors. In this model only those countries for which there is variation in the ongoing uprising variable, meaning either the onset or offset of an uprising, can be included, which limits the set of countries included in the logit model to only 23. We also estimated a random effects model on the full set of observations

(118 countries). The results are similar to those obtained when including country fixed effects¹⁰ and are reported in Appendix 2.3.

When we regress subjective wellbeing on uprising as recorded in the MEC dataset (Table 2.7, Column 1), the effect of *suffering* remains positive and statistically significant. On average a one percentage point increase in *suffering* increases the probability of a large-scale non-violent uprising with 1.3 percentage point. Also the coefficient on the *struggling* variable remains positive and significant with an average marginal effect of 1.1 percentage point.

Table 2.7 Alternative dependent variables.

	(1) Ongoing uprisings	(2) Riots	(3) Violent conflict	(4) Battle-related deaths
Suffering (%)	0.125** (0.064)	0.013+ (0.007)	0.025 (0.104)	-0.012 (0.011)
Struggling (%)	0.113* (0.065)	0.008 (0.006)	0.114 (0.12)	0.008 (0.008)
Constant	-122.665*** (41.705)	-0.686 (4.749)	30.467 (30.469)	9.964 (8.605)
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Control Var	Yes	Yes	Yes	Yes
R-squared	0.402	0.307	0.380	0.063
Observations	152	862	178	882
Countries	23	118	22	121

Note: R-squared refers to pseudo R-squared for the logit models in Column 1 and Column 3. Cluster robust standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + <0.10

How about violent political resistance?

Can a decrease in subjective wellbeing also explain violent resistance? In Table 2.7 (Column 2-4) we test this using three different measures of violent political resistance. In Column 2 the dependent variable is the number of riots obtained from the CNTS dataset. Riots are only included if they involve a clash of more than 100 citizens involving the use of physical force. We transform the number of riots using the inverse hyperbolic sine transformation and estimate an OLS model with country and year fixed effects. In this regression, *suffering* has a significant effect on riots, but the coefficient is only significant at the 10% level and is considerably smaller than when the dependent variable is non-violent resistance. Whereas a percentage point increase in suffering increases non-violent resistance with 2.1%, it only increases the number of riots with 1.3%.

¹⁰ A Hausman test does not find evidence of systematic differences between the fixed effects and random effects model and hence the random effects model is statistically most appropriate. For reasons discussed in our methodology section, we still have more confidence in the results obtained in the more conservative fixed effects model.

To measure armed violent conflict, we use a dummy variable which is one if there is “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 in one calendar year” (Pettersson & Wallensteen, 2015, p. 1). We also measure the intensity of violent political conflict with the number of battle-related deaths. This variable is left censored at 25 battle-related deaths, as deaths are only recorded for recognized conflicts. We transform the number of battle related deaths using the inverse hyperbolic sine transformation. Data for both violent conflict variables is derived from UCDP/PRIO (see Pettersson & Wallensteen, 2015).

When regressing subjective wellbeing on the violent conflict dummy (Table 2.7, Column 3), neither *suffering* nor *struggling* is statistically significant. In Column 4 (Table 2.7) we use the number of battle related deaths as a proxy for war intensity and again we find no significant effect of subjective wellbeing on violent conflict. Although no causal conclusions can be drawn from these conditional associations, our results suggest that whereas a decrease in subjective wellbeing can increase anti-government sentiments and produce non-violent uprisings, it does not necessarily lead to legitimization of the use of force to replace a government. This confirms that the relationship between grievances and conflict is stronger for non-violent uprisings than for its violent counterpart.

These results provide evidence for the view that although grievances might be a necessary condition for conflict, they are not a sufficient reason (Klandermans, 1996). Only if rebellion is perceived to be instrumental in addressing grievances, will citizens participate in political conflict. The perceived benefits of participation should outweigh the expected costs. This is true for both violent and non-violent uprisings. However, because participation in armed conflict is more costly both in terms of the resources required to participate and the probability of death or injury, the expectations of success have to be higher to ensure participation. There are many factors that determine the expectations of success, e.g. the reluctance of the government to suppress rebellion, the regime’s military power and the ease of mass mobilization. It might therefore be difficult to find a direct effect of subjective wellbeing – or any other type of grievances - on armed conflict.

2.5 CONCLUSION

Motivated by the incapacity of existing models of grievances to predict and explain the recent wave of non-violent uprisings, we test whether wellbeing data can explain variation in these uprisings above what is captured by traditional social and economic indicators. Our aim is to contribute to the empirical literature on the effect of grievances on political conflict, by augmenting standard models of political conflict with measures of subjective wellbeing. Instead of focusing on armed conflict as is common in the literature on grievances and conflict, we focus on non-violent uprisings, a type of political conflict that often precedes violent conflict and can cause significant changes to a regime. We find

evidence of an effect of grievances on non-violent conflict, and a preliminary analysis suggests that this effect is not present for its violent counterpart.

The main concern when studying the relationship between subjective wellbeing and non-violent resistance is reversed causality due to the possibility that non-violent resistance affects public goods provision which, in turn, might decrease subjective wellbeing. We address this in an instrumental variable analysis, where we instrument subjective wellbeing with deaths due to parasitic and infectious diseases. In a system GMM model, we complement this instrumental variable with the lags of our independent variables. Both the 2SLS and system GMM model confirm that a decrease in subjective wellbeing increases non-violent uprisings.

Because subjective wellbeing encompasses individuals' evaluation of their life-as-a-whole, we also test which life domains drive the effect of subjective wellbeing on non-violent uprisings. Three different life domains were included: material wellbeing, the capabilities to live a fulfilling life and satisfaction, and satisfaction with public goods provision and find that a decrease in material wellbeing and individuals' capabilities can to some extent explain the relationship between subjective wellbeing and civil resistance. We also find that the effect of a decrease in subjective wellbeing on non-violent uprisings is relatively universal and does not depend on the stage of development, nor on the type of political regime. However, we find some evidence that whereas struggling might be seen as acceptable in low and middle income countries, in high income countries an increase in *Struggling* is a sufficient reason to challenge the regime.

Happiness scholars often emphasize that politics should expand human wellbeing and research on subjective wellbeing has focused to a large extent on how political institutions might influence happiness. However, a relatively new strand of literature asserts that subjective wellbeing also has a place as an independent variable in our political economy models (Di Tella & MacCulloch, 2005; Flavin & Keane, 2012; Liberini et al., 2017). Whilst Flavin and Keane (2012) show that voter turnout increases with subjective wellbeing and Liberini et al. (2017) demonstrate that there is a positive relation between happiness and support for the incumbent leader, we find a negative relationship between subjective wellbeing and civil resistance. This suggests that subjective wellbeing influences a wide spectrum of political actions, i.e. not only whether to support the incumbent, but also the type of political actions that are inspired by support for or opposition to the regime. Hence, tracking subjective wellbeing in addition to financial indicators is not only important as to maximize human development, but it can also provide useful information about collective action and political instability.

We believe that our research has three important implications. First, our findings support the efforts taken by governments and international organizations to integrate measures of

wellbeing with standard economic measures to track progress and create informed policies. The results show that wellbeing has an effect on political actions taken by individuals and hence underscore the importance of assessing the effect of policies on subjective wellbeing. Second, using subjective wellbeing data we find evidence for a grievance-based model to non-violent uprisings. This contradicts previous conclusions that there are no systematic models of civil resistance, and can help not only explain but also predict uprisings in the future. Third, whereas many analyses of the causes of conflict focus on factors that change little over time (e.g. resources, ethnic fractionalization, institutions, geography), the level of subjective wellbeing can change relatively quickly, which allows us to exploit short-term dynamics in conflict. Hence, we exploit the within-country variation in uprisings rather than using a cross-sectional design. Accordingly, the results shed light not only on *whether* conflicts occur, but also *when*.

Future research could analyze how the effect of subjective wellbeing on both non-violent and violent rebellion depends on contextual factors. A decrease in subjective wellbeing provides a motive for participation in rebellion and such grievances are necessary conditions for conflict to occur (Klandermans, 1996). However, the decision to engage in rebellion depends on the evaluation of both the benefits and the costs of rebellion. Very little is currently known about how contextual factors influence such a cost-benefit analysis. Political terror, for example, could increase perceived grievances, while decreasing the probability of success of rebellion. Also the extent to which mass mobilization is believed to be probable affects the expected success and hence influences whether grievances translate into an uprising.

This study also raises questions about the different mechanisms that give rise to violent and non-violent conflict. As taking up arms tends to be costlier than participating in civil resistance, the expected success - which is largely influenced by contextual factors - needs to be higher to offset these costs. Hence, in order for grievances to be translated into violent conflict, either the probability of success needs to be relatively high or perceived costs need to be relatively low. In addition, whereas widespread grievances might accommodate mass mobilization, grievances felt by only one group, could induce that group to take up arms. This might explain why we do not find evidence for a direct effect of subjective wellbeing on armed conflict. Further research using data on the individual level could shed more light on these mechanisms.

2.6 APPENDICES

Appendix 2.1: Correlation table

	Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Suffering	11.66	8.914	0	61	1											
Struggling	59.44	14.13	17	90	0.26	1										
GDP	11.59	1.813	7.697	16.17	-0.35	-0.44	1									
GDP Growth	3.86	4.217	-14.8	34.5	-0.05	0.3	-0.2	1								
Inflation	5.538	5.173	-1.36	27.36	0.21	0.2	-0.19	0.16	1							
Oil rents	4.527	10.39	0	60.24	-0.02	0.11	0	0.15	0.13	1						
Infant mortality	21.75	21.37	1.6	106.8	0.23	0.61	-0.46	0.28	0.29	0.23	1					
Autocracy	1.261	2.427	0	10	0.02	0.18	-0.05	0.21	0.19	0.53	0.13	1				
Corruption	43.65	21.09	12	96	-0.43	-0.64	0.46	-0.29	-0.45	-0.25	-0.59	-0.25	1			
Political terror	2.529	1.111	1	5	0.29	0.43	-0.14	0.23	0.42	0.18	0.49	0.24	-0.73	1		
Mobile Phones	97.02	37.75	4.5	218.4	-0.21	-0.4	0.3	-0.26	-0.3	0.01	-0.62	-0.01	0.42	-0.41	1	
Urbanization	62.33	20.73	8.666	99.16	-0.36	-0.64	0.47	-0.22	-0.25	0.05	-0.64	-0.04	0.6	-0.49	0.52	1

Appendix 2.2 Alternative estimation techniques: Poisson regression, random effects models, and LSDVC.

	Poisson		Random effects		LSDVC	
	(1)	(2)	(3)	(4)	(5)	(6)
Suffering (%)	0.043*** (0.010)	0.040*** (0.009)	0.025*** (0.006)	0.027*** (0.006)	0.029*** (0.006)	0.027*** (0.006)
Struggling (%)	0.025** (0.008)	0.021** (0.008)	0.003 (0.004)	0.010** (0.004)	0.014** (0.006)	0.015** (0.006)
Non-violent uprisings _{t-1}					0.411*** (0.046)	0.359*** (0.046)
Country FE	Yes	Yes	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Control Var	No	Yes	No	Yes	No	Yes
Observations	764	764	862	862	862	862
Countries	98	98	118	118	118	118

Note: Dependent variable is the sum of the number of demonstrations and strikes. Robust standard errors in parentheses in Column 1-4 and bootstrapped standard errors in Column 5-6.

*** p<0.001, ** p<0.01, * p<0.05

Appendix 2.3 Alternative dependent variables: A random effects model

	(1) Ongoing uprisings	(2) Violent conflict
Suffering (%)	0.119*** (0.042)	0.035 (0.046)
Struggling (%)	0.091** (0.044)	0.042 (0.041)
Constant	-18.737*** (5.395)	-18.434*** (5.699)
Country FE	Yes	Yes
Year FE	Yes	Yes
Control Var	Yes	Yes
Observations	767	882
Countries	118	121

Note: Robust standard errors in parentheses.

*** p<0.001, ** p<0.01, * p<0.05

Chapter 3

Dodging Bullets: The Heterogeneous Effect of Political Violence on Greenfield FDI¹⁵

ABSTRACT

The relationship between political violence and greenfield foreign direct investment is contingent on the *type of violence, the characteristics of the investment-receiving sector, and the international scope of the investing firm*. Analysis with a dynamic fixed effects model for a panel of 90 developing countries shows that nationwide political conflict is negatively associated with total and non-resource-related greenfield FDI, but not with resource-related greenfield FDI. The insensitivity of resource FDI to political conflict is explained by the high profitability of natural resource extraction and geographic constraints on location choice. In the non-resource sector, the least geographically diversified firms are most sensitive to conflict. Other types of political violence, including intermittent violence in the form of terrorist acts and assassinations, or persistent but low-impact events, such as political terror, have no effect on the location choice decisions of multinational enterprises. These findings inform the strategies of multinationals with a nuanced and much needed understanding of the effects of political violence and the risks it poses to their businesses.

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3.1 INTRODUCTION

Although research on business in emerging and developing economies has flourished over the last decade (Meyer & Peng, 2016), there has been relatively little focus on the effect of political violence on multinational enterprise (MNE) strategy. This lack of attention is surprising because in terms of value more than 13% of all greenfield investments flowing to developing countries in the period from 2003-2012 went to countries experiencing a political conflict with at least 25 battle-related deaths per year, and nearly 5% went to countries experiencing a war (fDi Markets, 2013). Recent research on the topic acknowledges that many MNEs own subsidiaries in areas prone to political conflict and focuses on how firms can meet the challenges posed by this threat. Oetzel and Getz (2012) study how stakeholders affect the tactics MNEs use to strategically respond to conflict, whereas Bader and Schuster (2015) focus on the role of networks to eliminate the negative effect of terrorist threats on the wellbeing of expatriates. However, few studies explore the mechanisms that attract MNEs to these fragile states in the first place (Czinkota, Knight, Liesch & Steen, 2010; Driffield, Crotty & Jones, 2013).

Whereas the reasons for MNEs' entry into areas marred by political violence remain largely unknown, a considerable number of studies published in International Business (IB) and political economy journals have tried to answer the question of whether total foreign direct investment (FDI) inflows are in the least affected by political violence. On a conceptual level, scholars tend to agree that political violence has a detrimental effect on expected returns, reducing the propensity to invest. Nevertheless, the empirical results remain inconclusive. Nigh (1985) establishes that political violence in developing countries has a negative effect on U.S. manufacturing FDI, and Abadie and Gardeazabal (2008) show that terrorism has a large negative effect on inward FDI flows relative to Gross Domestic Product (GDP). Asiedu (2006) finds that in African countries, the number of coups, riots, and assassinations is negatively associated with the ratio of net FDI flows to GDP. However, in an earlier paper on the determinants of FDI in developing countries, she infers that the average number of assassinations and revolutions does not significantly influence FDI inflows (Asiedu, 2002). Li (2006) also concludes that the occurrence of unanticipated interstate wars has a negative influence on FDI, but he finds no significant association between FDI and intrastate wars or terrorist incidents, which represent most of the political violence incidents since the end of the Cold War (Pettersson & Wallensteen, 2015). In contrast to Li (2006), Busse and Hefeker (2007) find that civil war negatively affects FDI, whereas interstate war has no effect on FDI. Several other scholars find no relationship between political violence and FDI (Biglaiser & DeRouen, 2007; Li & **Vashchilko**, 2010; Oetzel & Oh, 2014), whereas Biglaiser and DeRouen (2006) and Asiedu and Lien (2011) find a positive relationship between FDI and conflict.

There are several explanations for these heterogeneous and seemingly contradictory findings in the literature on political violence and FDI. First, the relationship between

political violence and FDI is contingent upon the *type of violence*. Building on the literature classifying different types of risk (Miller, 1992; Oetzel & Oh, 2014), we develop the argument that the effect of political violence depends upon the extent to which violence poses a continuous risk to business activities. Risk is considered to be continuous if it is persistent and foreseeable, whereas discontinuous risk refers to events that are episodic and difficult to anticipate (Oetzel & Oh, 2014; Ramanujam, 2003). In contrast to Oetzel and Oh (2014), we conceptualize country risk as a continuum on which, at one end, persistent risks such as corruption and expropriation risk are continuous risks; and at the other end, less-predictable hazards, for example, terrorist attacks, pose discontinuous risks to MNEs. Political conflict falls in the middle; it is less predictable and persistent than corruption but more continuous than terrorism. Following Li (2006), we argue that a certain level of predictability is required for firms to adjust their location choice process; hence, only the types of violence that pose a relatively continuous risk may affect firm's location choice strategies. In addition, the geography of political violence matters because political conflicts that are geographically concentrated or localized in one part of the country are likely to pose less risk to an MNE investing in this country than political conflicts that are non-localized and are instead spread throughout the country.

Second, the relationship between political violence and FDI depends upon *characteristics of the FDI-receiving industry* as well as *firm-level attributes*. Industries differ in the degree to which investments yield economic rents. When expected returns are high, MNEs are willing to take additional risk to capture these rents and are hence more likely to invest in countries affected by political violence. Moreover, sectors differ in terms of geographic constraints on investment activity due to the availability of resources only in certain locations. Particularly when resources or inputs are scarce, the presence of limited investment opportunities might result in the insensitivity of FDI to political violence. In this paper, we test whether these mechanisms drive MNEs to conflict areas using data from the natural resource industry, a sector in which rents can be exceptionally high and location choice is significantly restricted. Finally, the ability of the MNE to diversify or absorb the potential downward shock of political violence moderates the relationship between political conflict and FDI. Geographically diversified MNEs are considerably less affected by political violence than relatively undiversified MNEs, present in only a small number of countries.

This paper is linked to the extensive literature on FDI and external sources of risk, notably political violence (Abadie & Gardeazabal, 2008; Dai, Eden & Beamish, 2003; 2016; Driffield et al., 2013; Li & Vashchilko, 2010; Oh & Oetzel, 2017) and political institutions (e.g., Burger, Ianchovichina, & Rijkers, 2016; Feinberg & Gupta, 2009; Globerman & Shapiro, 2003; Henisz & Delios, 2001; Meyer, Estrin, Bhaumik & Peng, 2009; Peng, Wang & Jiang, 2008). It builds on the work of Burger et al. (2016), who analyze sectoral heterogeneity with respect to the relationship between political risk and FDI in the Arab

World before and during the Arab Spring. We extend the analysis to a set of 90 developing countries. Developed economies are excluded because political violence is foremost a developing country phenomenon (see Figure 3.1). In contrast to Burger et al. (2016), who focus on political instability, this study explores the effects of political violence, defined as ‘collective attacks within a political community against the political regime, its actors – including competing political groups as well as incumbents – or its policies’ (Gurr, 1970, p. 3-4). Instances of political violence include civil wars, territorial disputes, acts of terrorism and genocides; cases of criminal behavior are not considered political violence (Kalyvas, 2013). Thus, political violence differs from political instability, which merely focuses on the probability of a regime change. The risk posed by political violence is also different from political risk, because, whereas political risk poses a relatively continuous risk, political violence is more discontinuous. In addition, political risk is generally conceptualized as uncertainty about government policy, which affects MNEs indirectly, whereas political violence is foremost associated with the direct effect of capital destruction. Instead of considering political violence as one homogeneous category, we study the different manifestations of political violence (political conflict, terrorism, state terror, and assassination) separately, recognizing the complex nature of the phenomenon.

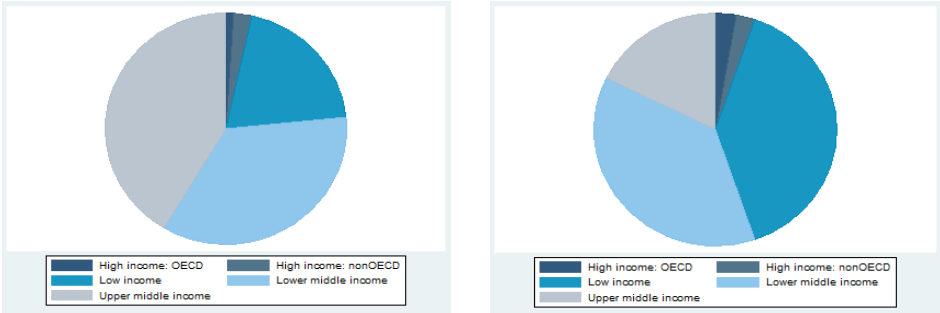


Figure 3.1 Pie charts depicting the number of deaths due to terrorist attacks (START, 2015) (left-hand side) and conflict (UCDP/PRIO, 2015) (right-hand side) for the period 2003-2012

In addition, this article relates to the literature on the strategy tripod perspective (Peng, Wang & Jiang, 2008; Peng, Sun, Pinkham & Chen, 2009). Since the conception of the institution-based view of international strategy that, combined with the resource-based view and the industry approach, forms the tripod of strategy, several studies have focused on the effect of institutions on international strategy and the interaction with the resource-based view (e.g. Darendelli & Hill, 2016; Goerzen, Sapp & Delios, 2010; Holburn & Zelner, 2010). Yet, this literature largely overlooks the interrelations with the industry-based view – a significant gap given the evidence that the sector in which an MNE operates matters for its location choice decisions in countries with weak institutions

(Burger et al., 2016; Driffield et al., 2013; Garcia-Canal & Guillén, 2008; Ramos & Ashby, 2013; Schotter & Beamish, 2013). Nevertheless, theory on the mechanisms that explains these heterogeneous effects is lacking. Building on the existing literature, we identify the underlying mechanisms that differentiate sectors and analyze the interrelations between industry-level mechanisms and the other two legs of the strategy tripod.

We also contribute to the existing IB and economic geography literature by developing theory that uncovers the mechanisms behind the heterogeneous relationship between political violence and FDI, testing several hypotheses that help explain the mixed results of previous studies. In our study, we bring together the notions of space, place, and organization, a previously identified and emerging topic in IB (Beugelsdijk et al., 2010). We incorporate the spatial context in three different ways. First, we consider the *geographic scope of political violence*, arguing that the effect of violence on inward FDI depends critically upon the extent to which firms can opt for a location in which the risk of attacks is minimized. Second, we develop the concept of *geographical constraints on location choice*, referring to the limitations on the location choice process resulting from requirements for inputs, which are exclusive, specific and irregularly dispersed across space, and we show that these constraints can moderate the effect of risk on location choice. Third, we show that the ability to absorb discontinuous risk depends on the *geographic diversification of a firm*.

In our study, we establish that there is considerable heterogeneity in MNEs' investment responses to political conflict in developing countries. This heterogeneity reflects differences in the type of violence, industry characteristics, notably the existence of rents and geographic constraints on location choice, and differences in the extent of a multinational's geographic diversification. We find empirical evidence that conflicts have a negative effect on FDI in manufacturing and services but no effect on resource-related FDI; this finding holds for nationwide conflicts and not for localized conflicts. Finally, we show that the negative effect of conflict on total greenfield FDI stems from the sensitivity of relatively undiversified MNEs' to political conflict. Most other types of political violence have no effect on any type of greenfield FDI.

These findings inform the strategies of MNEs with a nuanced and much needed understanding of the effects of political violence and the risks it poses to their businesses in the context of a significant rise in the incidence of politically violent events around the world in recent years (Ianchovichina, 2016). Building on the work by Ramanujam (2003) and Oh and Oetzel (2017), we show that the continuity of the risk posed by political violence is an important factor influencing MNEs' entry strategy into developing countries marred by political violence. Other factors that influence an MNE's sensitivity to risk include sector characteristics, the MNE's exposure to violence, and the ability of firms to diversify risk. Finally, our results suggest that political violence does not necessarily

depress earnings and put off investors; thinking otherwise is too simplistic. The paper shows that for geographically diversified MNEs entering a country in conflict may even be profitable.

Several policy implications emerge from this analysis. First, because conflict-related risks vary by sector and conflict type, it is imperative to collect and examine disaggregated greenfield investment and conflict data when analyzing FDI in fragile developing countries. Second, institutions offering investment guarantees must recognize the differential exposure and sensitivity of MNEs to conflict when pricing risk. Third, FDI to resource-rich, conflict-affected countries can hamper rather than facilitate countries' efforts to escape the conflict-resource trap. FDI flows to fragile countries are mostly financing resource projects, deepening resource dependence and thus threatening prospects for successful peace building (Doyle & Sambanis, 2000). Hence, the efforts of fragile developing countries to diversify and attract FDI into manufacturing and services sectors has to be accompanied by efforts to improve political stability, governance, transparency, and institutional quality.

The rest of the paper is organized as follows. Section 2 presents a review of the previous literature, a theoretical framework building on the risk and economic geography literature, and several hypotheses. Section 3 presents the econometric framework and the data. Section 4 discusses estimation issues, the main empirical results, and additional analysis exploring the robustness of the results. This section also discusses the mechanisms at play in the case of the oil and gas sector. Section 5 provides a summary of findings and suggestions for future research.

3.2 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

A large strand of the IB and economics literature has analyzed the role of risk in internationalization decisions (e.g., Agarwal & Ramaswami, 1992; Kogut & Chang, 1996; Pennings & Sleuwaegen, 2004; Rivoli & Salorio, 1996). Most of the theory explaining and classifying risk and uncertainty can be traced back to the work of Frank Knight (1921). According to Knight, risk applies to situations in which an informed agent can make a reasonable judgment on the probability of the event occurring; as such, risk differs from pure uncertainty in which these probabilities are unknown. Miller (1992) distinguishes three main sources of business risk: the general environment, the industry, and the firm itself. A large body of literature is focused on one specific type of environmental risk, namely political risk (e.g., Brunetti & Weder, 1998; Burger et al., 2016; Darandeli & Hill, 2016; Henisz, 2000; Kobrin, 1979; Miller, 1992; Schneider & Frey, 1985). Although several definitions of political risk exist (Kobrin, 1979), the concept is most often defined

as the risk that a sovereign government might change ‘the rules of the game’ to which firms ought to adhere (Butler & Joaquin, 1998).

The IB literature has traditionally analyzed the effect of three types of political risk on multinationals’ location choice decisions: corruption (Brouthers, Gao & McNicol, 2008; Cuervo-Cazurra, 2006; Habib & Zurawicki, 2002), absence of political constraints (García-Canal & Guillén, 2008; Henisz, 2000; Holburn & Zelner, 2010) and expropriation risk (Duanmu, 2014; Kobrin, 1984). The average effect of all three types of political risk on FDI is consistently found to be negative, although large differences exist depending upon the resources available to the firm. For example, Holburn and Zelner (2010) find that the effect of weak constitutional constraints on MNEs’ location choice is dependent upon whether the multinational acquired relevant political capabilities in its home environment, whereas Duanmu (2014) demonstrates that the strength of the home country’s political influence can moderate the effect of expropriation risk on FDI. Finally, Goerzen, Sapp and Delios (2010) show that experience in the host country positively affects the returns to FDI in environments with high political risk.

Similar to the studies mentioned above, we focus on risk deriving from the environment, specifically, the level of risk resulting from political violence. This risk is closely related to political risk because it also leads to ambiguity concerning government policy. During episodes of major political violence, a host government is more likely to change existing regulations or unexpectedly impose new ones, thus raising the cost of doing business once the MNE enters a market and incurs sunk costs (Li, 2006). These regulatory changes can include breach of contract, limiting repatriation of profits, exchange controls, embargoes, and other restrictive trade policies (Li & Vashchilko, 2010). However, political risk is different from political violence because political violence can also lead to extensive destruction of both human and physical capital due to fighting between government and rebel groups, or terror acts (Bodea & Elbadawi, 2008). In addition, whereas corruption, expropriation risk and political constraints are generally persistent over time, political violence can consist of singular incidents or short episodes of conflict, making it more difficult to predict accurately than other forms of political risk.¹⁶ For example, few predicted the Arab Spring uprisings in 2010 (Gause, 2011).

The above discussion links to the distinction between risk and uncertainty in which the difference between the two concepts is whether the probability of an event occurring is known. Because it is unlikely that managers know the exact probabilities with which political violence affects their business activities, it seems straightforward to conclude that political violence generates uncertainty instead of risk. However, in reality, managers

¹⁶ The literature on the determinants of political violence also remains inconclusive (for an overview see Blattman & Miguel, 2010).

attempt to approximate the odds of such events (albeit with a margin of error) and, when doing so, they inevitably convert uncertainty into risk. Still, their ability to convert uncertainty into risk depends largely on the process underlying the risk. Discontinuous risk of infrequent and episodic events is closer to pure uncertainty than continuous, Knightian risk of predictable events. The distinction between these two types of risk was made by Oetzel and Oh (2014), who built on the work by Ramanujam (2003). Following this distinction, political violence poses a more discontinuous risk than do most forms of political risk; hence, the occurrence of political violence confers less information about the event reoccurring.

The Multiple Facets of Political Violence and FDI

Although political violence can pose large risks to subsidiaries, the results of empirical inquiries into the relationship between FDI and political violence are inconsistent (Asiedu, 2011; Biglaiser & DeRouen, 2007; Dai et al., 2013; Driffield et al., 2013). A plausible explanation for these inconsistent findings is that the effect depends upon the type of political violence. Different types of violence (e.g., terrorism, conflict, and assassinations) not only have different effects on business activities but also differ in terms of the nature of the risk they pose. Following Oetzel and Oh's (2014) distinction between continuous and discontinuous risk, we recognize that (i) political violence poses a less continuous risk than do some types of political risk, such as corruption or the lack of constitutional constraints; and (ii) within the category of political violence, there remains substantial heterogeneity in terms of risk continuity. Whereas Oetzel and Oh (2014) presume that the effects of continuous and discontinuous risk are similar, we argue otherwise. In the case of a discontinuous risk, the event occurring does not directly affect the probability of reoccurrence; therefore, it most likely hardly affects risk assessment and ultimately location choice strategy.

Figure 3.2 illustrates our classification of political violence based on two dimensions: the continuity of the political risk and its level of impact on the MNE's operations. Both high level of impact and high degree of risk continuity are necessary conditions for political violence to affect location choice. First, we recognize that the impact of political violence must be high to affect location choice. Political conflicts (e.g. international wars and civil conflict) and terrorism,¹⁷ placed in the right-side panel of Figure 3.2, are high-impact events. They can lead to significant negative shocks to earnings because of property damage, death and injury of employees, destruction of required infrastructure, disruptions in the supply chain, and an increase in the cost of trade (Bodea & Elbadaw, 2008; Li & Vashchilko, 2010; Oh & Oetzel, 2017). Moreover, because of nationalistic sentiments,

¹⁷ Terrorism is *the threatened or actual use of illegal force and violence to attain a political, economic, religious or social goal through fear, coercion or intimidation* (LaFree & Dugam, 2007).

consumers might be reluctant to purchase products from a foreign firm, if it is a subsidiary of a company located in a country hostile to the host. This reluctance reduces the expected profitability of a subsidiary, particularly in the case of market-seeking FDI. As a result, the pay-off to an investment in a conflict-affected country is subject to a large one-sided risk, making FDI into such countries less attractive.

Political terror, defined as “*violations of physical or personal integrity rights carried out by a state*” (Wood & Gibney, 2010, p. 369), rarely directly affects an MNE’s earnings, although in rare cases, an MNE’s involvement in countries known for a lack of respect for human rights results in consumer boycotts in the home country (Driffield et al., 2013). Therefore, political terror is considered to be a relatively low impact event and it is placed in the left-side panel of Figure 3.2. Similarly, there is little reason to expect that political assassinations,¹⁸ affect an MNE’s investment decision as they have a limited effect on a subsidiary’s operations. Hence, this type of event also belongs in the left-side panel of Figure 3.2.

Type of impact → Type of risk ↓		Level of impact	
		Low	High
Continuity	Discontinuous/ Intermittent	Assassinations	Terrorism
	Continuous	Political Terror	Political conflict (e.g., civil conflict or interstate war)

Figure 3.2 Different types of political violence, organized by level of impact and continuity

Second, the risk of political violence has to be relatively continuous to affect location choice. In other words, the underlying event needs to be fairly persistent and predictable. Assassinations can be characterized as discontinuous because they are irregular and almost by definition difficult to predict; the success of an assassination depends upon an element of surprise. Similarly, following Oetzel and Oh (2014), we characterize terrorism as a discontinuous risk because isolated incidents tend to be uncommon and non-persistent. Some countries are more prone to attract terrorists, but the actual occurrence of terrorism is difficult to anticipate, making this type of violence more discontinuous than political conflict and terror. Oetzel and Oh’s study also showed that a recent terrorist attack does not significantly affect the probability of entry, confirming our statement that a certain level of continuity is a necessary condition for political violence to have a direct effect on location choice strategies. Finally, political terror, placed in the bottom left corner of

¹⁸ Political assassinations are the murder or attempted murder of a high government official or politician with a political aim (Banks, 2015).

Figure 2, poses continuous risk. This type of violence tends to be persistent and relatively predictable based on political trends, the quality of institutions, and the past prevalence of torture, extrajudicial killings, and political imprisonment.

Political conflict is defined as “a contested incompatibility that concerns government and/or territory where the use of armed force occurs between two parties, of which at least one is the government of a state” by Pettersson and Wallensteen (2015, p. 1). War that causes at least 1000 battle-related deaths per year is a specific case of political conflict. Conflict poses a continuous risk due to its persistent properties and relatively predictable nature. Political leaders often reveal parts of their military strategy in speeches, electoral statements, or political manifests. Moreover, after the onset of a political conflict, a manager is likely to readjust the risk perception of an investment because the probability of future battles is high. In other words, the incidence of battles conveys information about the probability of their impact on business activities and hence enables an updated risk assessment. Given that political conflict poses a continuous risk and at the same time has a high level of impact, we expect that particularly this type of political violence is negatively associated with the location choice decisions of MNEs. Thus, in the remainder of this paper, we focus on political conflict and formulate our first hypothesis.

H1: Total greenfield FDI flows in developing countries are negatively associated with political conflict.

Conflict heterogeneity: Geographic Scope

Type of political conflict → Type of sector ↓		Geographic scope	
		Localized/limited scope	Nationwide/wide scope
Geographic constraints	None	Less sensitive	More sensitive
	Severe	Not sensitive	Not sensitive

Figure 3.3 MNE’s sensitivity to political conflict: geography considerations

Although we expect that political conflict is negatively associated with FDI inflows, we also expect that this relationship is heterogeneous. The geographic scope of political conflict within a country can moderate the relationship between political conflict and FDI. Geographic scope refers to the extent to which the conflict is concentrated in one part of the country, where the scope is smallest in conflicts concentrated in only one province and largest in nationwide conflicts. In a subnational analysis, Dai et al. (2013) find that the likelihood of foreign subsidiaries’ survival is negatively associated with their geographic

exposure to conflict. Likewise, it can be expected that the sensitivity of MNEs to political conflict depends upon the extent to which they can limit their exposure to fighting. In countries affected by conflict with a relatively small scope, localized in one part of the country, MNEs can limit their exposure by locating elsewhere within the same country. This is not possible in countries marred by nationwide conflict. Therefore, a conflict with a small scope is likely to pose less risk to MNEs investing in a country than is violence with a large scope, prevalent in all areas of the country (Figure 3.3).

In addition, the goals of rebels fighting in remote or geographically confined areas tend to be different from the goals of groups participating in nationwide conflicts. Buhaug and Gates (2002) showed that geographically contained conflicts are more likely than nationwide conflicts to concern a territorial incompatibility because separatist groups are often active in their area of interest, whereas nationwide conflicts often involve a party contesting the national government. The second type of conflict is more likely to lead to a change in government and hence create additional political risk. Consequently, we can formulate our second hypothesis.

H2: The effect of a political conflict on total greenfield FDI flows to a developing country depends on the geographic scope of the conflict, so that total greenfield FDI flows are less sensitive to a localized than to a nationwide political conflict.

Sector heterogeneity: geographic constraints and economic rents

It is likely that the effect of political conflict on FDI is dependent upon industry characteristics (Driffield et al., 2013). We focus on two industry characteristics: geographic constraints on location choice and economic rents. First, FDI in some industries may be insensitive to political conflict because its set of location choices is restricted by requirements on inputs, which are exclusive, specific and irregularly dispersed across space (Figure 3.3). Only a limited number of locations can satisfy the criteria of an MNE that would like to invest abroad (Dunning & Narula, 2004; Narula & Bellak, 2009; Buckley et al., 2007; Mataloni Jr., 2011), particularly when the economic activities of the firm require high asset specificity (Burger et al., 2013). If assets are scarce and only available in a limited set of locations, MNEs face *geographical constraints on their location choice*.

With geographic constraints on location choice, the acquisition of a first-mover advantage (Lieberman & Montgomery, 1988) increases in importance. First-mover advantages, defined as the advantage of firms investing first over those that invest later, can arise from three sources: technological leadership, buyer switching costs, and pre-emption of rivals' acquisition of assets. Whereas technological leadership and, to a lesser extent, buyer switching costs are currently determined in increasingly global markets, first-mover advantages due to the acquisition of assets are specific to a geographical area. As a result,

location choice strategies play an important role in obtaining this type of advantage; this is particularly true for MNEs that are geographically constrained in their location choice. By being first in acquiring a license to operate in a location rich in scarce assets, the MNE preempts rival firms from accessing these assets (Lieberman & Montgomery, 1988), significantly affecting its profits. Smit and Trigeorgis (2004) show that if by investing a firm can obtain strategic advantages over its rivals, investing is the optimal action even when uncertainty is high.

Natural resource MNEs are particularly dependent upon specific scarce assets; thus, they are geographically constrained in their location. These firms might invest in a location despite the presence of political conflict to secure access and acquire the rents associated with a first-mover advantage (Mason & Weeds, 2010; Smit & Trigeorgis, 2004). As a result, MNEs active in the resource sector should be less sensitive to political conflict than MNEs in sectors in which location choice is less restricted. We refer to the effect of limited investment opportunities as the *geographic-constraints mechanism*.

Second, FDI flows may not be sensitive to conflict if the returns on an investment are sufficiently high to counteract the negative effect of the increased risk associated with conflict. In this article, we focus on the natural-resource industry, in which returns to investment can be especially high in times of commodity booms (Kolstad & Wiig, 2009). During resource booms, large rents increase the value of a project and hence increase the probability of investment despite high risk due to war. We refer to the effect of economic rents on the responsiveness of FDI to political conflict as the *economic-rent mechanism*. As the geographic-constraints and the economic-rent mechanisms are expected to be essential factors that differentiate the sensitivity of resource-related and non-resource-related FDI to political conflict, we formulate our third hypothesis.

H3: Resource-related greenfield FDI flows are less negatively associated with political conflict in developing countries than non-resource-related greenfield FDI flows.

Sector heterogeneity: geographic scope of conflict

The *geographical constraints on location choice* interact with the geographic scope of conflict (Figure 3.3). MNEs are constrained in their location choice by local resource availability, and not all locations are suitable for all types of investments because they lack the appropriate specialized location advantages (Mataloni Jr., 2011; Burger, Van der Knaap, & Wall, 2013). Particularly, for investments in the resource sector, the number of potential locations is limited given the very specific location requirements with respect to the presence of natural resources. If an MNE is limited in its location choice, it might not have the option to locate its subsidiaries away from political conflict, and we expect that the firm is not sensitive to conflict, irrespective of its geographic scope. Hence, firms active in the resource sector might be unable to locate their operations in a safe area that is

far away from a localized conflict, whereas MNEs active in non-resource industries might have several investment options within the same country and thus can choose a safer location. Therefore, in cases of localized conflict, resource MNEs might have fewer opportunities to circumvent areas where fighting is concentrated than firms that are less constrained in their location choices. Accordingly, we formulate the following hypothesis:

H4: The moderating effect of the geographic scope of conflict is larger for non-resource-related greenfield FDI flows than for resource-related greenfield FDI flows in developing countries.

Firm heterogeneity: MNE's ability to absorb risk through geographic diversification

Political violence tends to be exogenous to actions of investors (Li, 2006). It poses a type of uncertainty that can only be resolved with the passage of time and hence there is limited room for subsidiaries to implement strategies reducing the level of political violence. In a firm-level analysis Oh and Oetzel (2017) confirm this, showing that (general) experience with political conflict does not influence MNEs investment response to new disasters; only country-specific experience with conflict risk reduces MNEs sensitivity to conflict. Garcia-Canal and Guillén (2008) even found that firms that have invested in a high-risk economy in the past develop an aversion against entering countries with similarly high levels of risk.

Nevertheless, whereas MNEs might have limited influence on the level of political violence they face, the impact of political violence on a firm's internationalization strategy is likely to depend on firm-specific resources, particularly the firm's ability to absorb and diversify risks. Rugman (1976) already demonstrated that in the case of imperfectly correlated national economic fluctuations an MNE faces less risk than a comparable firm selling goods in one market alone because the number of subsidiaries in the MNE's portfolio reduces the variance of the overall portfolio of subsidiary results (Kogut & Kulatilaka, 1994). Several studies confirmed that geographic diversification improves firm's risk-return performance (Kim, Hwang & Burgers, 1993; Qian, 1996; Qian & Li, 1998). Following these findings, we expect that the degree of an MNE's geographic diversification will reduce the negative effect of the risks posed by political violence on earnings.

In addition, real options theory posits that geographic diversification confers firms the option to transfer production to another subsidiary in the case of unanticipated events (Kogut & Kulatilaka, 1994; Lee & Makhija, 2009; Li & Rugman, 2007). Accordingly, MNEs present in a relatively large number of countries can minimize the effect of downside risks on earnings. Both the option value and the value of diversification are largest when unanticipated events are not globally correlated (Belderbos, Tong & Wu, 2014). Because political violence tends to be limited to one or at most a few countries, this condition is typically satisfied. Hence, geographically diversified firms seem better able to

absorb risks posed by political conflict than relatively undiversified MNEs. Accordingly, we expected that conflict has a smaller effect on their expected earnings, increasing the probability that more diversified MNEs invest in countries characterized by a high conflict risk relative to less diversified MNEs. Finally, the most geographically diversified firms may be running out of opportunities to expand to highly attractive markets (Penrose, 1959). Hence, they might be more willing to invest in high-risk environments than less diversified firms.¹⁹ Oetzel and Oh (2014) also find evidence that the impact of terrorism on FDI is moderated by international diversification, albeit using it merely as a control variable. We therefore hypothesize the following:

H5: Greenfield FDI flows from more geographically diversified MNEs are less negatively associated with political conflict than greenfield FDI flows from less geographically diversified MNEs.

3.3 METHODOLOGY & DATA

Our economic model departs from the assumption that the decision to invest in a foreign subsidiary is a function of both expected returns and perceived uncertainty (e.g., Wheeler & Mody, 1992; Meon & Sekkat, 2012). Therefore, we assume that MNEs evaluate each investment opportunity individually and invest if the expected payoff exceeds a certain cutoff value. Hence, our model represents a positive sum economy in which an investment made in one country does not directly affect the amount of FDI in other territories. Guimaraes, Figueirdo and Woodward (2003) show that in models with only location-level determinants such as ours, the assumption behind the location decision does not directly affect results. We estimate the following sector-specific, reduced-form dynamic investment model:

$$FDI_{ist} = \alpha_0 + \alpha_1 FDI_{is(t-1)} + \alpha_2 P_{i(t-1)} + \alpha_3 X_{i(t-1)} + \mu_i + \mu_t + \varepsilon_{ist}, \quad (1)$$

The model links the greenfield foreign direct investment, FDI_{ist} , flowing into country i in sector s in year t with a range of variables underpinning perceived uncertainty and expected returns. These variables include lagged FDI in sector s ; political violence indicator $P_{i(t-1)}$ for country i in the previous year; a set of control variables $X_{i(t-1)}$, which capture conditions that might confound the relationship between political violence and

¹⁹ According to Penrose's (1959) view of firm growth, MNEs expand internationally to utilize firm-specific assets that exhibit economies of scope. Compared to MNEs that already operate in many foreign locations, MNEs in the early stages of international expansion are likely to have more limited international expertise. Yet, they have greater expansion opportunities that are tightly linked with their existing resource base than MNEs that are already geographically diversified.

greenfield FDI; a set of country dummies μ_i for time-invariant country characteristics; and a vector of time dummies μ_t .

The country fixed effects capture time-fixed heterogeneity, controlling for effects such as country size, resource endowments, culture, ethno-linguistic fractionalization, as well as institutions because institutions change very slowly over time. Moreover, the country fixed effects control for unobserved heterogeneity, limiting the risk of self-selection bias. We thus consider only within country variation, that is, whether a country attracts less FDI when its level of political violence increases. The time dummies capture time-dependent effects, such as global FDI waves, global commodity price fluctuations, and other global economic phenomena. The lagged FDI_{it} variable minimizes the risk of omitted variable bias because the amount of FDI received in the previous period is one of the best predictors of FDI received in the subsequent period. In addition, this variable makes possible the estimation of the long-term effects of our variables. To reduce the problem of reverse causality, all independent variables are lagged. However, ultimately, this model cannot determine causality, so the results should be interpreted as conditional associations, not causal relationships.

The data on flows of greenfield FDI into developing countries for the period from 2003 to 2012 are obtained from the fDi Markets database, a Financial Times databank tracking cross-border investment in new projects and expansions of existing ventures. The data are collected through Financial Times newswires, internal information and other media sources, project data acquired from industry organizations and investment agencies, and data purchased from market research and publication companies. Each project is cross-referenced against multiple sources. The dataset includes 51,800 greenfield investments in developing countries, amounting to US\$ 4.62 trillion. Annual FDI inflows are aggregated to the sector level of the receiving country. To test hypotheses three and four, we split total FDI flows into resource-related flows, which include flows to hydrocarbons, minerals, and agriculture, and non-resource-related FDI flows, which include flows to manufacturing, construction, distribution, and commercial services. FDI flows are measured in millions of US dollars, and because the distribution of these flows is skewed, they are log-transformed, using the logarithm of the inverse hyperbolic sine: $y = \ln(x + \sqrt{x^2 + 1})$.

We focus on greenfield investment because it consists of a relatively homogeneous group of investments in new facilities and excludes investments resulting from fire sales (Krugman, 2000). This focus eliminates concerns that heterogeneity of FDI is driving the results and the possibility that investment reflects repairs of facilities associated with prior investments rather than new projects. In developing countries, the inflow of greenfield investments is also considerably greater than the inflow of brownfield investments (Markusen & Stähler, 2011). A comparison of the number of greenfield investments in our dataset to all mergers and acquisitions (M&As) registered by the Thomson One data

service in the same period reveals that 81.6% were greenfield investments. Moreover, many policymakers are particularly interested in attracting greenfield FDI (UNCTAD, 2013). Finally, data on greenfield investments are more detailed than data on M&As. Although the Thomson One data service includes information on M&As, the size of the investment is missing for approximately 50% of the observations in developing countries for the period under study.²⁰

Following the political science literature, we measure political conflict using the number of battle-related deaths (*BRD*) per year in a country. The data are obtained from the UCDP/PRIO Battle Related Death database (Pettersson & Wallensteen, 2015) and are gathered using information taken from a selection of publicly available sources, including journals, news agencies, NGO reports and statements of governments. The battle-related deaths variable is a best estimate, based on all information evaluated by UCDP/PRIO. The variable measures fatalities in conflict situations such as conventional battlefield fights, guerrilla attacks on government personnel, and bombardments of military bases, cities, and villages. It only includes battle-related deaths for conflicts with more than 25 battle-related deaths per year. Although this indicator has limitations – e.g., it does not measure non-fatal casualties or damage to property – it is widely available for conflict countries and is considered a good proxy for political violence. In addition, this variable is less likely to be endogenous to FDI than most subjective measures of conflict because MNE investments are unlikely to cause battle-related deaths directly. Because the battle-related deaths variable is highly skewed, we take the natural log of the inverse hyperbolic sine function.

For our second and fourth hypothesis on the moderating effect of geographic scope of political conflict, we use again the UCDP/PRIO Battle Related Deaths dataset. UCDP/PRIO records the warring parties and the incompatibility of each conflict. The geographic scope variable is a dummy, which is 0 if a conflict is localized and 1 if a conflict is nationwide. First, we coded every secessionist conflict as *localized* because secessionist fighting is generally confined to the territory that is fought over (Buhaug & Gates, 2002). Subsequently, we manually checked whether conflicts, in which the incompatibility concerned the government instead of a regional territory, were nationwide by analyzing articles on the conflict on the website of BBC news and profiles of the insurgents on the START website (2014). Finally, we visually confirmed our coding using maps based on the UCDP/PRIO Georeferenced Event Database (Sundberg & Melander, 2013) for all conflicts in Africa and South Asia. Unfortunately, UCDP/PRIO GED does not yet collect georeferenced data on conflicts on other continents. We found no

²⁰ Some of the data on the size of investment are estimated by fDi Markets rather than directly observed. Therefore, we repeated our estimations with the number of projects (*ln*) as the dependent variable. The results were qualitatively the same as those reported here and are available from the authors on request.

inconsistencies in the coding based on the information provided by BBC News or START. We exclude the main effect of localized conflict from our regressions because the type of conflict is virtually country invariant and is hence absorbed by the country fixed effects in our regression.²¹ If a country experienced both a localized and non-localized conflict, we coded the observation as having experienced a nationwide conflict. In 22.4% of the observations, there is an ongoing conflict; of those, 56.6% are coded as localized.

Although fDi Markets records FDI data on the project level, it does not include any information on the investing firm other than the name of the company and its parent company. We collected firm-level data from Bureau van Dijk's Orbis database, containing annual report data of over 79,000 companies worldwide, and manually matched these data to companies in the fDi Markets dataset. Nevertheless, 32.9% of all investment projects in fDi Markets could not be linked to companies in the Orbis dataset. We code geographically diversified firms using a dummy variable which is 1 if the firm has subsidiaries in at least 10 countries and zero otherwise.²² To facilitate the comparison of different models and to limit sample selection bias,²³ we divide greenfield FDI into FDI by geographically diversified firms and FDI by other firms. Whereas we restrict the coefficients of our control variables to be fixed at the country-year level, the effect of political conflict and the constant are allowed to vary over the values of the diversification dummy. In the section containing our robustness analysis, we also present the results of a firm-level model.

The data on our control variables come primarily from the World Bank's World Development Indicators Database. We control for *GDP* given in millions of US\$ in 2013 prices; the size of the *population*; and *inflation* measured as the annual growth rate of the GDP implicit deflator. In addition, we add three variables that control for continuous political risk: the *level of democracy*; *regulatory quality*; and *control of corruption*. Democracy is measured by the Polity Index developed by Marshall and Jaggers (2002), which ranges from -10 to +10, where low negative numbers indicate autocracies and high positive numbers correspond to democracies. The quality of regulations indicator, part of the World Governance Index (WGI) (Kaufman, Kraay, & Mastruzzi, 2011), measures perceptions of a government's ability to formulate and implement sound policies and regulations that permit and promote private sector development. The control of corruption

²¹ Only Pakistan and Mali experienced both a localized and non-localized conflict.

²² Firms that were not matched to firms registered by Orbis or firms for which no data were available on the number of employees were assumed to be small and hence undiversified. We also tested our hypotheses using other operationalizations of the diversification variable and obtained results that were qualitatively the same. These results are available from the authors on request.

²³ Data on firm-level variables other than multinationality were limited, even more so than the data on the geographic location of subsidiaries.

measure also comes from the WGI and measures the extent to which public officials use power for private gain. Both WGI variables are measured as a z-score varying from approximately -2.5 to 2.5, with higher values corresponding to better governance. Furthermore, we control for nominal *exchange rates* (level and standard deviation²⁴) using data collected through OANDA. Appendix 3.1 provides descriptive statistics and the correlation matrix. Appendix 3.2 shows a list of all countries included in the sample.

3.4 ESTIMATION & EMPIRICAL RESULTS

Using a fixed effects estimator to estimate the dynamic model (1) presents a problem. In panels with a large number of countries but a small number of time periods, the standard fixed effects estimates are inconsistent because the transformation process creates a correlation between the regressor and the error (Nickell, 1981). We therefore use the bias corrected least-squares dummy variable dynamic panel estimator, also known as the LSDVC model, developed by Bun and Kiviet (2003) to correct for this Nickell bias, where a system GMM estimator initializes the bias correction. In a simulation, Flannery and Hankins (2013) compared the LSDVC model to other popular models designed to address dynamic panel data bias, including the popular system GMM model developed by Blundell and Bond (1998). They find that even in the case of moderate endogeneity and serial correlation, the LSDVC emerges as the most accurate methodology. We estimate dynamic model (1) separately for the resource and non-resource sectors and perform a Chow test (Chow, 1960) in order to test whether the coefficients in the resource and non-resource FDI estimations are statistically different from each other. The Chow test is designed to test whether the coefficients of a model estimated over one group are similar to those estimated in another group.

In addition to analyzing the short-term effect of political violence on greenfield FDI inflows, we are also interested in the long-term effect, which is the total cumulative effect from year t until infinity. The dynamic panel model (1) makes it possible to identify the long-term equilibrium effect of political violence on greenfield FDI as follows:

$$\alpha_{LR \ln(BRD)} = \alpha_2 / (1 - \alpha_1) \quad (2)$$

Results

Table 3.1 shows the baseline results estimated using the Bun and Kiviet LSDVC estimator. We estimate six different specifications in which the dependent variable represents total greenfield FDI (columns 1 and 2), resource greenfield FDI (columns 3 and 4), and all other greenfield FDI, also referred to as non-resource FDI (columns 5 and 6).

²⁴ Following the literature, exchange rate volatility is operationalized as the standard deviation of the first difference of the natural logarithm of daily bilateral exchange rates vis-a-vis the U.S. dollar.

Table 3.1 Effect of Political Violence on Total, Resource, and Non-resource Greenfield FDI

	Dependent Variable: Log greenfield FDI (in USD millions), LSDVC Estimation					
	Total FDI		Resource-Related FDI		Non-Resource-Related FDI	
	(1)	(2)	(3)	(4)	(5)	(6)
BRD _{t-1} (ln)	-0.095+ (0.052)	-0.111 (0.072)	0.009 (0.074)	0.046 (0.102)	-0.125* (0.051)	-0.225** (0.070)
BRD (ln)*localized _{t-1}		0.033 (0.096)		-0.075 (0.137)		0.202* (0.094)
Greenfield FDI _{i, t-1} (ln)	0.190*** (0.042)	0.189*** (0.043)	0.095* (0.043)	0.095* (0.043)	0.119** (0.044)	0.109* (0.044)
GDP _{t-1} (ln)	-0.427 (0.594)	-0.440 (0.597)	-1.484+ (0.848)	-1.461+ (0.851)	0.126 (0.582)	0.061 (0.583)
Population _{t-1} (ln)	8.696** (2.831)	8.734** (2.838)	14.547*** (4.027)	14.528*** (4.035)	6.432* (2.763)	6.583* (2.759)
WGI regulatory quality _{t-1}	-0.069 (0.647)	-0.084 (0.651)	1.616+ (0.925)	1.655+ (0.929)	-0.819 (0.635)	-0.916 (0.637)
Polity Index _{t-1}	0.006 (0.049)	0.002 (0.049)	0.014 (0.070)	0.022 (0.070)	-0.012 (0.048)	-0.033 (0.048)
Exchange Rate _{t-1} (ln)	-1.515+ (0.783)	-0.272 (0.367)	-1.447 (1.024)	-1.438 (1.026)	-0.893 (0.741)	-0.870 (0.741)
Exchange Rate Volatility _{t-1}	-24.344** (7.480)	-24.497** (7.476)	-12.680 (10.638)	-12.378 (10.626)	-12.606+ (7.331)	-13.489+ (7.317)
Control of Corruption _{t-1}	1.495* (0.627)	1.487* (0.629)	0.784 (0.893)	0.804 (0.896)	1.306* (0.611)	1.259* (0.612)
Inflation _{t-1}	-0.002 (0.008)	-0.002 (0.009)	0.011 (0.012)	0.011 (0.012)	0.001 (0.008)	0.002 (0.008)
Long-term BRD (ln)	-0.117* (0.065)	0.137 (0.088)	0.010 (0.083)	0.051 (0.113)	-0.142* (0.059)	-0.253** (0.079)
Observations	707	707	707	707	707	707
Number of countries	90	90	90	90	90	90
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: Political conflict proxied by battle-related deaths. Bootstrapped standard errors in parentheses.

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Battle-related deaths are negatively associated with total FDI flows, and the variable is significant at the 10% level. A 10% increase in the number of battle-related deaths decreases total greenfield FDI flows by approximately 0.95%, *ceteris paribus*. This effect is in addition to the decline in FDI stemming from worsening macroeconomic conditions and restrictions in investment policies; these additional effects are captured by the controls for changes in GDP, exchange rates, inflation, and the regulatory quality index. The long-term effect of BRD on total greenfield FDI flows is slightly larger than the short-term effect. A 10% increase in BRD decreases greenfield FDI with 1.2%. We therefore find support for the first hypothesis (H1), namely that political conflict has a negative effect on total greenfield FDI.

In the second specification, we take into account the geographic scope of conflict by adding a moderator for scope of conflict to the model. The coefficient of the moderator is positive and eliminates the negative effect of the main effect. However, the moderator is not significantly different from zero. Therefore, we find no support for our second hypothesis (H2) that the effect of political conflict on total FDI flows depends on the geographic scope of the conflict. The fact that the number of BRD in a localized conflict reflects more intense fighting than the same number of BRD in a nationwide conflict could offset the effect of the geographic scope of conflict on the relationship between conflict and FDI. This could explain why the scope of conflict moderator is not statistically significant.

With respect to the control variables, the lagged FDI term is highly significant across both specifications. Exchange rate volatility and level are negatively associated with FDI flows. The effect is particularly strong for exchange rate volatility. Control of corruption and large population size are positively and significantly associated with FDI flows, whereas regulatory quality, level of democracy, inflation and GDP do not significantly affect FDI in any of the specifications, possibly because these variables vary little during the years covered by our sample.

In columns 3 to 6, we show results from split sample analyses for resource-related and non-resource-related FDI. In the resource sector, the coefficient on BRD is positive, very small and not statistically significant (column 3). The addition of the localized conflict moderator (column 4) slightly increases the estimate of the positive effect of BRD, but the moderator itself is small and statistically insignificant. Additionally, the long-term effect of BRD on resource-related FDI is positive and insignificant. Hence, there is no evidence that political violence affects greenfield FDI flows to this sector, either over the short or long term.

In the models in columns 5 and 6 explaining FDI to the non-resource sector, the effect of political conflict is negative and statistically significant at the 5% level; this effect is

slightly larger than that for total FDI. A 10% increase in BRD decreases greenfield FDI flows to non-resource sector by 1.3%. A Chow test shows that this effect is significantly larger than the effect on resource-related FDI at the 5% level. Hence, we find empirical support for the third hypothesis (H3), namely that resource-related FDI is less sensitive to conflict than non-resource-related FDI.

The scope-of-conflict moderator (column 6) is positive, relatively large, and significant at the 5% level. A Chow test shows that the moderator is significantly larger in the model explaining non-resource-related FDI (column 6) than in the model analyzing resource-related FDI (column 4). Hence, we find support for hypothesis 4. Due to the addition of the moderator, the coefficient of BRD becomes more negative and its significance increases to the 1% level. Whereas an increase in the BRD in a localized conflict does not affect greenfield FDI in the non-resource sector (effect size = 0.023, standard error = 0.072), a 10% increase in the BRDs in a nationwide conflict is associated with a significant reduction of 2.3% in greenfield FDI in the non-resource sector, *ceteris paribus*. The long-term effect is even slightly larger.

With respect to the control variables in the split sample analysis (columns 3-6), the lagged FDI term and the size of the population are highly significant in the regressions for both sectors. Exchange rates, the level of democracy and inflation do not significantly affect FDI in any of the specifications. The control of corruption and exchange rate volatility are important only in the non-resource sector, whereas GDP and regulatory quality have a significant effect only in the resource sector. The finding that the regulatory quality measure has an opposite sign in the split sample analyses is noteworthy. Compared to political violence, low-quality investment regulations pose a continuous risk to MNEs because these institutions are very persistent, and the risk posed by them is predictable. Our results suggest that the regulatory environment matters for resource activities, which tend to be associated with large capital investments. None of the results changed substantively when a non-corrected LSDV estimator was used, suggesting that the Nickell bias is small.^{25,26}

Table 3.2 shows the results for hypothesis 5. For these regressions we aggregated greenfield FDI, distinguishing between investments made by relatively diversified and undiversified MNEs. Since this results in a three-dimensional dataset (country - year - diversification dummy), the Bun and Kiviet LSDVC estimator is unsuitable. Instead, we

²⁵ The results of the non-corrected LSDV are reported in the appendix with a random effects and pooled OLS model. All support our hypotheses (1), (3) and (4).

²⁶ In an additional analysis, we excluded the level and volatility of exchange rates because the inclusion of these variables reduced the size of our sample by 25%. The results were qualitatively the same as those reported herein and are available from the authors on request.

estimate an Ordinary Least Square model with country and year fixed effects and robust standard errors.²⁷

Table 3.2 Effect of Political Conflict on FDI by relatively Undiversified and Diversified Firms

	Dependent Variable: Log greenfield FDI (in USD millions), LSDV Estimation					
	Total FDI		Resource-Related FDI		Non-Resource-Related FDI	
	Undiversified MNEs	Diversified MNEs	Undiversified MNEs	Diversified MNEs	Undiversified MNEs	Diversified MNEs
	(1)	(2)	(3)	(4)	(5)	(6)
BRD _{t-1} (ln)	-0.129+ (0.073)	-0.015 (0.082)	0.060 (0.071)	0.088 (0.071)	-0.145* (0.061)	-0.064 (0.061)
Constant	-50.651 (34.898)	-53.071 (34.912)	-106.398* (49.570)	-108.520* (49.577)	-51.979+ (30.738)	-54.134+ (30.729)
BRD (ln)*localized _{t-1}	-0.001 (0.079)		-0.122 (0.092)		0.084 (0.069)	
Greenfield FDI _{i,t-1} (ln)	0.120** (0.037)		0.037 (0.033)		0.137*** (0.036)	
GDP _{t-1}	-0.100 (0.460)		-0.933 (0.655)		0.293 (0.442)	
Population _{t-1} (ln)	3.955 (2.417)		7.898* (3.316)		3.761+ (2.155)	
WGI regulatory quality _{t-1}	0.275 (0.706)		1.091 (1.017)		-0.454 (0.620)	
Polity Index _{t-1}	-0.037 (0.044)		0.008 (0.047)		-0.050 (0.036)	
Exchange Rate _{t-1} (ln)	-0.400 (0.295)		0.050 (0.459)		-0.319 (0.295)	
Exchange Rate Volatility _{t-1}	-13.326* (5.404)		-6.163 (7.057)		-4.232 (3.556)	
Control of Corruption _{t-1}	1.000+ (0.568)		0.361 (0.778)		1.117* (0.542)	
Inflation _{t-1}	0.001 (0.008)		0.011 (0.010)		-0.002 (0.007)	
Observations	1,234		1,234		1,234	
Number of Countries	90		90		90	
Country FE	Yes		Yes		Yes	
Year FE	Yes		Yes		Yes	

Note: Political conflict proxied by battle-related deaths. Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

²⁷ For the analysis in Table 1 we show that the Nickell bias is limited and we assume that the bias remains negligible in the models distinguishing between diversified and undiversified MNEs.

The results in column 1 show that the effect of BRD on undiversified firms' greenfield FDI flows is negative but only statistically significant at the 10% level. A 10% increase in BRD is associated with a 1.3% decrease in FDI flows made by undiversified MNEs. In contrast, the effect of BRD on FDI of diversified firms, defined as those having subsidiaries in 10 countries or more, is close to zero and is not significant (column 2). A Chow test shows that the coefficients in models 1 and 2 are statistically different from one another at the 1% level, supporting hypothesis 5 that political conflict has a smaller effect on FDI made by diversified MNEs than on FDI made by undiversified MNEs. In columns 3 to 6, we also distinguish between resource-related and non-resource-related greenfield FDI flows of diversified and undiversified firms. The effect of BRD on resource-related FDI flows is small and statistically insignificant, irrespective of whether these are investments made by undiversified or diversified MNEs. This supports our previous finding that political conflict does not significantly affect resource-related FDI flows (see Table 3.1, columns 3-4).

The results for non-resource-related FDI flows (Table 3.2, columns 5-6) show a different pattern. Nationwide conflict negatively affects the non-resource-related FDI flows of undiversified firms. This effect is significant at the 5% level, indicating that a 10% increase in BRD decreases non-resource-related FDI flows of undiversified MNEs by 1.5%. Non-resource-related FDI flows of diversified MNEs are less affected by increases in the number of BRD and the coefficient is not statistically significant. The difference between the coefficients in regressions 5 and 6 is statistically significant at the 1% level. Thus, whether firms are geographically diversified matters for the relationship between political conflict and greenfield FDI flows only in the case of non-resource-related FDI.

3.5 ROBUSTNESS ANALYSES

In this section, we explore the robustness of the main results to the inclusion of other types of political violence. We also investigate the importance of within-sector heterogeneity and the robustness of our results to using an alternative measure of political conflict, distinguishing in particular between wars and conflicts. In addition, we test our hypotheses at the firm level using a two-stage Heckman model. Finally, the section discusses the special case of the hydrocarbons industry and the role of economic rents and geographic constraints on investment.

Different types of political violence

We argued in the theoretical section that there are two necessary conditions for political violence to affect FDI inflows. Violence must have a sufficient effect on a subsidiary's profits and pose a relatively continuous risk to its operations. Because political conflict is the only type of political violence that meets these conditions, we focused on this type of violence in the main results section. Nevertheless, the literature suggests that the effect of other types of political violence on FDI flows is mixed. Most studies on terrorism focus on

its impact on developed economies. They find that terrorism leads to a negative shock to a country's GDP and global capital markets (Abadie & Gardeazabal, 2003; Chen & Siems, 2004), a drop in inward FDI (Enders & Sandler, 1996), an increase of vacancy rates in Central Business Districts (Abadie & Dermisi, 2008), and a drop in the number of tourists (Drakos & Kutan, 2003). Studies on the effect of terrorism in developing countries, particularly those focusing on its relationship with FDI, are considerably less abundant. Moreover, those that consider developing nations show conflicting results (Abadie & Gardeazabal, 2008; Enders et al., 2006; Li, 2006; Oetzel & Oh, 2014; Powers & Choi, 2012). Similarly, studies on the effect of assassinations and political terror on total FDI do not reach a consensus (Asiedu, 2002; 2006; Bary, Clay & Flynn, 2014; Blanton & Blanton, 2007; Edwards, 1990). Most of these authors ignore other forms of political violence and risk in their empirical strategies, which could largely explain the mixed results.

In Table 3.3, we include measures for *terrorism*, *political terror* and *assassinations* in our regression models to test our assumption that political violence must be both relatively continuous and detrimental to returns on economic activity. We measure terrorism using the number of deaths during terrorist attacks from the Global Terrorism Database (GTD). This database, developed by the National Consortium for the Study of Terrorism and Responses to Terrorism, is based on reports from a variety of open media sources (LaFree & Dugan, 2007). We prefer this proxy to the number of terrorist attacks because it measures not only the prevalence of attacks, but also their intensity. The number of terrorist fatalities is highly skewed; hence, we transform the measure using the natural log of the inverse hyperbolic sine function. We measure political terror with the widely used Political Terror Scale (Wood & Gibney, 2010), an index constructed based on information from three sources: Amnesty International Yearly Country Reports, the U.S. State Department Country Reports on Human Rights Practices, and the World Reports of Human Rights Watch. The index ranges from 0 in the case of a strong rule of law to 5 in the case of widespread political terror. We measure the numbers of assassinations using the Cross-National Time Series data developed by Banks (2015).

The results confirm that terrorism, political terror, and assassinations in a country do not affect its total greenfield FDI inflows (Table 3.3, columns 1-3). The coefficient of the conflict variable BRD is negative and significant at the 10% level in two of the three regression models (columns 1-2). Although terrorism and assassinations do not significantly affect greenfield FDI in the resource sector, political terror has a positive effect on investment in this industry (columns 4-6), indicating that MNEs in the resource sector benefit from a certain level of oppression. This benefit could be explained by the fact that a high level of oppression might be necessary to keep certain governments in place. MNEs active in the resource sector might benefit in such an environment because they depend upon government contracts that might be reneged upon by a new government; hence, these MNEs have the most to lose if an incumbent ruler is removed from office.

The effect of conflict on resource greenfield FDI remains small and insignificant (columns 4-6). In the models explaining non-resource FDI, terrorism, political terror, and assassinations are not significantly different from 0. The effect of conflict (BRD) remains strongly negative and significant at the 0.1% or 1% level. The effect of conflict (BRD) remains strongly negative and significant at the 0.1% or 1% level. The type of conflict moderator is positive and significant at the 5% level. Hence, nationwide political conflicts have a strong negative effect on non-resource FDI, whereas localized conflicts have a negligible effect on this type of FDI.

Table 3.3 Effect of Political Conflict, Terrorism, Political Terror and Assassinations on Greenfield FDI

	Dependent Variable: Log greenfield FDI (in USD millions), LSDVC Estimation								
	Total FDI			Resource-related FDI			Non-Resource related FDI		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
BRD _{t-1} (ln)	- 0.133+	- 0.125 +	-0.112 (0.072)	0.037 (0.107)	-0.004 (0.103)	-0.036 (0.083)	0.254** *	0.216* *	0.226* *
BRD (ln)* localized _{t-1}	0.034 (0.096)	0.039 (0.096)	0.034 (0.096)	-0.074 (0.138)	-0.053 (0.137)	0.058 (0.113)	0.202* (0.082)	0.198* (0.094)	0.202* (0.094)
Terrorism _{t-1} (ln)	0.074 (0.072)			0.031 (0.102)			0.098 (0.070)		
Political terror _{t-1}		0.186 (0.166)			0.632* *			-0.006 (0.139)	
Assassinations _{t-1}			0.006 (0.063)			0.035 (0.090)			0.004 (0.062)
Observations	707	707	707	707	707	707	707	707	707
Number of countries	90	90	90	90	90	90	90	90	90
Economic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: Political conflict proxied by battle-related deaths. Bootstrapped standard errors are in parentheses.

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Within-sector heterogeneity

The analyses so far distinguish between non-resource and resource industries but there might be substantial within-sector heterogeneity that may affect our results. There are substantial differences between the manufacturing and service industries, for example, in terms of sunk costs and labor intensity. There might also be considerable heterogeneity in the natural resource category. Investments in the hydrocarbon industry (oil, gas and coal) might not be sensitive to political violence because they occur in remote locations (offshore). Recognizing these differences, we re-estimate the model using more disaggregated data on manufacturing and services FDI flows and hydrocarbon and non-hydrocarbon FDI flows.

Table 3.4 Effect of Political Conflict on Manufacturing, Services, Hydrocarbon, and Non-hydrocarbon Greenfield FDI

Dependent Variable: Log greenfield FDI (in USD millions), LSDVC Estimation				
	Manufacturing FDI (1)	Service FDI (2)	Hydrocarbon FDI (3)	Non-hydrocarbon FDI (4)
BRD (ln)	-0.132+ (0.071)	-0.209** (0.067)	0.055 (0.105)	0.091 (0.091)
BRD (ln)*localized _{t-1}	0.123 (0.101)	0.168* (0.096)	0.020 (0.142)	-0.082 (0.123)
Observations	707	707	707	707
Number of countries	90	90	90	90
Economic Controls	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: Political conflict is proxied by battle-related deaths. Bootstrapped standard errors are in parentheses.

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Our results confirm that the negative effect of conflict on non-resource FDI is observed in both the manufacturing and service industries (Table 3.4, columns 1 and 2). The coefficients of the conflict variable and the scope-of-conflict moderator are similar across the two specifications and a Chow test shows that the coefficients of the BRD variable are not systematically different for the two industries. This indicates that it is valid to group manufacturing and services into one non-resource industry. The results in columns 3 and 4 suggest that the effect of conflict on hydrocarbon and non-hydrocarbon FDI is comparable in size and positive but insignificant in both cases. In addition, a Chow-test shows that the difference between the BRD coefficients in columns 3 and 4 is not statistically significant. Hence, there is no evidence that the insensitivity of resource-related FDI to political conflict is driven solely by the hydrocarbon sector.

Conflict and war onset

As an additional robustness check, we use a dummy variable for conflict onset instead of our continuous BRD variable to measure whether a country experiences a conflict or a war according to the definitions of UCDP/PRIO. We code an observation as a conflict if there were at least 25 BRD but not more than 1000 BRD in a year and as a war (or a large conflict) if there are at least 1000 BRD per year. Thus, we measure the effect of conflict and war onset rather than the intensity of the disputes. Figure 3.4 shows that conflicts are more prevalent than wars and that in both categories approximately half of the disputes are localized and the other half are nationwide.

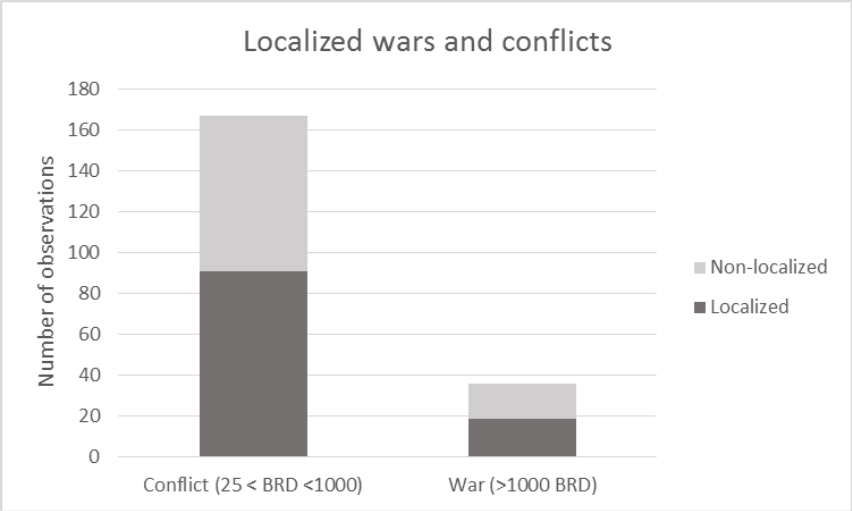


Figure 3.4 Incidence of conflict and war and their geographic scope in developing countries over the period of 2003-2012

Table 3.5 shows the results of the LSDVC regression model, including dummy variables for conflict and war and moderators for their geographic scope. In Column 1 the coefficient of the political conflict dummy is negative and significant at the 0.1% level and the coefficient on the scope-of-conflict moderator is positive and significant at the 5% level. These results indicate that the onset of a nationwide political conflict has a large effect on greenfield investments and that the scope of conflict matters to MNEs. The onset of a nationwide political conflict decreases greenfield FDI flows on average by 86.2%, whereas the onset of a localized political conflict has a smaller effect which is not significantly different from zero (effect size = -0.413, standard error = 0.503). The main effect of war onset is also negative and as statistically significant as in the case of conflict onset, but as expected the size of the war effect is much larger than that of conflict. There is evidence that the scope of violence matters in this case too. The moderator for the onset of a localized war is positive and significant at the 10% level. Quantitatively, the onset of a

nationwide war has a very large effect on greenfield FDI flows; on average, the onset of nationwide wars is associated with a decline in greenfield investment flows of 93.2%. The onset of a localized war has a smaller effect on greenfield FDI and it is not significantly different from zero (effect size = -0.937, standard error = 0.778).

In Column 2 the main effect of conflict onset on resource-related FDI is negative, but insignificant. The coefficient of the moderator for geographic scope is positive, but also insignificant. Hence, there is no evidence that the onset of a conflict affects resource FDI, independent of the scope of the conflict. However, the onset of a war has a negative effect on resource-related FDI, which is statistically significant at the 10% level. The onset of a nationwide war decreases resource FDI flows by 84.1%, whereas that of a localized war has a small and statistically insignificant effect (effect size=-0.103, standard error = 1.183).

Table 3.5 Effect of Political Conflict and War on Total FDI, Resource FDI and Non-Resource FDI

	Dependent Variable: Log greenfield FDI (in USD millions), LSDVC Estimation		
	Total FDI (1)	Resource-related FDI (2)	Non-resource-related FDI (3)
Conflict Dummy _{t-1}	-1.985*** (0.528)	-0.562 (0.762)	-1.632** (0.522)
Conflict Dummy*Localized _{t-1}	1.572* (0.689)	0.123 (0.995)	1.683* (0.679)
War Dummy _{t-1}	-2.692*** (0.664)	-1.842+ (0.957)	-2.172*** (0.655)
War Dummy*Localized _{t-1}	1.755+ (0.999)	1.739 (1.441)	0.954 (0.986)
Observations	707	707	707
No. of Countries	90	90	90
Economic Controls	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

Bootstrapped standard errors are in parentheses.

*** p<0.001, ** p<0.01, * p<0.05, +p<0.10

In model 3 the main effect of conflict onset on non-resource-related FDI flows is negative and significant at the 1% level. The geographic scope moderator is positive and significant at the 5% level. The onset of a nationwide conflict reduces greenfield FDI flows to the non-resource sector by 80.4%, but the effect of a localized conflict is not significantly different from 0 (effect size = 0.051, standard error = 0.547). The onset of a war has a strong negative effect, but this effect is again only statistically significant if the war is nationwide. This analysis suggests that even when we consider conflict onset rather than conflict intensity, we find support for the hypotheses proposed in the theoretical section of

the paper. One additional insight we obtain is that unlike conflict onset, war onset has a negative effect on all types of greenfield FDI.

Firm-level Model

In this section, we discuss how we test our hypotheses using firm-level panel data. This method has the advantage of enabling us to measure geographic diversification continuously and to add control variables for firm-level characteristics that might confound the relation between FDI and political conflict. However, the disadvantage is that for many of the observations in the original dataset, firm-level variables were not available. Although as many as 67.1% of all parent companies in the fDi Markets dataset could be matched to firms registered in ORBIS, only for 1,413 of those firms (10.2%) data on firm-level characteristics were available. Although a sample of this size is not rare in IB research, it considerably decreases the precision of our estimates and the ability to detect statistically significant effects. In addition, a missing value logistic regression (Long & Freese, 2006) shows that firm-level data are not missing at random; the probability that data are missing depends on the sector and the level of political conflict. As this could considerably bias our results, we prefer the country-level estimates and show the estimates of the firm-level regressions merely for robustness.

The firm-level dataset comprises data on the 1,413 MNEs that invested in a developing country between the years 2003 and 2012 according to the fDi Markets dataset. For each MNE (m) we report greenfield FDI to a host country (i) in a certain year (t), resulting in the following regression model:

$$FDI_{mit} = \alpha_0 + \alpha_1 P_{i(t-1)} + \alpha_2 X_{i(t-1)} + \alpha_3 X_{m(t-1)} + \alpha_4 X_{io(t-1)} + \mu_i + \mu_t + \mu_o + \varepsilon_{mit}, \quad (2)$$

Similarly to our previous models, the independent variable of interest is political conflict P for country i in the previous year, while we control for destination country variables $X_{i(t-1)}$, a set of country dummies μ_i , and a vector of time dummies μ_t . In addition, we add fixed effects for the country of origin μ_o , controlling for time-invariant characteristics of the home country of the MNE. We also add a set of firm-level control variables $X_{m(t-1)}$, including greenfield FDI flows by the MNE m to country i in the previous year, the *age* of the firm (ln), the number of *employees* (ln), the rate of return on equity (*ROE*), and *geographic diversification*, measured by the number of countries in which the multinational is present (ln). The diversification variable is standardized to simplify the interpretation of the main effect of political conflict and the moderator. Finally, we include a set of bilateral variables, $X_{io(t-1)}$, controlling for the population-weighted *distance* (ln) between the host country i and country of origin o and whether the origin and host country share a *common language*, *common border*, or *colonial history*. Data on these bilateral variables were obtained from the gravity dataset developed by Head, Mayer and Ries (2010).

Table 3.6 Heckman estimation of the effect of Political Conflict on firm level greenfield FDI flows

	Dependent Variable: Log greenfield FDI (in USD millions), Heckman estimation					
	(1)		(2)		(3)	
	Total FDI		Resource-related FDI		Non-resource-related FDI	
	Intensive Margin	Extensive Margin	Intensive Margin	Extensive Margin	Intensive Margin	Extensive Margin
BRD _{t-1} (ln)	-0.247* (0.109)	-0.009 (0.022)	-0.093 (0.200)	-0.018 (0.041)	-0.276* (0.108)	0.002 (0.023)
BRD (ln) * localized _{t-1}	0.301** (0.106)	0.000 (0.022)	0.142 (0.191)	0.021 (0.041)	0.308** (0.106)	-0.010 (0.023)
BRD(ln)* Diversification _{t-1}	-0.018 (0.012)	0.007+ (0.003)	0.010 (0.027)	0.004 (0.007)	-0.007 (0.012)	0.007* (0.004)
Bilateral Controls						
Distance	0.196+ (0.113)	-0.228*** (0.016)	-0.908 (0.571)	-0.337*** (0.039)	-0.058 (0.215)	-0.254*** (0.017)
Common Border	-0.961** (0.371)	0.424*** (0.079)	0.925 (0.953)	0.349* (0.172)	-0.523 (0.535)	0.496*** (0.080)
Common Language	-0.538** (0.196)	0.307*** (0.040)	1.729* (0.767)	0.337*** (0.080)	-0.152 (0.379)	0.339*** (0.042)
Colonial History		0.126** (0.046)		0.145+ (0.087)		0.181*** (0.049)
Firm Controls						
Diversification _{t-1}	-0.155* (0.062)	0.096*** (0.014)	0.516 (0.381)	0.216*** (0.036)	-0.065 (0.113)	0.128*** (0.015)
FDI _{t-1} (ln)	0.009 (0.018)	0.061*** (0.002)	0.057*** (0.008)	0.068*** (0.003)	0.001 (0.018)	0.059*** (0.002)
Age _{t-1} (ln)	-0.105** (0.035)	-0.019* (0.009)	-0.209+ (0.118)	-0.029 (0.025)	-0.095** (0.033)	-0.004 (0.010)
ROE _{t-1}	-0.001 (0.001)	0.000+ (0.000)	-0.001 (0.005)	-0.002* (0.001)	0.000 (0.001)	0.001* (0.000)
Employees _{t-1} (ln)	-0.059 (0.051)	0.118*** (0.006)	0.247 (0.239)	0.137*** (0.014)	0.106 (0.137)	0.170*** (0.006)
Constant	177.034** * (46.194)	-57.929*** (9.001)	39.617 (77.702)	-50.043** (19.365)	201.298** * (48.315)	-62.014*** (9.271)
Inverse Mills Ratio	-1.427** (0.434)		0.300 (0.511)		-1.550*** (0.454)	
Observations	519,030		58,528		491,123	
Econ. Controls	Yes		Yes		Yes	
Destination FE	Yes		Yes		Yes	
Origin FE	Yes		Yes		Yes	
Year FE	Yes		Yes		Yes	

Standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

We estimate a two-stage Heckman model to simultaneously examine investment at the extensive margin - i.e. whether to invest - and the intensive margin - i.e. how much to invest. The first stage analyzing the extensive margin consists of a probit model, where the dependent variable is 1 if a MNE invested in a host country in year t and 0 otherwise. The second stage, examining the intensive margin, consists of an OLS-model estimating the amount of greenfield FDI (transformed using the inverse sine-transformation) for those firms that decided to invest. To avoid multicollinearity resulting from limited nonlinearity in the functional form, we use the colonial history dummy as our exclusion restriction. However, our results are also robust to using different exclusion restrictions.

Table 3.6 presents the results from the two-stage Heckman model. Column 1 shows the results for the regression of the intensive margin, where the dependent variable is the amount of greenfield FDI flows given that an MNE invests in a country. At the average geographic diversification level, a nationwide conflict has a significant negative effect on total FDI flows, whereas a localized conflict does not significantly affect greenfield FDI flows (Column 1). This is consistent with our hypotheses and main results. However, in the equation for the extensive margin there is no significant main effect of BRD, irrespective of the type of conflict. Hence, political conflict affects greenfield FDI flows through a decrease in the size of investment projects, whilst there is no evidence that conflict affects the probability that an MNE invests in a country.

The diversification moderator is not statistically significant for the intensive margin, but it is positive and significant at the 10% level for the extensive margin (Column 2). At particularly high levels of geographic diversification, with presence in at least 26 countries, the effect of BRD becomes positive. This indicates that for MNEs that are better able to absorb the risk posed by political violence, the increase of conflict can actually positively affect the probability of investment. Although this might seem counterintuitive, it could suggest that MNEs that are sufficiently diversified have a competitive advantage in countries with high discontinuous risk and can accordingly reap the monopoly rents associated with this advantage. This can in turn initiate entry into high-risk environments.

Concerning the control variables, distance positively affects the intensive margin, but has a negative effect on the extensive margin. A common border and a shared language negatively affect the intensive margin, but positively affect the extensive margin. In addition, a shared colonial history has a positive effect on the extensive margin. Hence, the bilateral controls indicate that an increase in psychic distance decreases the probability that an MNE sets up a subsidiary in a country, but increases the size of the FDI flow if the MNE makes an investment. Moreover, FDI in the previous year, the rate of return on equity and the number of employees positively and significantly affect the probability of investment, whereas they do not affect the size of the investments. Age has a significant negative effect on both the intensive and extensive margin, whereas geographic

diversification increases the probability of an MNE making an investment, while decreasing the size of FDI flow.

We also estimate the Heckman model separately for resource and non-resource FDI decisions.²⁸ The estimates for non-resource-related FDI flows (Column 3) are similar to those of total FDI flows. This is not surprising; in the firm-level dataset 88% of the observations concern non-resource FDI flows. However, the estimates for the resource sector differ (Column 2). Political conflict, the type of conflict and the diversification moderator are no longer significant. In line with our hypotheses, the effect sizes are also considerably smaller than the effects on non-resource-related FDI flows. However, the number of MNEs in the resource-related FDI regression is small and therefore, the estimates of the coefficients are relatively imprecise. This concern in combination with the sample selection effect, explained above, lowers our confidence in the Heckman estimates for the resource sector.

Testing the Mechanisms: The Role of Economic Rents and Geographic Constraints

This section examines the factors behind the insensitivity of resource-related FDI to political violence by focusing on the two mechanisms discussed in the theory section: the size of the economic rents and the geographic constraints on location choice. We focus on the oil and gas industry because no data on rents and location choice are available for other natural resource industries. The BP Statistical Review of World Energy provides a large dataset containing information on global oil, gas reserves and prices, obtained from government sources and published data. As a proxy for geographic constraints on location choice, we use proven global reserves of oil and gas that can be extracted from known reservoirs with reasonable certainty in the future. We first standardize the oil and gas reserves data (because oil and gas reserves are measured in different units) and subsequently take the average of the two measures to obtain our *gasoilreserves* variable. We then interact this score with battle-related deaths to test the limited-location-choice mechanism. The main effect of global oil and gas reserves is excluded because it does not vary over countries and is hence absorbed by the time fixed effects.

It is possible that oil-and-gas-related FDI flows and political violence are the result of the discovery of one of these valuable resources. Therefore, we also control for large oil and

²⁸²⁸ We estimate separate Heckman regressions for resource-related and non-resource-related FDI flows instead of including interaction effects to avoid the issue of interpretation concerning three-way interactions. In addition, the regression results in Table 1 show that also the control variables behave differently for the two sectors. Finally, many of the firms in the resource sector also make greenfield FDI in the non-resource sector.

gas field discoveries within a country using a dataset obtained from the BP Statistical Review of World Energy. The variable for discovery is a dummy coded as one if a major oil or gas field was found in the country, and zero otherwise. A *major gas/oil discovery* is a discovery of a field that contains at least 500 million barrels of oil or 79 million m³ of gas (Halbouty, 2001).

Table 3.7 Effect of Political Conflict on Greenfield FDI in the Oil and Gas sector

	LSDVC estimations, greenfield FDI in USD millions			
	(1)	(2)	(3)	(4)
BRD _{t-1} (ln)	0.064 (0.077)	0.090 (0.078)	-0.091 (0.114)	-0.097 (0.130)
Ln(BRD)*gasoilreserves _{t-1}		-0.090* (0.046)	-0.156** (0.055)	-0.156** (0.055)
Ln(BRD)*gasoilindex _{t-1}			0.002* (0.001)	0.002* (0.001)
Ln(BRD)*localized _{t-1}				0.013 (0.141)
Major Gas/Oil discoveries _{t-1}	-0.391 (0.507)	-0.332 (0.507)	-0.337 (0.505)	-0.336 (0.505)
FDI _{t-1} (ln)	0.086* (0.043)	0.086* (0.043)	0.081+ (0.043)	0.081+ (0.043)
GDP _{t-1} (ln)	-0.962 (0.877)	-0.950 (0.877)	-1.004 (0.874)	-1.008 (0.877)
Population (ln)	13.495** (4.312)	14.050** (4.330)	13.965** (4.313)	13.973** (4.322)
WGI regulatory quality _{t-1}	1.287 (0.997)	1.121 (1.002)	1.104 (0.998)	1.096 (0.996)
WGI Corruption _{t-1}	-0.419 (0.905)	-0.482 (0.905)	-0.656 (0.907)	-0.659 (0.909)
Polity Index _{t-1}	-0.061 (0.073)	-0.038 (0.074)	-0.052 (0.074)	-0.053 (0.074)
Real Exchange Rate _{t-1} (ln)	0.415 (0.545)	0.470 (0.544)	0.468 (0.542)	0.466 (0.543)
Exchange Rate Volatility _{t-1}	-2.525 (11.240)	-1.560 (11.242)	-3.752 (11.206)	-3.798 (11.208)
Inflation _{t-1}	0.009 (0.012)	0.010 (0.012)	0.010 (0.012)	0.010 (0.012)
Observations	707	707	707	707
Number of countries	90	90	90	90
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

The gas and oil reserves variable is standardized, and the gas and oil index is a price index.

Bootstrapped standard errors are in parentheses.

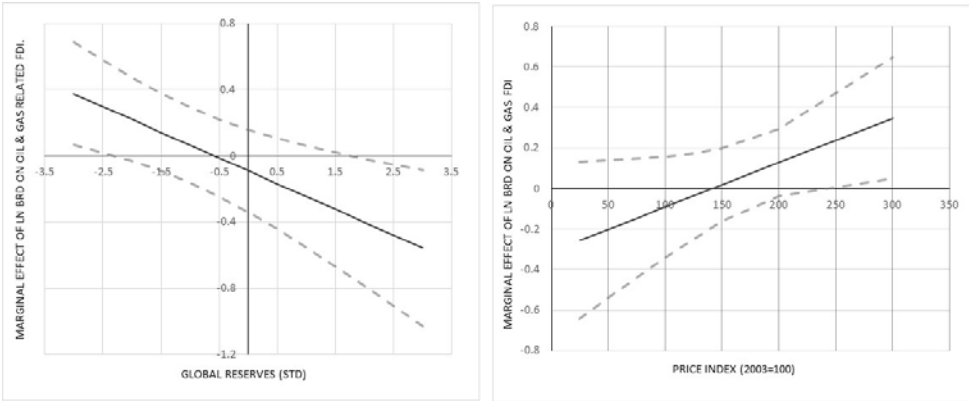
*** p<0.001, ** p<0.01, * p<0.05

We proxy oil and gas rents with a global price index of oil and gas prices (*gasoilindex*). This index is constructed using data from the BP Statistical Review of World Energy. We take 2003 as the base year and subtract 100 from the index to ease the interpretation of our results. We interact this price index with battle-related deaths to test for the effect of rents on the responsiveness of resource-related FDI to political violence. The main effect of our global oil and gas price measure is excluded because it does not vary over countries and is hence absorbed by the time fixed effects.

Column 1 of Table 3.7 shows the baseline model for the oil and gas industry. Similar to column 3 in Table 3.4, the results show that the effect of political violence on oil and gas FDI is comparable to the effect on total resource-related FDI flows (see columns 3-4, Table 3.1): battle-related deaths do not have a significant effect on oil-and-gas-related FDI. In columns 2 and 3, respectively, we add the moderator for hydrocarbon reserves and moderator for the price index. Figures 3.5a and 3.5b present the effect of these moderators, as estimated in model 3. The moderating effect of reserves on the relationship between battle-related deaths and oil and gas FDI is negative and significant, indicating that when new oil and gas reserves are discovered, MNEs active in the oil and gas sector are less willing to invest in countries marred by political violence. Nevertheless, the change in global reserves must be large for the total effect of conflict on greenfield FDI flowing to the hydrocarbon sector to be different from zero. Figure 3.5a shows that the effect of battle-related deaths on oil-and-gas-related FDI flows is positive if global reserves decrease by 0.5 standard deviations or more relative to the mean. However, the effect only becomes significantly greater than zero if global reserves decrease by at least 2.5 standard deviations relative to the mean. The effect of conflict on oil and gas FDI is significantly smaller than zero only if reserves increase by 2.0 standard deviations or more relative to the mean. If global reserves increase by two standard deviations relative to the mean, a 10 percent increase in battle-related deaths is associated with a reduction of greenfield FDI in the oil-and-gas sector of approximately 4%, *ceteris paribus*. Hence, our results suggest that during the estimation period, the geographic-constraints mechanism was at work.

The effect of political violence is positively moderated by oil and gas prices, indicating that the effect of battle-related deaths on FDI flows to the oil and gas sector depends positively upon the global prices of oil and gas. This dependency implies that during commodity booms when prices are high, MNEs are more likely to enter countries marred by political conflict than when prices are low. Figure 3.5b shows that only in cases of exceptionally high oil and gas prices do the effects of political violence on oil- and gas-related FDIs become significantly different from zero. For example, if prices are at their base 2003 level and global reserves are at their mean value, the effect of political violence on oil-and-gas-related FDIs flows is negative but insignificant. However, when the oil-and-gas price index increases to 240, i.e., the 2012 level, the effect of battle-related deaths becomes significantly positive at the 5% level. Hence, we find that the effect of political

violence on oil and gas FDI flows depends positively on economic rents or the profitability of oil and gas extraction and that the rent mechanism was at work towards the end of our investigation period. Finally, in Column (4), we add the moderator effect of localized and battle-related deaths to the model. The effect of this moderator is positive but insignificant and does not change the results associated with the rents and geographic-constraints mechanisms.



Figures 3.5a and 3.5b Marginal effect of ln(BRD) on oil- and gas-related FDIs at different levels of global oil and gas reserves (std) and oil and gas prices, respectively

3.6 CONCLUDING REMARKS

This study makes several contributions to the literature on political violence and FDI, particularly on the heterogeneous nature of their relationship. We argue that the relationship between political violence and greenfield FDI flows is contingent on the type of violence, the characteristics of the FDI-receiving sector and the international scope of the MNE. We differentiate among several different types of political violence: high- and low-impact events, discontinuous and continuous events, and localized and nationwide events. We also differentiate between resource and non-resource sectors, focusing specifically on differences stemming from geographic constraints on location choice and economic rents.

By disaggregating total FDI into sectoral flows and limiting our analysis to a homogeneous set of greenfield investments, we show that the effect of political conflict on greenfield FDI flows depends upon sector characteristics, particularly those flows tied to economic rents and geographic constraints on location choice. We show that while non-resource-related greenfield FDI flows are negatively associated with political conflict, resource-related greenfield FDI flows do not significantly decrease when political conflict

intensifies. We also find evidence that the effect of nationwide political conflict on non-resource FDI tends to be greater than the effect of localized conflict. Resource-related FDI is affected neither by localized nor geographically dispersed conflicts. Finally, we find evidence that political conflict particularly deters investment by MNEs that are relatively geographically undiversified. These results are remarkably robust across different specifications and provide a plausible explanation for the ambiguous results reported in the literature.

We empirically show that the insensitivity of resource MNEs to political violence can be attributed to the high profitability of resource extraction and these companies' geographic constraints on location choice during the period of estimation. These characteristics might not be the only attributes that distinguish the resource from the non-resource sector. Greenfield FDI in the resource sector also tends to be more dependent on government contracts and might have a longer time horizon. Yet, our moderator analysis for the hydrocarbon sector shows that high profitability of resource extraction and geographic constraints on location choice largely explain the insensitivity of the resource sector to political violence. The two mechanisms are related, as suggested by the prolonged period of high oil prices in the 2000s and the subsequent increase in investment opportunities provided by the discovery of hydraulic fracturing. During periods of commodity booms, profitability and limited investment opportunities reinforce one another. However, when the development of alternative sources of energy reduces the constraints on location choice within the resource sector, or if the economic rents associated with resource extraction drop, resource MNEs are likely to be considerably less willing to invest in countries experiencing political conflict. Although we use the oil and gas sector to illustrate the effect of the rents mechanism and the geographic constraints mechanism on the propensity of MNEs operating in this industry to invest in conflict areas, we recognize that certain non-resource sectors might also be characterized by these mechanisms. Hence, we argue more generally that MNEs active in sectors in which these mechanisms are at play are more likely to invest in countries experiencing political conflict.

Finally, our results suggest that a certain level of continuity and impact are necessary conditions for political violence to affect greenfield FDI flows. Only political conflict, a continuous and high-impact type of political violence, has a significant effect on greenfield FDI. Other types of political violence, such as terrorism and assassinations, do not affect greenfield investments, although political terror is positively associated with the flow of greenfield FDI into resources, possibly because political repression reduces political instability and the risk that resource licenses might be reneged upon due to government change.

The findings in this paper point to a vicious cycle between resource dependence and conflict by providing evidence that political violence entrenches the resource dependency

of fragile countries. We show that some types of political violence, namely repression through political terror, can be positively associated with resource-related FDI and that political conflict is detrimental to non-resource-related FDI – the type of investment considered most effective in promoting structural transformation and employment creation. At the same time, conflict does not affect resource-related FDI – the type of investment associated with the resource curse (Collier, 1998; Fearon & Laitin, 2003; Hodler, 2006; Poelhekke & Van der Ploeg, 2013; Sachs & Warner, 1995).

These findings provide managers of MNEs with a more nuanced understanding of the effects of political violence and the risks it poses to the MNE. We show that the continuity of the risk posed is an important factor influencing MNEs' entry strategy. However, also sector characteristics that influence an MNE's sensitivity to risk, the MNE's exposure to violence and the ability to diversify risk should be taken into account when making a risk assessment of investment into developing countries marred by political violence. As such, our results emphasize that the assumption that political violence necessarily depresses earnings and puts off investors is too simplistic. Our finding that political conflict positively affects greenfield FDI by the most diversified firms, suggests that entry into conflict countries might even increase earnings if MNEs are able to absorb discontinuous risk. As such, MNEs might want to consider entry into conflict countries – taking into account sector and firm attributes, despite the large level of risk posed, with the intention of obtaining a competitive advantage.

The main limitation of this study is that the empirical analysis cannot establish a causal relationship between FDI and political violence; therefore, the results should be interpreted as conditional associations. Although it is unlikely that total FDI flows have a direct effect on the number of battle-related deaths, FDI in the natural resource sector might affect political violence – particularly separatist violence – by intensifying grievances or increasing the perceived gains of secession. However, finding sources of exogenous variation in political violence that can be exploited in a panel format is challenging. Therefore, we address the endogeneity problem by including fixed effects and a large set of control variables, including income and quality of institutions. In the robustness analyses, we also control for the discovery of large oil and gas reserves because it is likely that the discovery of valuable resources rather than the involvement of an MNE fuels conflict. This additional control variable does not change our main results.

Another limitation lies in the data sources used. The data on greenfield FDI flows are collected through Financial Times newswires, internal information sources, other media sources, project data acquired from industry organizations and investment agencies and data purchased from market research and publication companies. MNEs investing in conflict countries might actively avoid publication of the investment project in the media to avoid a public outcry. This selection effect could drive our results on the effect of

political conflict on total greenfield FDI flows. To our knowledge, however, there are no FDI datasets that are not based on media coverage while simultaneously covering an equally large set of countries and allowing for disaggregation at the sector level. Nevertheless, it is unlikely that our results on sector heterogeneity are driven by sample selection bias. It could be expected that particularly resource-related FDI is sensitive to public outcry because this type of investment is generally believed to have negative environmental, economic and institutional development effects (Collier & Hoeffler, 1998; Fearon & Laitin, 2003; Hodler, 2006; Ross, 2004; Sachs & Warner, 1995). Non-resource-related greenfield FDI, however, is widely considered a vehicle for economic development and accordingly does not have a reputation as bad as resource-related FDI (Poelhekke & Van der Ploeg, 2013). Hence, it could be expected that managers in this sector face fewer incentives to avoid publication of FDI projects than do managers in the resource sector. Such a selection mechanism would yield results opposite to ours. It is therefore unlikely that this drives our sector-level results.

In addition, our data covers the relative short time period from 2003 to 2012. This limits our ability to analyze dynamics, including variations in the lag-structure of our models and the effect of sustained political conflicts. Accordingly, we cannot rule out that gestation periods are longer in the resource than in the non-resource sector. This could partially explain why we find that these firms are relatively insensitive to political conflict in the previous year. However, the results of our analysis for the hydrocarbon sector show that insensitivity of resource FDI to political conflict can be primarily explained by the profitability of resource extraction and geographic constraints on location choice. Because gestation periods are likely to be time-invariant, differences in gestation periods between the resource and non-resource FDI are unlikely to bias these estimates.

This study explores the heterogeneous effects of political violence on greenfield FDI flows to developing countries. Additional research could examine sectoral FDI and conflict at the subnational level. During such an examination, it is possible to consider the distance from the investment location to the epicenter of a conflict, the exact location and characteristics of an MNE, and the role of oil rent sharing between subnational and national governments in determining what affects the likelihood of MNE investment in an affected region. In addition, future research could explore how gestation periods matter for MNEs' sensitivity to political violence and whether prolonged conflicts affect firms differently than short-term outbursts of violence.

3.7 APPENDICES

Appendix 3.1: Descriptive Statistics and Correlation matrix

Variable	Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
(1) BRD (ln)	1.28	2.50	0.00	9.92	1																
(2) Localized Conflict dummy	0.25	0.43	0.00	1.00	0.292	1															
(3) GDP (current US\$, billions)	10.08	1.86	6.15	15.95	0.251	0.216	1														
(4) Regulatory Quality	-0.48	0.59	-2.26	0.69	-0.056	-0.032	0.315	1													
(5) Polity Index	2.69	5.44	-9.00	10.00	-0.024	-0.073	0.033	0.494	1												
(6) Population (ln)	16.45	1.48	13.10	21.02	0.368	0.356	0.802	0.054	-0.034	1											
(7) Exchange rate (ln)	4.30	2.84	-0.35	16.02	0.121	0.069	-0.23	-0.376	-0.027	-0.009	1										
(8) Exchange rate volatility	0.01	0.01	0.00	0.20	0.011	-0.02	-0.093	-0.07	0.049	-0.002	0.148	1									
(9) Inflation (annual %)	8.85	9.48	-25.31	103.82	0.015	0.034	0.01	-0.22	-0.08	0.036	0.125	0.055	1								
(10) Control of Corruption	-0.62	0.46	-1.51	1.00	-0.075	-0.057	0.171	0.605	0.238	-0.076	-0.438	-0.085	-0.125	1							
(11) No. of Assassinations	0.15	1.10	0.00	26.00	0.176	-0.021	0.078	0.021	0.038	0.074	0.065	-0.005	0	0.004	1						
(12) Political Terror Scale	3.11	0.86	1.00	5.00	0.482	0.215	0.27	-0.275	-0.222	0.511	0.179	0.077	0.109	-0.364	0.152	1					
(13) Terrorism: Fatalities	1.59	2.25	0.00	8.62	0.712	0.304	0.39	-0.066	-0.013	0.548	0.146	0.044	0.052	-0.145	0.161	0.557	1				
(14) Global Oil/Gas Reserves	0.36	0.98	-0.80	2.02	0.014	0.026	0.133	0.043	0.062	0.023	0.033	-0.057	0.024	0.014	-0.029	-0.054	0.008	1			
(15) Oil/Gas Price Index	101.23	42.45	21.96	165.83	0.025	0.02	0.109	0.02	0.038	0.016	0.033	-0.054	0.1	0.014	-0.069	-0.007	0.051	0.516	1		
(16) Major Oil/Gas discovery	0.08	0.27	0.00	1.00	0.031	0.109	0.391	-0.07	-0.167	0.338	-0.037	-0.036	0.032	-0.064	0.021	0.147	0.074	0.017	-0.002	1	

Appendix 3.2: List of countries in the sample

Albania	Ethiopia	Morocco
Algeria	Gabon	Mozambique
Angola	Gambia	Namibia
Armenia	Georgia	Nepal
Azerbaijan	Ghana	Nicaragua
Bangladesh	Guatemala	Niger
Belarus	Guinea	Nigeria
Bolivia	Guinea-Bissau	Pakistan
Botswana	Guyana	Panama
Brazil	Haiti	Papua New Guinea
Bulgaria	Honduras	Paraguay
Burkina Faso	India	Peru
Burundi	Indonesia	Philippines
Cambodia	Iran	Rwanda
Cameroon	Iraq	Senegal
Central African Republic	Jamaica	Sierra Leone
Chad	Jordan	South Africa
China	Kazakhstan	Sri Lanka
Colombia	Kenya	Sudan (-2011)
Congo	Lebanon	Suriname
Congo, Dem. Rep.	Liberia	Syria
Costa Rica	Libya	Tajikistan
Cote d'Ivoire	Madagascar	Thailand
Cuba	Malawi	Togo
Djibouti	Malaysia	Tunisia
Dominican Republic	Mali	Turkey
Ecuador	Mauritania	Uganda
Egypt	Mexico	Ukraine
El Salvador	Moldova	Uzbekistan
Eritrea	Mongolia	Yemen

Appendix 3.3: Results of Fixed Effects (LSDV), Random Effects and pooled OLS models

	Dependent Variable: Log greenfield FDI (in USD millions), LSDV Estimation		
	Total FDI (1)	Resource FDI (2)	Non-Resource FDI (3)
BRD _{t-1} (ln)	-0.120+ (0.065)	0.040 (0.093)	-0.228*** (0.064)
BRD _{t-1} (ln)*localized	0.049 (0.091)	-0.066 (0.129)	0.208* (0.088)
Observations	707	707	707
Number of Countries	90	90	90
Economic Controls	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

Robust standard errors are in parentheses.
 *** p<0.001, ** p<0.01, * p<0.05, +p<0.10

	Dependent Variable: Log greenfield FDI (in USD millions), Random Effects Estimation		
	Total FDI (1)	Resource FDI (2)	Non-Resource FDI (3)
BRD _{t-1} (ln)	-0.089* (0.040)	-0.045 (0.047)	-0.101* (0.047)
BRD _{t-1} (ln)*localized	0.082+ (0.045)	0.035 (0.061)	0.111* (0.052)
Observations	707	707	707
Number of Countries	90	90	90
Economic Controls	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

Robust standard errors are in parentheses.
 *** p<0.001, ** p<0.01, * p<0.05, +p<0.10

	Dependent Variable: Log greenfield FDI (in USD millions), Pooled OLS Estimation		
	Total FDI (1)	Resource FDI (2)	Non-Resource FDI (3)
BRD _{t-1} (ln)	-0.089* (0.040)	-0.045 (0.047)	-0.101* (0.047)
BRD _{t-1} (ln)*localized	0.082+ (0.045)	0.035 (0.061)	0.111* (0.052)
Observations	707	707	707
Number of Countries	90	90	90
Economic Controls	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

Bootstrapped standard errors are in parentheses.
 *** p<0.001, ** p<0.01, * p<0.05, +p<0.10

Chapter 4

*When political instability destroys historical ties**

Abstract

Although institutional and cultural distance evolve slowly, historical home-ties linkages can swiftly wear away as a result of political shocks. We investigate how shocks related to political instability, i.e. war and regime changes, affect the importance of historical ties for location choices of multinational enterprises (MNEs). We exploit firm-level variation in a unique dataset comprised of FDI flows to all low income countries in Sub-Saharan Africa from 2003 to 2013 and estimate a mixed logit model. The results show that violent conflict eliminates the positive effect of colonial relationships on the probability of MNE investment. This effect is confined to large conflicts where the probability of government takeover is largest. We also find that regime transitions erode the advantage that MNEs from previous colonizer states used to have. This implies that MNEs originating from a country with historical ties to the host country face incentives to prevent political shocks, whereas MNEs from countries without such home-host ties might actually benefit from threats to the status-quo.

* Witte, C.T., Burger, M.J. & Pennings, H.P.G. Submitted to the Journal of World Business.

4.1 INTRODUCTION

Home-host ties can systematically influence how multinational enterprises (MNEs) perceive risks in a host country. Following institutional theory, these relationships between countries can foster the embeddedness of MNEs and accordingly can improve trust between parties, increasing the ability of MNEs to control transactions and appropriate value (Rangan & Sengul, 2009). Whereas existent work comprehensively analyzed under which conditions ties resulting from migration or international treaties can enhance firm performance and affect entry into foreign markets (Hernandez, 2014; Jandhyala & Weiner, 2014; Williams, Lukoianova & Martinez, 2017), considerable less is known about the effects of historical relationships (Buckley, 2009; Dunning & Lundan, 2008; Godley, 2014; Jones & Khanna, 2006).

In this study, we examine the relationship between historical relationships and location decisions of MNEs. Historical ties, defined as historically developed relations between two countries (Makino and Tsang, 2011), can enhance MNEs' ability to appropriate value in a particular country and accordingly affect MNEs' location decisions. In this regard, a small number of studies confirm that historical ties continue to influence foreign direct investment (FDI) flows (Jones & Khanna, 2006; Kedia & Bilgili, 2015; Gao, Wang & Che, 2017; Karreman, Burger & Van Oort, 2017).

The existing literature on historical ties presumes that their relevance is persistent. This is, however, in contrast with – mainly anecdotal - evidence that economic and geo-political relationships have been shifting over the last two decades (Hurrell, 2006; Layne, 2012; Sauvant, 2008). As such, historical ties differ from concepts of institutional and cultural distance, which tend to evolve slowly if changing at all. Rangan and Sengul (2009) also emphasize the need for a better understanding of the historical component of home-host ties, including how they change over time. The objective of this study is to fill this gap in the literature by studying how contemporaneous political events in the host country affect the importance of historical home-host country relationships. Accordingly, we aim to gain a better understanding of whether the effect of historical ties on location choice decisions is heterogeneous.

We focus on one type of historical ties, namely ties that resulted from colonization. These ties can limit discretionary practices by the host country by enhancing trust and legitimization, reducing information asymmetries, improving sanctioning and supporting the formation of social networks (Makino & Tsang, 2011). As a result, MNEs from previous colonizer nations have a lower liability of foreignness and can obtain a comparative advantage in the host country. For example, Frynas (1998) documents that Shell, a large British-Dutch petroleum corporation, obtained considerable first-mover advantages in Nigeria's oil sector during British colonial rule in Nigeria. After decolonization, Shell maintained its political connections and continued to penetrate state

structures, contributing to the firm's ability to limit value-diverting discretion by the Nigerian government.

In particular, we examine how contemporary political events in the host country, in the form of wars and regime changes, moderate the relationship between colonial ties and location decisions. The effect of these events in the host country on the importance of home-host historical ties is ambiguous. On the one hand, wars and regime transitions are likely to reduce transparency in the market and increase the uncertainty associated with transactions. Under these conditions, trust and legitimacy might become more important mechanisms in the market and accordingly the value of historical ties might increase.

On the other hand, wars pose a serious threat to ties, because they increase the probability that a host country regime is replaced. After the fall of a regime, relational resources become less valuable, since the legitimacy of MNEs connected to the fallen regime is likely to diminish (Darandeli & Hill, 2016; Siegel, 2007). As a result, investments of connected firms would decrease. This would imply that MNEs originating from a country with ties to the host country face incentives to avoid shock to macrostructures, whereas MNEs from countries without such ties might actually benefit from shocks to the status-quo, as these shocks could level the playing field.

This paper is related to the literature on home-host ties. Rangan and Sengul (2009) and Rangan and Drummond (2011) argue that, besides the conventional geographical and institutional distance measures, home-host country ties matter for location choice decisions as they decrease the propensity of governments to appropriate assets, by increasing trust, improving monitoring and enabling sanctioning of host country actors. This is in line with studies showing that being connected through sociopolitical networks can substantially increase firm value, particularly in host countries with governments that with fewer formal institutional controls (e.g., Amore & Bennedsen, 2013; Fisman, 2001; Li & Zhang, 2007; Sun, Mellahi & Thun, 2010).

In addition, this study builds on the literature that has examined the heterogeneous effects of historical relationships on location decisions. In this regard, Gao et al. (2017) studied the impact of historical conflict on the location of Japanese FDI in China. They found that the number of casualties in Chinese provinces during the Second Sino-Japanese War affected the location choice of Japanese companies within China. Likewise, Head, Mayer, Ries (2010) found that post-colonial trade linkages erode over time and that hostile separations between the colonizer and colony resulted in large, immediate reductions in trade. Instead of focusing on disputes between the former colony and colonizer, of which there have been few over the last decades, we shed light on how political instability in the host country affects the relationship between historical home-host country relationships and location decision of MNEs.

We test the effect of colonial ties and political instability on the investment strategies of MNEs using a unique dataset comprised of greenfield and brownfield Foreign Direct Investment (FDI) in low income Sub-Saharan African from 2003 to 2013. Our main conclusions can be summarized as follows: large conflicts diminish the positive effect that historical ties have on the probability that an MNE invests in a country, whereas smaller conflicts do not seem to deter MNE investments. This suggests that historical ties still play an important role in the foreign investment climate in Africa, but, as a result of wars and ultimately government takeovers, their impact is likely to decline. Our results imply that non-connected MNEs could in the long run benefit from wars and regime changes because these events level the playing field and open the door for MNEs from economies without historical ties, including emerging market MNEs. In addition, connected firms have an incentive to avoid the outbreak of wars by, for example, financing an increase in state capacity or actively mediating between parties.

The remainder of the paper is organized in the following way. Section 2 presents the theoretical framework, section 3 describes the data and methodology and in section 4, the empirical results are presented. Section 5 concludes and discusses.

4.2 THEORETICAL FRAMEWORK

Historical home-host ties, value appropriation and location choice

According to internationalization theory, liability of foreignness emerges because MNEs face disadvantages in value creation in the host country compared to domestic firms (Hymer, 1976). The extent to which MNEs' firm capabilities can compensate for these disadvantages determines their profitability in foreign markets. Rangan and Sengul (2009) and Rangan and Drummond (2011) argue that in addition to heterogeneity in firm's value creation capabilities, the extent to which MNEs can appropriate the created value matters. As a result of asymmetric information, distrust and discrimination, MNEs tend to face larger constraints in value appropriation than domestic firms.

Home-host ties might reduce these constraints, because they can reduce information asymmetries, improve control and sanctioning and promote trust, accordingly reducing the probability of discretionary actions by governments. In the following paragraphs these three mechanisms through which historical ties in general, and colonial ties in particular, can improve an MNE's value appropriation are discussed in detail.

First, colonial ties increase familiarity with the host country institutions. Colonizers often created regimes in their colonies that were similar to the regimes in their home country and colonial history has continued to influence institutions even after decolonization (Jones, 1996). As MNEs learn and imprint the political routines in their home country, they tend to have a competitive advantage in institutional structures that are similar to those in their

home country (Cuervo-Cazurra, 2011; Holburn & Zelner, 2010). In addition, these institutional similarities promote the creation of political connections in the host country. In order to successfully develop these connections firms need to understand how institutional checks and balances are structured as to allocate their political networking activities over the political actors in a country (Sun, Mellahi and Wright, 2012). Having political connections can in turn improve access to information and enable firms to shape policies in their favor, reducing the probability that the host country government exercises value-diverting discretion (Rijkers, Freund & Nucifora, 2014; Diwan, Keefer and Schiffbauer, 2015). Accordingly, MNEs from previous colonizers might face fewer information asymmetries and accordingly be better able to safeguard their investments against value appropriation than MNEs without historical ties.

Second, ties can influence monitoring and sanctioning, increasing the ability of an MNE to influence the bargaining process in its favor (Henisz & Delios, 2004; Rangan & Sengul, 2011). Previous colonies tend to remain reliant on the previous colonizer, who often continues to provide them with military and development assistance (Alesina & Dollar, 2000). Sovereign discretion by the host government might result in a deterioration of its relationship with the home country, which could impose sanctions setting back the host country government (Stopford & Strange, 1992). Accordingly, continued political relationships can reduce the probability of discretionary actions *ex ante*.

Third, historical ties tend to give rise to a high-frequency of interactions which can in turn promote trust - especially if these interactions are fruitful (Inglehart, 1991; Makino & Tsang, 2011). Particularly in host countries with relatively weak institutions where the boundaries between corporate and government spheres are often blurred, feelings of trust are essential for MNEs to gain legitimacy in the eyes of the government and local communities (Marquis & Raynald, 2015; Sun *et al.*, 2012). Legitimacy in the eyes of key stakeholders can decrease the probability of unfavorable discretionary interventions such as expropriation of assets or profits (Stevens, Xie & Peng, 2016). In addition, by promoting trust and legitimacy historical ties can be conducive in the formation of long-lasting business networks (Rauch, 1999; Makino & Tsang, 2011). These business networks are important, because they are likely to increase experience with policymakers, improve access to information and accordingly decrease sovereign value appropriation.

MNEs that expect to better appropriate value are also more likely to make investments with the aim of creating value. Hence, historical ties likely increase the probability that an MNE invests in a host country. In an empirical analysis of FDI to Vietnam, Makino and Tsang (2011) confirm that historical ties have a positive impact on FDI flows. In addition, trade economists have recognized the positive effect that historical events such as colonization have on economic exchange between countries (Davies, Ionascu & Kristjánssdóttir, 2008; Frankel & Rose, 2002; Linders, Burger & Van Oort, 2008; Head *et*

al., 2010; Lavallée & Lochard, 2015). In line with these studies, we advance the following baseline hypothesis:

Hypothesis 1: Historical ties between the home and host countries increase the probability that an MNE invests in a given economy.

Political conflict and war

Political conflict is generally assumed to deter FDI – although there is considerable firm-level heterogeneity (Chen, 2017; Dai *et al.*, 2013; 2017; Driffield, Jones & Crotty, 2013; Witte *et al.*, 2017). Political conflict is defined as a contested incompatibility that concerns government and/or territory where the use of armed force occurs between two parties, of which at least one is the government of a state (Pettersson & Wallensteen, 2015), whereas wars are political conflicts that cause at least 1,000 battle-related deaths (BRD) a year.

In a country marred by political conflict, the pay-off to an investment is subject to great uncertainty due to a variety of downside risks. Conflicts are characterized by a high risk of asset expropriation, asset destruction, supply chain disruption, market disorder and death or injury of employees (Bodea & Elbadawi, 2008; Dai *et al.*, 2013; 2017; Li & Vashchilko, 2010). The host government is also more likely to change existing regulations or unexpectedly impose new ones, raising the cost of doing business once the MNE enters a market and incurs sunk costs. These regulatory changes can include breach of contract, limiting repatriation of profits, exchange controls, embargoes, and other restrictive trade policies (Li & Vashchilko, 2010). During an interstate conflict, consumers may also be reluctant to purchase products from a firm located in a hostile country due to nationalistic sentiments. This again reduces the expected profitability of a subsidiary, especially when it concerns market-seeking FDI. MNEs observe these risks *ex-ante* their investment decision, hence the second baseline hypothesis:

Hypothesis 2: Political conflict and war decreases the probability that an MNE invests in a given economy.

The erosion of historical ties: political conflict

In addition to the negative main effect of political conflict, the resulting instability is likely to affect the value of historical ties. Conflict limits the ability of a foreign government to exercise value-diverting discretion due to a decline in bargaining power of the host country's authorities (e.g., the licensing cost for mining concessions as in Guidolin & La Ferrara, 2007), and as a result of better access to information connected firms are most

likely to profit from this. This could provide them with benefits in terms of acquiring operating licenses or transforming formal institutions to the benefit of connected MNEs (Kostova, Roth & Dacin, 2008)

Moreover, conflicts make transactions less transparent allowing for unofficial profitable deals by connected firms. This suggests that the effect of conflict on FDI can be positive for firms from a home country that has historical ties with the host. Oh and Oetzel (2017) suggest a similar mechanism and find that MNEs with experience in the host country are in a better position to deal with conflict risk, because they can evaluate the strategy of the government and its capacity for bringing peace. This implies that by reducing information asymmetries the value of historical ties increases during conflict.

Conversely, if a conflict poses a large risk of a change of government, FDI flows from firms with historical ties to the conflict country might actually decrease. This is especially relevant in the case of a war. Previous work found that, when there was a change of government, the value of connected firms dropped (Acemoglu, Hassan & Tahoun, 2017; Faccio & Parsley, 2008; Fisman, 2001; Siegel, 2007). During wars, the probability of such a regime change increases, and, hence, the probability that political ties become worthless due to a regime change increases.

Moreover, firms connected to an incumbent regime are likely to lose their legitimacy in case of severe fighting or after a regime transition (Henisz & Zelner, 2005). Darendeli and Hill (2016) analyze the effect of the fall of the Qadhafi regime on Turkish MNEs active in the construction industry and find that these firms faced an increased risk of expropriation and a ban from operation in the country introduced by the new government. Rijkers *et al.* (2014) show that the removal of Ben Ali's regime during the Arab Spring resulted in similar risks for connected firms in Tunisia. Hence, being connected to the incumbent regime might become a liability in times of war and regime change. This is particularly true for MNEs from past colonizers, because these MNEs are often considered by African leaders as agents of imperialistic rule and are more likely to be attacked after a political crisis (Chironga *et al.*, 2011). Hence, for connected firms, the risk of a regime change augments the negative effects of war. This observation is supported by data from the World Bank Enterprise Survey (2015), in which it can be observed that Caucasian ownership is less abundant in countries that experienced long periods of war and frequent regime changes. Hence, whereas in smaller conflicts where there is less of a risk of regime change, firms with historical ties might be able to benefit, in large conflict (wars) the negative effects if being affiliated with the previous regime are likely to dominate.

Hypothesis 3a: The presence of a political conflict ($100 \leq BRD < 1000$) in the host country positively moderates the relationship between historical ties and MNEs' location choice strategies.

Hypothesis 3b: The presence of a war ($BRD \geq 1000$) in the host country negatively moderates the relationship between historical ties and MNEs' location choice strategies.

The erosion of colonial relationships: Regime changes

Like wars pose a large risk of a change in governments, the erosion of historical ties is likely to be accelerated when a government is overthrown, even when the regime change happens peacefully. Following convention in political science, we define regime transitions as a major change to the state polity, where state polity is defined as “the more or less institutionalized authority patterns that characterized the state” (Marshall, Gurr & Jagers, 2016, p. 5). Most of these regime changes are the result of a change in leadership, but it is not a formal requirement. As argued above, regime changes are detrimental to the value of connected firms, because their connections lose their value if there is a change of power (Acemoglu *et al.*, 2017; Faccio & Parsley, 2008; Fisman, 2001). Henisz and Delios (2004) also show that a firm's experience under a government increases subsidiary exits after a change of leadership. This implies that, after a regime change, connected MNEs have a competitive disadvantage compared to MNEs which are not regarded as being affiliated with the previous regime. This is likely to be the result of a loss of perceived legitimacy of MNEs connected to the previous regime, leading to increased risk of expropriation (Bucheli & Kim, 2012).

Moreover, a regime change necessarily translates into a new set of policies, which influence the business environment and could disturb home-host ties (Henisz & Delios, 2004; Siverson & Starr, 1994). This is likely to result in an increase in the institutional distance between historically connected nations. Hence, the information advantage of MNEs' with historical ties decreases. We formulate the following hypothesis:

Hypothesis 4: Historical ties are eroded by the number of regime changes that occurred in the host country after decolonization and therefore negatively moderate the effect of historical ties on MNEs' location choice strategies.

4.3 DATA & METHODOLOGY

Empirical Context

Our sample consists of MNE location choice decisions in low-income Sub-Saharan Africa. We focus on these economies for three reasons. First and most importantly, in this region colonial relationships are likely to have remained an important source of political capabilities and connections. Except for Liberia and Ethiopia, all African economies have been under colonial rule of Western European States, with France and Great-Britain controlling the majority of them. The separation of the African nations from its colonizers was relatively amicable. Business networks were initiated immediately after

decolonization to protect MNE interests and counter African nationalist movements (Casson & Da Silva Lopes, 2013; Quinn and Simon, 2006).

For example, the decolonization of French colonies in Sub-Saharan Africa was gradual, with the French keeping a strong military presence, remaining an important aid donor and upholding a strong network of French experts within government organizations (Vallin, 2015). Through fostering linkages with the Francophone African world, the French tried to retain a pivotal position in post-colonial investment and trade networks and maintain its sphere of influence in the world. Although Great Britain, the other main colonizer in Sub-Saharan-Africa, disengaged more from its former African colonies than France (Fenwick, 2009), it maintained strong political ties through the creation of the Commonwealth of Nations. The Commonwealth was initially set up to promote peace, liberty and human rights, but also aimed to create an advantageous economic environment by engaging with the private sector and promoting trade and investment (Power, 2009). Evidence that these networks are still in place is the observation that many contemporary African leaders have followed their tertiary education or worked in the former colonizing country, where they most likely have build an extensive network. In this regard, Constant and Tien (2010) also found that the foreign education of African leaders is significantly associated with FDI inflows. In summary, existing connections between the former colonizers and colonies were relatively undisrupted by the decolonization process (Head, Mayer & Ries, 2010).

Second, the African continent is historically known for its political instability and civil wars. After the periods of colonization and decolonization, the majority of countries on the continent have experienced major episodes of political violence, most of which have seriously obstructed economic development and reduced state capacity (Bodea & Elbadawi, 2008; Dincecco, Fenske & Onorato, 2014). In addition, political instability, defined as the propensity that a government collapses, has remained high. From decolonization until 2015 the number of successful coup d'états amounts to 70, which is almost 50% more than the average country (Marshall & Marshall, 2016). This has resulted in a stigmatized image of Africa as the 'lost continent', hunted by extreme poverty, inescapable corruption, and horrifying wars. Nevertheless, FDI is flowing to the continent at increased rates. In 2014, Sub-Saharan Africa received FDI inflows just over 40 billion U.S. dollars, representing 3.5 percent of worldwide FDI flows in that year (UNCTAD, 2015). 18.5 % of all greenfield FDI flowing to Sub-Saharan Africa during the 2003-2013-time period went to countries experiencing a conflict (fDi Markets, 2014). The amount of FDI flowing to unstable economies makes Sub-Saharan Africa an appropriate setting for this study.

Third, over our sample period, i.e. 2003 to 2012 most wars in Sub-Saharan Africa have been fought symmetrically and non-conventionally. This type of conflicts is characterized by governments and rebels who both use a similar but low level of military sophistication

(Kalyvas & Balcells, 2010). Balcells and Kalyvas (2014) show that these wars are much more likely to result in a regime transition and hence, they could form a more significant threat to the value of historical ties of MNEs. Accordingly, colonial relations can be expected to be particularly dynamic in Sub-Saharan Africa.

Data

The dependent variable in this study consists of location choice decisions into low income Sub-Saharan African. Data on Greenfield FDI flows into Sub-Saharan African countries for the period 2003-2012 is obtained from the fDi Markets database, a Financial Times databank tracking cross-border investments in new projects and expansions of existing ventures. The data are collected through Financial Times newswires and internal information sources, other media sources, project data acquired from industry organisations and investment agencies and data purchased from market research and publication companies. Each project is cross-referenced against multiple sources. We added data on mergers & acquisition (M&As) from Thomson, a database tracking global M&As. The data sources include newswires, filings, global and regional media, and direct deal submissions from the deal-making community. The dataset includes 2,886 investments made by a total of 1,148 different MNEs. Only 6.7% of the investments are M&As.

The data on historical ties, approximated by past *colony-colonizer* relationships, are derived from the CEPII database (Head *et al.*, 2010). The observations are structured as a gravity dataset where for each pair of countries the relevant bilateral data, including colonial relationships, are included. The variable colony measures whether the country of origin has ever colonized the destination country. France colonized 18 Sub-Saharan countries, while Great Britain had 17 African colonies. Portugal, Spain, Italy, Belgium and Germany had considerable less colonies in Sub-Saharan Africa. Our dataset records a total of 368 investments by MNEs from previous colonizers into one of their former colonies. The majority of these were investments by British multinationals into Nigeria (14.9%) and Kenya (14.3%).

Data on political conflict are derived from the Armed Conflict Location Event Dataset (ACLED, 2015), which is the most comprehensive political violence database for Sub-Saharan Africa (Raleigh, Linke, Hegre, & Karlsen, 2010). ACLED measures incidences of political violence - focussing particularly on civil and communal conflicts, violence against civilians, remote violence, rioting and protesting - in all African countries from 1997 until the presents. The data are collected from a large set of public sources including country reports, local media, humanitarian agencies, and research publications. Following the literature on war, we code the incidence of a relatively small *political conflict* (100 to 1000 fatalities) and the incidence of a *war* if in a year at least 1000 people died as a direct result of political violence (Collier & Hoeffler, 1998; Gleditsch *et al.*, 2002; Hegre, Ellingsen,

Gates & Gleditsch, 2001). Hence, the *conflict* and *war* variables are dummy variables, which are 1 in case of extended political conflict. The map in Figure 4.1 shows the geographic distribution of wars in Sub-Saharan Africa.

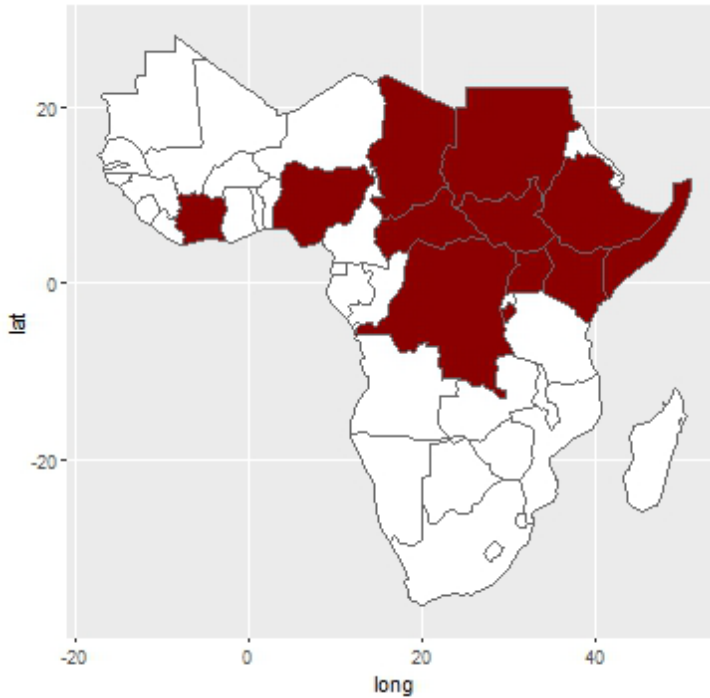


Figure 4.1 Geographic distribution of wars (more than 1000 fatalities per year) in Sub-Saharan Africa over the period 2003-2013. Countries that experienced at least one war are colored in red. Data on fatalities are derived from the ACLED dataset (Raleigh et al., 2010).

To test whether regime transitions erode the value of historical ties, we include the cumulative number of *regime transitions* starting from decolonization, derived from the Polity IV dataset (Marshall & Jagger, 2002). The Polity IV dataset is widely used to measure regime changes (e.g. Rodrik & Wacziarg, 2005; Morrison, 2009). Its main variable Polity measures the extent to which a country is democratic on a scale of -10 to 10, where higher levels indicate more democratic regimes. Polity IV codes a regime transition if a state experiences a three-point change in the polity score over a period of three years or less or at the end of a transition period defined by the lack of stable political institutions. Hence, minor transitions that do not result in considerable changes in institutions are not coded as regime transitions.

We control for the *weighted distance* (\ln) between the two countries calculated as the bilateral distances between the largest cities of those two countries, weighted by the share

of the city in the overall country's population. We also include dummy variables measuring whether host and home country share a *common language* (1 if a language is spoken by at least 9% of the population in both countries), whether they have a *common legal origin* and whether they have had a *common colonizer*. All bilateral data are derived from the CEPII Dataset (Head *et al.*, 2010). In addition, we take into account macroeconomic variation in the host country using the following control variables: *GDP per capita*, *GDP growth*, the size of the *population*, the size of *land area* and *inflation*. Data on these control variables are obtained from the World Bank. We log transformed *GDP per capita*, *population* size, and the size of the *land area*. We also include bilateral *real exchange rates*, derived from a dataset developed by Darvas (2012).

Because previous literature focussed extensively on the effect of colonial relationships on institutions (Acemoglu, Johnson & Robinson, 2001), we also include control variables that capture the variation in institutional quality across Sub-Saharan Africa. The *quality of regulations* indicator, part of Kaufman's World Governance Index (WGI), measures perceptions of a government's ability to formulate and implement sound policies and regulations that permit and promote private sector development. The *control of corruption* measure also comes from the WGI and measures the extent to which public power is exercised for private gain. Both variables are transformed to a z-score. Finally, we include the number of *migrants* from the MNEs home country in the destination nation. Migration data are obtained from the World Bank's Global Bilateral Migration Database, which collects the information only once every ten years. We approximate the number of migrants using the 2000 estimates. The estimates are then transformed using the inverse hyperbolic sine function (Burbidge, Magee & Robb, 1988), which resembles a log transformation, but can account for zeros.

For the models including firm level interactions, the data were manually matched with information on the size and profits of the MNE that makes the investment. It can be expected that larger and more profitable firms are more likely to invest in conflict countries, as these firms are better able to diversify the associated risk. Firm-level data are obtained from the Orbis database developed by Bureau van Dijk (2015). This database comprises annual report data for over 160 million companies worldwide. We measure the size of the firm using *total assets*, which we transform using an inverse hyperbolic sine transformation. We add moderators for profitability using the rate of return on equity (*ROE*) and the *age* of the firm. 268 out of the 1148 investing firms could not be linked with data in the Orbis dataset, while another 374 firms have missing data for either assets or income. Firm age is missing for another 80 MNEs. We estimate our model both with and without firm level moderators to verify that the results are not driven by a selection effect. Descriptive statistics, including a correlation matrix are provided in Appendix 4.1.

Empirical Model

Following the literature in economic geography, we model the location choice of firms using discrete choice models (Basile, Castellani & Zafei, 2008; Schmidheiny & Brühlhart, 2011; Karreman, Burger & Van Oort, 2017). In these models, each location decision is considered to be the outcome of a discrete choice among available alternatives, where a profit-maximizing firm is assumed to choose to invest in the location that maximizes the expected returns on investment. The dependent variable in all the models is the probability that an MNE chooses to invest in economy i from the choice set of all low-income Sub-Saharan African economies. We assume that the investment decision of an MNE is a sequential process in which the MNE first decides to invest in a low-income Sub-Saharan Africa and subsequently identifies the country which would be most appropriate (Basile *et al.*, 2008). In deciding where to invest, the MNEs from 56 different home countries are faced with a set of 42 alternative investment locations (i.e., the African low income economies). Appendix 4.2 lists all destination countries included in the sample.

To estimate these location decisions, a mixed logit model, also known as a random parameters logit, is applied (Revelt & Train, 1998). This type of model is particularly appropriate for our analysis because the technique allows coefficients to vary over firms, accounting for firms' differential value attributed to particular characteristics in their location decisions. Consequently, a mixed logit estimation relaxes the restrictive assumptions regarding the substitution patterns across alternative investment locations that are generally present in other discrete choice models such as the conditional logit model. This problem is better known as the violation of the independence of irrelevant alternatives (IIA), and it is particularly common to location choice datasets with a large number of alternatives (Basile *et al.*, 2008). Not accounting for a violation of the IIA assumption can result in inconsistent and biased estimates.

In the mixed logit model we allow the coefficients to be normally distributed random variables. The model provides both the estimated mean and the estimated standard deviation of this distribution and their confidence intervals. As a result, the estimated effects are heterogeneous across firms. Because there is no closed-form solution for the maximum likelihood estimator, these estimates are obtained using maximum simulated likelihood. Standard errors are obtained using bootstrapping. As the mixed logit model estimates probabilities conditional on the MNE to invest, only host country or country-pair specific variables are estimated, while firm level variables are included in moderator analyses. The results are conditional on the MNE having decided to invest in Sub-Saharan Africa. A more elaborate discussion of this estimation strategy in the context of location choice models can be found in Basile *et al.* (2008) or Hensher and Green (2003).

Table 4.1 The determinants of MNEs location choice in Sub Sahara Africa – Mixed logit estimation.

	(1)	(2)	(3)	(4)
	Baseline	Incl. conflicts moderator	Incl. regime changes	Incl. firm variables
Colony - colonizer	0.861*** (0.222)	0.946*** (0.233)	1.354*** (0.257)	1.757*** (0.374)
War (> 1000 BRD)	-0.518*** (0.113)	-0.426*** (0.113)	-0.437*** (0.112)	-1.604** (0.773)
Conflict(100< BRD<1000)	-0.003 (0.092)	-0.010 (0.093)	-0.022 (0.092)	0.105 (0.181)
Regime transitions	-0.022 (0.015)	-0.023 (0.015)	-0.011 (0.015)	-0.006 (0.029)
Colony*War		-0.857*** (0.280)	-0.673** (0.289)	-0.739 (0.457)
Colony* Conflict		0.020 (0.226)	0.182 (0.219)	0.037 (0.337)
Colony*transition			-0.129*** (0.038)	-0.180*** (0.061)
War * ROE				-0.747 (0.553)
War * assets (ln)				0.073 (0.051)
War * firm age (ln)				0.015 (0.146)
GDP per capita (ln)	0.249*** (0.044)	0.255*** (0.044)	0.254*** (0.044)	0.233*** (0.081)
Growth rate of GDP	0.040*** (0.007)	0.039*** (0.007)	0.039*** (0.007)	0.013 (0.014)
Population (ln)	0.733*** (0.046)	0.739*** (0.046)	0.727*** (0.046)	0.745*** (0.091)
Area (ln)	0.201*** (0.036)	0.200*** (0.036)	0.207*** (0.036)	0.327*** (0.071)
Migrants (ln)	0.070*** (0.014)	0.069*** (0.014)	0.073*** (0.014)	0.075*** (0.029)
Weighted distance (ln)	-0.784*** (0.083)	-0.802*** (0.083)	-0.817*** (0.083)	-1.114*** (0.164)
Inflation (annual %)	0.009*** (0.003)	0.008*** (0.003)	0.009*** (0.003)	-0.000 (0.007)
Exchange rate	0.005 (0.004)	0.005 (0.004)	0.005 (0.004)	0.017** (0.007)
Common language	0.927*** (0.095)	0.928*** (0.095)	0.951*** (0.094)	1.023*** (0.189)
Common colonizer	0.519*** (0.170)	0.526*** (0.171)	0.515*** (0.172)	0.870* (0.459)
Common legal origin	0.208* (0.106)	0.206* (0.107)	0.218** (0.107)	0.241 (0.214)
Control of corruption	-0.206** (0.095)	-0.212** (0.095)	-0.211** (0.095)	0.025 (0.181)
Regulatory quality	1.181*** (0.094)	1.180*** (0.094)	1.178*** (0.094)	1.362*** (0.181)
SD				
Colony - colonizer	1.332*** (0.392)	1.302*** (0.380)	1.160*** (0.365)	0.293 (0.439)
War	0.478** (0.238)	0.385 (0.256)	0.372 (0.261)	-0.498 (0.481)
Conflict	0.806*** (0.143)	0.813*** (0.140)	0.813*** (0.140)	-0.980*** (0.283)
Regime transitions	0.143*** (0.022)	0.140*** (0.022)	0.133*** (0.022)	0.181*** (0.050)
Log likelihood	-6442.83	-6437.40	-6431.46	-1866.41
Observations	86,580	86,580	86,580	25,896

Note: BRD refers to Battle Related Deaths. Bootstrapped standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10

4.4 EMPIRICAL RESULTS

Table 4.1 reports the results of the mixed logit regression in which the dependent variable is a dummy which measures whether the MNE chooses to invest in the country. In each regression we also estimate the standard deviations (sd) of coefficients for all independent variables with the exception of the moderator variables. To conserve on space, we only report the standard deviations of the colony, regime transition and conflict variables. The models are estimated using the Hole (2007) routine for estimating mixed logit models in Stata. The first column shows the results of a baseline model examining which factors determine location choice in Sub-Saharan Africa. Here all main effects and control variables are included, however, the moderator effects are excluded. The second column includes the *colony-conflict* and *colony-war* moderator, to test whether relatively small political conflict, causing between 100 and 1,000 BRD, and wars, causing at least 1000 BRD, moderate the relationship between historical ties and the propensity of a firm to invest. In the third model, we test whether regime transitions erode historical ties and in the fifth column we add additional interactions to control for possible firm level biases.

The results of the baseline model show that coefficient of the *colony-colonizer* variable is positive and highly significant, indicating that MNEs from a former colonizer are more likely to invest in a location. This confirms the first hypothesis that historical ties increase the probability that an MNE invests in a Sub Saharan African economy. *War* has a negative effect on the propensity of an MNE to invest in a location, supporting our second hypothesis. This is in line with most previous studies on the effect of conflict on FDI (Brunetti & Weder, 1998; Busse & Hefeker, 2007; Dai *et al.*, 2013). Moreover, the war coefficient has a statistically significant standard deviation, the size of which confirms that war may have a positive effect on some firms' propensity to invest in a country. More specifically, given the estimated mean and standard deviation for the distribution of the war variable, a positive effect is found for approximately 13.9% of all firms.

Small *conflicts* and the number of *regime transitions* after decolonization do not have a significant effect on MNE location choice strategies. Nevertheless, both coefficients have a significant standard deviation, suggestion that there is considerable variation in the importance of small *conflict* and *regime transitions* across multinationals. Moreover, the distribution of the *colony* coefficient has a significant standard deviation (see bottom rows Table 4.1), indicating that the effect of the variable varies significantly across MNEs location choice decisions.

Most control variables also behave as predicted by theory. *GDP per capita*, *GDP growth*, the size of the *population*, the size of the *land area*, a *common colonizer* or *common language*, the number of *migrants* and *regulatory quality* all positively affect the probability that an MNE locates in a country. A *common legal origin* is positively associated with MNE investment, although the coefficient is only significant at the 10%

level. *Weighted distance* from the MNE’s home to the host country has a negative effect. Surprisingly, after controlling for the *quality of regulations*, *control of corruption* has a negative effect on the probability that an MNE invests in a host country. In other words, the level of corruption is positively associated with MNE investment, suggesting that MNEs investing in Sub-Saharan Africa might under certain circumstances be able to profit from corruption. *Inflation* seems to have a significant positive effect on the probability of investment. There is no evidence that real *exchange rates* affect MNEs location choice.

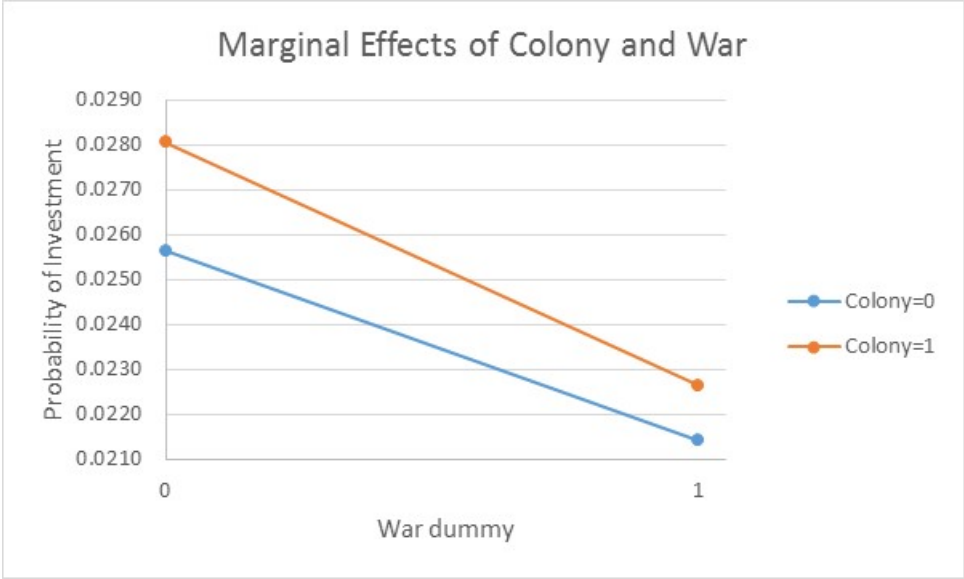


Figure 4.2 Average marginal effects plot, depicting how war (>1000 fatalities) moderates the relationship between colonial relationships and the probability of investment. Marginal effects have been obtained using the *mixlpred* module in Stata (Hole, 2007).

In the second model, the interaction term for colonial relationships and war and conflict is added to test how wars and smaller political conflicts change the effect of historical ties on the location choice strategies of connected firms. There is no evidence of an interaction effect for smaller conflicts (Column 3). The minor *conflict-colony* interaction is small and insignificant and the standard deviation of the minor *conflict* coefficient is not affected by the addition of the interaction term. These results do not support hypothesis H3a. One explanation for this could be that during smaller conflicts the positive effects of decreased transparency and increased bargaining power on profitability are offset by a small though non-negligible risk of a regime change.

The interaction is negative and significant for wars, indicating that the effect of colonial relationships on location choice depends negatively on whether the destination country experiences a war. Figure 4.2 shows the size of the marginal effects. If the country

experiences a war, the positive effect of the country of origin being a former colonizer on MNEs location choice diminishes significantly. This is in line with expectations: wars can increase the risk of a regime change and as a result, decrease the positive effect political ties might have on MNEs' returns and ultimately on FDI. This supports hypothesis 3b, confirming that wars diminish the positive effects of historical ties on location choice strategies. However, Figure 4.2 shows that the size of the interaction effect is small.

In column 3 the *regime transitions – colony* moderator is added to the mixed logit model to test whether historical ties erode with the number of regime changes after decolonization. The moderator coefficient is negative and significant at the 1% level, providing support for hypothesis 4, whereas the main effect of *regime transitions* is small and insignificant. This demonstrates that the number of regime transitions after decolonization deter MNEs from previous colonizers, whereas there is no evidence that regime transitions have a negative effect on the investment decisions of MNEs from other economies. The inclusion of the moderator decreases the standard deviation of the regime transitions coefficient, indicating that the inclusion of the moderator somewhat reduces the variation of the effect of regime transitions on MNE investment decisions. In addition, the inclusion of the *regime transitions – colony* interaction reduces the variation of the colony coefficient. This demonstrates that the number of regime changes is an important source of variation for the colonizer effect on location choice decisions. The coefficients of the *war* and *conflict* variables are not significantly affected by the inclusion of the additional moderator.

In the fourth column, we control for the size of the MNE in terms of total *assets*, rate of return on equity (*ROE*) and the *age* of the firm. Because we model the investment decision as being conditional on the MNE making an investment in Sub-Saharan Africa, it is impossible to include the main effects of the investor-specific variables. It is however possible to include firm characteristics in a moderation analysis to determine how firm characteristics affect the coefficients of the country specific variables (Cameron & Trivedi, 2010). The firm level controls are only available for about a third of the investment decisions, considerably reducing the number of observations in the sample which weakens the statistical power of the models.

There is no evidence that total *assets*, *ROE* or the *age* of an MNE affect the probability of investment in a country experiencing war. The main effect of being a previous colonizer remains large and statistically significant, supporting the first hypothesis. The *war-colony* interaction is negative and the coefficient is similar in size as in models 1-4. However, the effect is no longer significant. This is probably due to the loss of statistical power, resulting from the large decrease in sample size. The *colony-regime transitions* moderator remains negative and statistically significant at the 5% level. The standard deviations of the *colony* and *war* coefficient lose their significance, indicating that the model can fully explain the variance in the effect of these variables.

Robustness

To test for robustness, we estimate a tobit regression model instead of the mixed logit model. We first estimated a Heckman two-stage selection model, but the inverse mills ratio in this model was not statistically significant, indicating that modeling the selection of firms that invested prior to the location choice decision does not significantly improve our model. Therefore, we provide estimates of a tobit regression, which is more parsimonious and allows us to model FDI continuously. The dependent variable in these models is the amount in dollars invested in an economy instead of a dummy variable indicating an investment. Because the FDI variable is highly skewed and contains a high number of zeros, we transform it using an inverse hyperbolic sine transformation, which can be interpreted in the same way as a standard logarithmic dependent variable. The models have a maximum of 10 years * 40 countries * 2,538 companies = 1,015,200 observations. Due to some missing values, 1,012,662 of these are included in the models. In addition to the control variables included in the mixed logit regressions, year and country of destination fixed effects are included. Table 4.2 shows the results of the Tobit models.

Table 4.2 Tobit estimation of the effect of colonial relationships, war and regime transitions on FDI.

	(1)	(2)	(3)	(4)
Colony - colonizer	2.267*** (0.353)	2.397*** (0.367)	3.634*** (0.499)	3.597*** (0.500)
War (> 1000 BRD)	-2.430*** (0.316)	-2.223*** (0.326)	-2.455*** (0.316)	-2.352*** (0.328)
Conflict (100< BRD<1000)	0.580*** (0.218)	0.577** (0.228)	0.543** (0.218)	0.472** (0.229)
Regime transitions	-0.022 (0.015)	-0.023 (0.015)	-0.011 (0.015)	-0.006 (0.029)
Colony* War		-1.822** (0.822)		-0.973 (0.859)
Colony* Conflict		-0.030 (0.539)		0.559 (0.569)
Colony*transition			-0.302*** (0.080)	-0.298*** (0.086)
Sigma	10.921*** (0.185)	10.920*** (0.185)	10.918*** (0.185)	10.917*** (0.185)
Economic Controls	Yes	Yes	Yes	Yes
Country of Destination FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	1,012,662	1,012,662	1,012,662	1,012,662

Note: Conflict refers to episodes of political violence that result in more than 100 battle related deaths (BRD) but less than 1,000 BRD per year. War refers to episodes resulting in more than 1,000

BRD per year. The set of economic controls included in the models corresponds to the control variables in the main regressions (Table 1). Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Overall, the results of Tobit model (Table 4.2) are relatively similar to those obtained using the mixed logit model (Table 4.1). In the first column of Table 4.2 a baseline model without the moderators is shown. Here colonial relationships significantly increase investment in a Sub-Saharan African economy, supporting our first hypothesis. A war has a negative and significant effect on FDI. The effect of smaller violent conflicts becomes positive and significant, indicating that they positively affect location choice decisions. The effect of the number of regime transitions is not significant. In the second model, the conflict-colony and war-colony moderators are added. Similar to the results in Table 4.1, the conflict-colony moderator is not significant, whereas the coefficient of the war-colony moderator is negative and statistically significant at the 1% level, supporting hypothesis 3b. In the third column, the regime transition moderator is added. The moderator is negative and significant at the 1% level, supporting the fourth hypothesis. In the last model (Column 4) all moderators are added simultaneously. The coefficient of the war-colony moderator loses its significance, but the regime transition moderators stays negative and statistically significant at the 1% level. This indicates that the effect of the colony-war moderator is mediated by the effect of regime changes on the value of historical ties. Hence, this suggests that war limits the positive influence of historical ties mainly by increasing the probability of a regime transition.

We also tested for alternative explanations behind our main results by adding additional moderators to the mixed logit regression. The results of this exercise can be found in Table 4.3. In the first model we add a moderator indicating whether the investment is in the resource sector. If MNEs from previous colonizer countries are overrepresented in the natural resource industry, and investments in this industry are more affected by war due to large sunk costs, this might create an upward bias for the colony-war moderator. The results in Column 1 show that the resource-war moderator is positive, indicating that firms active in the resource industry are indeed more likely to invest in war affected countries. This result is in line with previous studies by Witte *et al.* (2016). The moderator is however not statistically significant. More importantly, the main results of our analysis are unchanged. Hence, the results are not driven by MNEs from colonizer nations selecting into the resource sector.

Most previous colonizers are nowadays some of the least corrupt countries in the world. It is not unlikely that MNEs coming from a more corrupt environment are better able to navigate through the institutional environment of war affected nations, which are often characterized by very high levels of corruption (Cuervo-Cazurra, 2006). Hence, the negative effect of war on the investment decision of firms from previous colonizers might be the result of larger institutional distance instead of being a direct result of historical ties. In Column 2 we add a moderator to test whether the effect of war on investments is moderated by the control of corruption in the home country of the MNE. This moderator is negative indicating that MNEs originating from countries where corruption is properly

Table 4.3 Mixed logit estimation of MNE location choice decisions: tests for alternative mechanisms

	(1) Incl. resources	(2) Incl. corruption	(3) Incl. migration	(4) Incl. BITs	(5) Incl. region dummies
Colony- colonizer	1.411*** (0.255)	1.400*** (0.255)	1.371*** (0.256)	1.516*** (0.417)	1.364*** (0.245)
War (> 1000 BRD)	-0.527*** (0.132)	-0.451*** (0.137)	-0.041 (0.214)	-0.724*** (0.220)	-0.396** (0.187)
Conflict(100< BRD<1000)	-0.018 (0.090)	-0.015 (0.091)	-0.020 (0.091)	0.104 (0.161)	0.033 (0.087)
Regime transitions	0.178*** (0.050)	-0.022 (0.015)	-0.023 (0.015)	-0.009 (0.032)	-0.005 (0.016)
Migration (ln)	-0.022 (0.015)	0.090*** (0.014)	0.098*** (0.015)	0.035 (0.032)	0.071*** (0.015)
War * colony	-0.700** (0.299)	-0.625** (0.308)	-0.509* (0.306)	-0.996** (0.457)	-0.700** (0.311)
Conflict * colony	0.125 (0.206)	0.126 (0.206)	0.128 (0.207)	0.239 (0.271)	0.120 (0.204)
Transition*colony	-0.105*** (0.037)	-0.105*** (0.037)	-0.107*** (0.037)	-0.130** (0.054)	-0.112*** (0.039)
War * resources	0.136 (0.223)				
War*Home corruption		-0.087 (0.079)			
War * migration (ln)			-0.068** (0.027)		
BIT dummy				0.339** (0.142)	
War*BIT				0.532 (0.371)	
War* Asia					0.067 (0.225)
War*Latin America					0.340 (0.661)
War*MENA					0.575** (0.292)
War*NorthAmerica					-0.453* (0.265)
War*SubSaharanAfrica					-0.297 (0.255)
SD					
Colony	1.534*** (0.381)	1.541*** (0.379)	1.517*** (0.384)	0.925** (0.444)	0.984*** (0.339)
War	0.697*** (0.200)	0.709*** (0.199)	0.595*** (0.206)	0.752*** (0.260)	0.479 (0.307)
Conflict	0.761*** (0.155)	0.754*** (0.156)	0.785*** (0.156)	0.936*** (0.266)	0.745*** (0.150)
Regime transition	0.115*** (0.023)	0.115*** (0.023)	0.117*** (0.023)	0.178*** (0.050)	0.161*** (0.026)
Economic controls	Yes	Yes	Yes	Yes	Yes
Observations	86580	86580	86580	20592	86580

Note: Conflict refers to episodes of political violence that result in more than 100 battle related deaths (BRD) but less than 1,000 BRD per year. War refers to episodes resulting in more than 1,000 BRD per year. The set of economic controls included in these models corresponds to the control variables in the main regressions (Table 1). Bootstrapped standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

controlled, are less likely to invest in countries affected by war than MNEs from countries where corruption is abundant. The effect is however not statistically significant. More importantly, our variables of interest, the colony-war and colony-transition moderators, remains negative and highly significant.

Similarly, we add a moderator for migration in Column 3 of Table 4.3. Migration from a colonizer to a previous colony is relatively common and the effect of a large episode of political violence might depend on the size of a migrant community from the MNE's home country in the host nation. The migrant colony moderator is indeed negative and statistically significant, indicating that the positive effect of having migrant stock in the destination country decreases in times of war. Again the main results are not meaningfully affected by the inclusion of the additional moderator.

In addition, previous literature emphasized the importance of Bilateral Investment Treaties (BITs) for investment under high uncertainty (Neumayer & Spess, 2005). These treaties could eliminate expropriation risk and can accordingly promote investment. However, if a change in regime threatens the existence of these BITs, wars which increase the probability of a change of regime can have a larger negative effect on country pairs that adopted a BIT. On the other hand, if BITs protect MNEs from expropriation, these treaties can protect connected MNEs in case of a regime transition. Hence, if adaptation of BITs is more common between countries that have a colonial relationship, this could possibly bias our results. Therefore, we control for BITs using a dummy variable and add an interaction between war and the BIT dummy in Column 4 of Table 4.3. We use the data on BITs collected by Neumayer and Spess (2005) and include the existence of BITs in 2002 as an approximation, because recent data on BITs are not readily available. By including the BIT moderator, we reduce our sample by 75%. Nevertheless, this does not affect our main results. Colonial relationships still have a positive and significant effect on MNE location choice strategy, whereas war has a large negative effect. The colony-war moderator remains negative and highly significant. The main effect of BITs is positive, but not significant, whereas the BIT-war moderator is positive, but insignificant.

In Column 5 (Table 4.2) we estimate a model including moderators for the MNE's region of origin: Asia, Latin America, the Middle East and North Africa (MENA), North America or Sub-Saharan Africa. Europe serves as the reference category and is not included in the model. Only the MENA moderator is positive and statistically significant at the 5% level, indicating that investors from the MENA region are less sensitive to war than European investors. The North America dummy is negative and significant at the 10% level, showing that North American investors are less inclined to invest in war-affected countries than European investors. There is no evidence that the response of investors from other world regions to war differs significantly from those of European firms. Our main results are also not influenced by the inclusion of region dummies.

Finally, we performed several other robustness checks that are available from the authors on request. First, we tested whether our results are purely driven by the former French colonies. It is well known that the French have continued to be actively involved in their former colonies, whereas the British disengaged more (Vallin, 2015). However, comparing the effects of being a former French or a former British colony, no systematic differences are found, neither in the main effects, nor in the moderators. We also estimate models using a conditional logit model, measure war with a continuous measure of the number of Battle-Related Deaths, only include investments by MNEs from former empires, and estimate a model excluding all brownfield investments. All the results are qualitatively similar to those of the mixed logit model.

4.5 CONCLUSION & DISCUSSION

Conclusion

In this study we showed how historical home-host ties can be rearranged as a result of shocks to the macrostructure. We examined how the impact of colonial relationships on FDI is contingent on political instability, i.e. wars and regime changes. By exploiting variation in a dataset comprised of FDI flows to low income countries in Sub-Saharan African from 2003 to 2013, we showed that violent conflict can diminish the positive effect that colonial relationships have on the probability that a MNE invests in a country. This effect is confined to large conflicts (wars) where the probability of government takeover is largest. In addition, our findings suggest that regime transitions erode colonial relations. The findings are robust to controlling for, among other things, firm-level characteristics, natural resource-seeking motives and the level of corruption in the MNE's country of origin.

Thus, whilst historical ties might increase MNEs' capabilities to limit sovereign discretion and appropriate created value, shocks to these ties can reduce their competitive advantage. This confirms that war can function as a cap on rent-seeking activities by connected firms (Acemoglu *et al.*, 2017). If the incumbent government loses a conflict and rulers are replaced, historical ties decrease significantly in value. Firms that were connected to the previous regime and which were able to capture significant rents due to favoritism might be prosecuted by the new regime. Of course, new leaders are also likely to establish new connections with both domestic and international firms. This can lead to a shift in political ties from firms originating from a former colonizer to firms coming from other countries - such as China. Future research could analyze whether neocolonialist efforts bring about a type of home-host country ties equivalent to colonial relations and whether these are similarly affected by political dynamics in the host country.

Implications

This article furthers our understanding of home-host ties taking a historical approach. We show that ties that were created during colonial times still influence multinational location choice strategies. This result emphasizes the importance of historical events for understanding the competitive landscape in which multinational enterprises operate today. Nevertheless, in contrast to effect of cultural and geographical distance on MNEs, the value of historical ties is dynamic and depends on contemporary events in the host country. War creates uncertainty about the future value of a connection and hence decreases the positive effect of former colonial relations on location choice strategies. Similarly, regime transitions erode the value of these ties. The findings demonstrate that the value of (historical) home-host ties should be evaluated in tandem with contemporary developments in the host economy.

Regarding firm-level implications, our results suggest that connected firms have an incentive to avoid the outbreak of large wars. This incentive is larger for connected than non-connected firms, because wars do not only have a direct negative effect on the profitability of connected MNEs due to supply chain disruption and the risk of capital destruction, but they also have a substantial indirect effect on the value of subsidiaries because of value erosion of historical ties. As a result, connected MNEs might be more likely to engage in voluntary actions to avoid conflict. Examples of such actions are providing adequate schooling, supporting small business development through skill trainings and microfinance, creating industry codes of conduct with the aim of reducing political risk, refraining from selling to those who facilitate conflict or actively mediating between players (Oetzel & Getz, 2012). These types of action can reduce the chances of a full-blown war and accordingly decrease the probability of a hostile regime takeover.

In addition, connected MNEs are likely to benefit from the strengthening of a host government's state capacity and particularly an increase in military power. A strong state is less likely to face conflict and should ultimately experience less regime transitions (Fearon & Laitin, 2003). MNEs could enhance host countries' state capacity by providing intelligence and financial resources, which can be employed to enhance military capacity. Finally, connected MNEs can lobby their home country governments, which often remain involved with the politics of their colonies, into providing military support to the host country's government, and to deter insurgents and opposition parties. Examples of military support to previous colonies include France's involvement in the conflict in Mali and the British participation in the peace keeping mission in South Sudan. Future research could examine if MNEs influence state building and military strategies during or after wars.

In contrast, non-connected MNEs could in the long run benefit from a conflict and a regime change, because these events can level the playing field. The advantages of firms originating from a previous colonizer decrease and there are opportunities for non-

connected firms to create partnerships with the new political leaders. This is particularly the case when new leaders are actively seeking out new alliance partners to distinguish themselves from the previous rulers (Bucheli & Kim, 2012; Siverson & Starr, 1994). By entering a country that is likely to go through a change of regime in the near future and partnering up with the opposition party, MNEs can create a considerable political first-mover advantage. Likewise, MNEs that enter an economy immediately after a regime change might face a window-of-opportunity for the creation of connections to speed up the wheels of commerce.

Limitations

Similar to other studies in this field, our analysis suffers from several limitations. First, the investment data used in this study are a sample of all greenfield FDI and M&A into Sub-Saharan Africa. The data on greenfield investments are collected through Financial Times newswires, internal information sources, other media sources, project data acquired from industry organizations and investment agencies and data purchased from market research and publication companies. Hence, investments that are not communicated publicly by the MNE or recorded by the media, are not included in the dataset. Most notably, small firms are underrepresented in our dataset. MNEs might also be more reluctant to communicate investments in war-torn countries, possibly leading to sample selection bias. Hence, the estimated effect of war on investment can be seen as an upper bound estimate of the effect. Unfortunately, reliable investment-level data based on primary sources is still unavailable for Sub-Saharan Africa. Yet, it is unlikely that the moderator analyses are affected by sample selection bias, because underreporting during times of war is unlikely to depend on the existence of colonial relationships. The ACLED fatalities data used to construct our conflict and war variables are also collected from secondary sources and as a result, the estimate of the war dummy might be biased. However, MNEs making an investment decision are unlikely to have more access to more accurate information on the number of fatalities and hence, it is unlikely that this influences our main results.

Second, although colonial relationships cannot be influenced by contemporary investment decisions, the colony variable is not completely exogenous. There might be factors that simultaneously influence the probability that a country colonized a certain area in Sub-Saharan Africa during the age of imperialism *and* the likelihood that an MNE invests in that area today. An example of such a factor is the distance from the home country. To limit the problem of omitted variable bias, we control for an extensive set of variables, including a number of bilateral factors, such as distance. However, data on Sub-Saharan African countries, particularly statistics on war-affected economies, are not as readily available as for most developed nations. As a result, we are not able to control for the quality of physical infrastructure, unemployment rates and labor productivity. As these variables are unlikely to simultaneously influence the probability that a country colonized

a state centuries ago and the probability that an MNE invests in this state today, the endogeneity problem is probably limited.

Third, whereas we show that the effect of colonial relationships on multinational location choice strategies depends on contemporary political developments, we are unable to uncover whether the effect of colonial relationships is a result of a depreciation of relational capital or changes in policies and institutions that decrease the usefulness of the political capabilities of connected MNEs. Future research could use interviews with executives from colonizer nations to analyze which mechanism is most dominant. This type of qualitative research could also shed light on the strategies MNEs from colonizer nations could undertake to minimize the negative consequences of war and regime transitions.

Appendix 4.1 Correlation Matrix

	Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
1 Colonizer - Colony	0.06	0.24	0	1	1																
2 Conflict	0.07	0.25	0	1	0.01	1															
3 War	0.18	0.38	0	1	-0.01	-0.13	1														
4 Regime transitions	3.85	2.34	0	9	0.01	0.1	0.05	1													
5 GDP per capita (ln)	6.66	1.03	4.68	10.09	0.02	-0.08	-0.19	-0.2	1												
6 Growth rate of GDP	4.82	4.38	-32.83	38	-0.01	0.02	-0.01	0.12	-0.08	1											
7 Population (ln)	15.92	1.38	13.05	18.94	0.02	0.39	0.29	0.22	-0.48	0.18	1										
8 Migrants	4.49	3.13	0	13.7	0.26	0.18	-0.03	-0.01	-0.05	0.06	0.3	1									
9 Distance (ln)	8.71	0.65	2.94	9.78	0	-0.02	-0.05	-0.02	-0.01	0	-0.06	-0.19	1								
10 Inflation (annual %)	8.59	9.09	-29.99	80.75	0.01	0.15	0.01	0.07	-0.1	0.04	0.23	0.09	0	1							
11 Exchange rate	1.12	9.86	-45.05	101.22	0.07	-0.02	0.08	-0.01	0.01	0.05	0.04	0.04	0	0.07	1						
12 Common language	0.3	0.46	0	1	0.26	-0.02	-0.04	0.11	-0.05	0.04	0.05	0.21	-0.03	0.07	0.01	1					
13 Common colonizer	0.11	0.31	0	1	-0.09	0.02	-0.01	0.02	0.04	-0.01	0.04	0.09	-0.21	0.06	-0.02	0.27	1				
14 Common legal origin	0.34	0.47	0	1	0.29	0.07	-0.02	0.14	-0.03	0.03	0.09	0.16	-0.14	0.08	-0.01	0.41	0.35	1			
15 Control of corruption	-0.67	0.51	-1.71	0.87	0.04	-0.25	-0.26	-0.06	0.13	0.08	-0.27	0	0.05	-0.12	-0.03	0.14	0.08	0.02	1		
16 Regulatory quality	-0.71	0.53	-2.26	0.98	0.06	-0.18	-0.15	0.06	0.24	0.12	0.02	0.12	0.03	-0.19	-0.12	0.11	0.09	0.08	0.08	1	

Appendix 4.2: List of all host countries in the sample

Benin	Lesotho
Burkina Faso	Liberia
Burundi	Madagascar
Cabo Verde	Malawi
Cameroon	Mali
Central African Republic	Mauritania
Chad	Mauritius
Comoros	Mozambique
Congo, Dem. Rep.	Niger
Congo, Rep.	Nigeria
Cote d'Ivoire	Rwanda
Equatorial Guinea	Sao Tome and Principe
Eritrea	Senegal
Ethiopia	Seychelles
Gabon	Sierra Leone
Gambia, The	Sudan
Ghana	Swaziland
Guinea	Tanzania
Guinea-Bissau	Togo
Ivory Coast	Uganda
Kenya	Zambia

Chapter 5

Conclusion & Discussion

This chapter commences with a summary of the main findings of each chapter in this thesis (Section 5.1). In this section I revisit the conceptual triangle presented in the introduction. It is followed by a discussion of the implications of these findings for government agencies and managers of multinational enterprises (Section 5.2). In Section 5.3 the limitations of the studies in this dissertation are discussed, followed by suggestion on how to address these in future research. In this section I provide future research suggestions for research in economics and in International Business separately. In a short epilogue (Section 5.4), where the focus is on the importance of solution-based research, I also outline the opportunities for researchers in these two fields to work together to address ‘Grand Challenges’ like political conflict.

5.1 MAIN FINDINGS

This thesis looks at the causes and consequences of political conflict. The findings can be depicted in the triangle introduced in the introduction and duplicated in Figure 5.1.

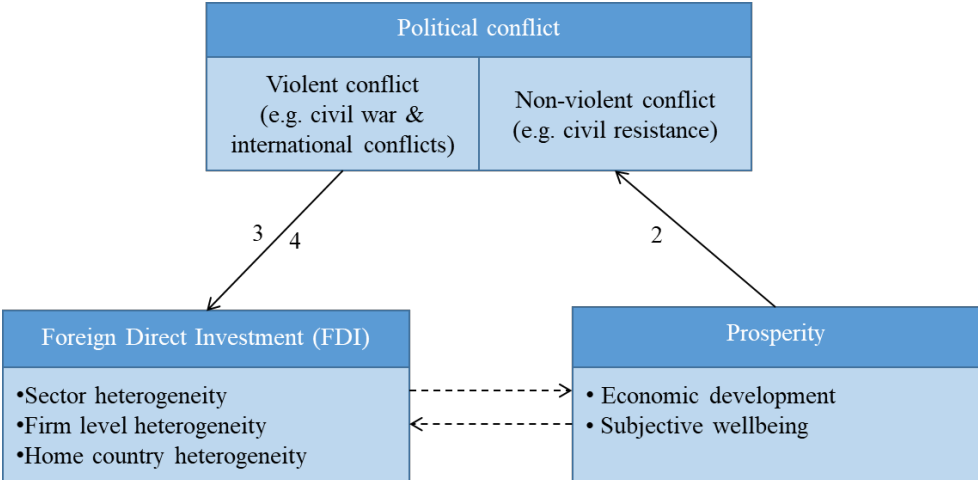


Figure 5.1 Illustration of the hypothesized political conflict, FDI and prosperity triangle. The solid lines represent the relations studied in this dissertation, while the dashed lines correspond to relations established in the literature. The numbers indicate the chapters of this dissertation in which the relationship is discussed.

In Chapter 2 the causes of political conflict are examined. Here the focus lies on civil resistance, the non-violent counterpart of armed conflict. The findings demonstrate that a decrease in subjective wellbeing (i.e. happiness) can motivate citizens to engage in acts of civil resistance. This negative effect of overall wellbeing on non-violent uprisings is to a large extent the result of changes to satisfaction with living standards and the perceived capability to have a purposeful and meaningful life. Hence, in contrast to previous literature, I find that there are systematic causes of non-violent uprisings, although these causes might be difficult to capture using traditional socioeconomic indicators. However, there is no evidence for a direct relationship between unhappiness and armed conflict.

In Chapter 3 and 4 I analyze the consequences of political conflict for Foreign Direct Investment (FDI). This is depicted by the right-hand side arrow in Figure 5.1. In these chapters the focus is on armed conflict. In Chapter 3 I compare the effect of armed conflict to other types of political violence, i.e. terrorism, assassinations and political terror. The effect of political violence on greenfield FDI is heterogeneous across types of violence, sectors and firms, falsifying the claim that all FDI flows are negatively affected by political violence. These findings demonstrate that the sensitivity of investment by MNEs to political conflict is reduced by (1) the extent to which conflict is localized, (2) whether

there are constraints on location choice due to requirements on inputs, (3) the size of economic rents and (4) the extent to which the firm is sufficiently internationalized to diversify the risk posed by conflict. On the other hand, the spread of violence, its continuity and its impact positively affect the sensitivity of investment to political violence. Only investment by relatively non-diversified MNEs in the non-resource sector is affected by nationwide armed conflict. Other types of political violence (e.g. localized armed conflict, terrorism, political terror) do not affect greenfield FDI flows.

Chapter 4 looks at the effect of armed conflict on MNEs' location choice strategies, shedding light on how armed conflict moderates the effect of home-host ties on location choice strategies. Whereas the ways in which international wars can disrupt international (business) relationships are relatively well understood, this paper demonstrates how internal conflict – currently the dominant form of armed conflict– affects these relationships. The focus is on historical ties, specifically ties resulting from colonial history. I find that similar to international conflict, internal wars can disturb existing relationships between the MNEs' home and host country. However, smaller conflicts have no effect on the relevance of these ties for FDI. These results do not support the idea that connected firms can benefit more from the confusion caused by political conflict. In contrast, they seem to have more to lose and accordingly face considerable incentives to avoid the outbreak of wars.

5.2 IMPLICATIONS

5.2.1 Implications for government

Political conflict has become more prevalent in the last decades and with the consequences of global warming becoming more pronounced, the prospects of world peace are only declining. Although it might be impossible to prevent these conflicts all together, an improved understanding of their causes makes it easier to anticipate them and by addressing these causes, some conflicts might be avoided. In terms of the findings of this thesis, this implies two things. First, we need to strengthen the efforts to collect data on developing countries. This thesis provides evidence that decreases in subjective wellbeing can explain non-violent conflicts, although not armed conflict (Chapter 2). Hence, non-violent political conflict, which is often the predecessor of major instability and armed conflict, has systematic causes and might hence be predicted by monitoring data on subjective wellbeing together with traditional measures of economic development. Data collection efforts should therefore not be limited to objective socioeconomic indicators, and special attention should be given to collecting data on subjective wellbeing. By combining objective and subjective data, a more complete picture can be drawn of how prosperous societies are and how probable political conflict is. The importance of more inclusive data collection efforts is exemplified by the Arab Spring, which took economist

and policymakers by surprise, whereas those that monitored the downward trend in subjective wellbeing could have anticipated the conflict.

Second, more attention should be given to societies that appear to be suffering in terms of subjective wellbeing. Here the case of ‘unhappy development’ merits special attention. Countries experiencing ‘unhappy development’ prosper in terms of objective indicators of development, but suffer in terms of subjective wellbeing. The Arab Spring was preceded by a period of such unhappy development. There is preliminary evidence that the quality of institutions and welfare policies influence the extent to which economic growth translates to improvements in subjective wellbeing (Burger, Ianchovichina, Arampatzi, Devarajan, Veenhoven & Witte, 2017). Hence, policies should not only be evaluated in terms of objective economics outcomes, but also in terms of their effect on subjective wellbeing. This is not just relevant for democratically elected leaders, who will be punished for reductions in subjective wellbeing at the ballot box, but also for malevolent autocratic regimes, which face the risk of unhappy citizens ‘taking to the streets’.

Regarding the consequences of (violent) conflict for FDI inflows, my findings suggest that conflict countries are still able to attract FDI. For Sub-Saharan Africa, I find that 13.9% of investments are actually attracted to conflict countries (Chapter 4). FDI into the resource sector is to a large extent insensitive to political conflict (Chapter 3). This is the result of the rents that could be obtained by investment in new resource reserves and the constraints on location choice that these firms face. However, when the development of alternative sources of energy reduces the constraints on location choice within the resource sector, or if the economic rents associated with resource extraction drop, resource MNEs are likely to be considerably less willing to invest in countries experiencing political conflict. This would make it more difficult for countries afflicted by conflict to attract FDI.

However, the question remains whether resource-related FDI, which has been related to the resource curse, is beneficial for fragile economies in the first place. Although the effect of FDI in the resource sector– or any other sector– on prosperity is beyond the scope of this thesis, I would recommend that conflict countries focus on attracting MNEs in the non-resource sector instead, as resource dependence has been associated with decreased prosperity and peace (e.g. Collier, 1998; Fearon & Laitin, 2003; Hodler, 2006; Poelhekke & Van der Ploeg, 2013; Sachs & Warner, 1995). I find evidence that also non-resource multinationals which are sufficiently internationally diversified are insensitive to political conflict (Chapter 3). Firms active in at least 26 different countries even seem to be attracted to conflict countries. Investment promotion agencies could target their efforts to non-resource firms that are somewhat internationalized, but not yet to the extent that they can completely diversify the risk of conflict. Additional incentives or information could convince these firms to invest anyhow.

Although non-resource FDI could inject capital in a war-ridden economy and create much needed employment opportunities, the question remains whether these foreign investments will eventually benefit the citizens of the conflict-afflicted country. Although this question is not answered directly in this dissertation, the fact that MNEs invest during a conflict rather than just before or after it, could suggest that they benefit from the conflict. This might be because other firms are not willing to invest, which reduces competition and increases monopoly rents, or because MNEs profit from rebellion more directly. Yet, in both cases firms have an incentive to prolong conflict. Even if MNEs invest *despite* conflict, because they, for example, expect to obtain a first-mover advantage when fighting stops, it is doubtful whether this will benefit the conflict-afflicted country, as there is strong evidence that the effect of FDI on prosperity depends critically on a country's absorptive capacity. Only if financial markets are sufficiently well developed, there is a basic level of human capital and the quality of institutions is high, will FDI inflows positively affect economic development. During political conflict these aforementioned factors tend to be lagging and hence it is unclear whether attracting MNEs to conflict-afflicted countries enhances prosperity. By sharing data on investment, employment and tax collection with researchers, governments can assist research on this topic. Table 5.1 summarizes the recommendations for government agencies.

Table 5.1 Implications and recommendations for government agencies.

Recommendations for government agencies	
<i>Prosperity & political conflict</i>	<i>Political conflict & FDI</i>
- Strengthen the efforts to collect more data on objective and perceived prosperity.	- Be aware that although on average conflict does not affect oil and gas FDI, growth in renewable energy production, is likely to increase the sensitivity of oil and gas MNEs to conflict.
- Pay more attention to societies that are suffering in terms of subjective wellbeing – also when objective measures indicate prosperity improvements.	- Provided that conflict countries are looking to attract FDI, Investment Promotion Agencies (IPAs) could target non-resource firms that are somewhat internationalized, but not yet to the extent that they can completely diversify the risk of conflict.
- Evaluate policies not only in terms of objective economics outcomes, but also in terms of their effect on subjective wellbeing.	- Share data on investment, employment and tax collection with researchers to learn how FDI in conflict countries enhances prosperity.

5.2.1 Managerial implications

The findings of this thesis provide managers of MNEs with a more nuanced understanding of the risks associated with political conflict. We show that the continuity of the risk is an important factor influencing MNEs' entry strategies, so that exceptionally discontinuous risks, such as the risk of a terrorist attack, are so unpredictable that they do not affect FDI decisions. Yet, MNEs tend to avoid countries that are afflicted by armed conflict, a type of political violence that poses a relatively continuous type of risk and can have a large negative impact on a firms' profits. This suggests that political conflict tends to be detrimental to MNEs. This is not surprising, because conflicts decrease the profitability of subsidiaries due to supply chain disruption and the risk of capital destruction. The average MNE thus faces incentives to minimize the probability of conflict. Although MNEs are unlikely to have a major influence on the outbreak of conflicts, they can nevertheless engage in voluntary actions that might decrease human suffering and could accordingly decrease conflict. Examples of such actions are providing adequate schooling and supporting small business development through skill trainings and microfinance. They could also have a more direct effect on the intensity of conflict by refraining from selling to those who facilitate conflict or actively mediating between players (Oetzl & Getz, 2012).

Yet, the relationship between political conflict and FDI is heterogeneous. Several factors determine the sensitivity of FDI to political conflict, most notably:

- (1) sector characteristics, i.e. are there large economic rents or constraints on location choice?
- (2) the MNE's geographic exposure to violence, i.e. is the conflict nationwide or localized?
- (3) the MNE's ability to diversify risk, i.e. is the firm sufficiently internationalized?
- (4) the existence of home-host ties, i.e. do the home and host country share a historical connection?

As such, our results emphasize that the assumption that political violence necessarily depresses earnings and puts off investors is too simplistic. Our finding that political conflict positively affects greenfield FDI by the most diversified firms, suggests that entry into conflict countries might even increase earnings if MNEs are able to absorb discontinuous risk. As such, taking into account sector and firm attributes, MNEs might want to consider entry into conflict countries, despite the large level of risk posed, with the intention of obtaining a competitive advantage. The key for managers is to recognize the risk conflict poses to their operations and understand how this risk can be diversified. In this regard, size does matter. Or to quote Africa's richest man, Aliko Dangote, "if you are not a big player, you have no way of survival" (Lacqua, 2017, p. 58).

The findings in this thesis also imply that wars can reduce the importance of colonial ties for current investment decisions. These ties are still conducive to business dealings

between a previous colony and colonizer, but wars can reduce the advantage that MNEs from previous colonizers have. Wars increase the probability of a regime change which in turn erodes ties by causing legitimacy problems, increasing institutional distance and reducing the value of relational resources. This creates two separate sets of incentives for connected and unconnected MNEs. Connected MNEs are likely to benefit from the strengthening of a host government’s state capacity and particularly from an increase in military power. A strong state could deter rebellion, whilst also decreasing the probability that insurgents win a conflict. MNEs could enhance host countries’ state capacity by providing intelligence and financial resources, which can be employed to enhance military capacity. In addition, connected MNEs can lobby their home country governments, which often remain involved with the politics of their colonies, into providing military support to the host country’s government, as to deter insurgents. Examples of military support to previous colonies include France’s involvement in the conflict in Mali and the British participation in the peace keeping mission in South Sudan.

Table 5.1 Implications for managers of MNEs.

Implications for managers of MNEs
- The average MNE thus faces incentives to minimize the probability of conflict and could engage in voluntary actions that might decrease human suffering and could accordingly decrease conflict.
- The assumption that political violence necessarily depresses earnings is too simplistic, there are profit opportunities in conflict countries.
- To formulate location choice strategies it is essential to understand the risk conflict poses to a firm’s operations and how this risk can be diversified. This depends on sector characteristics, the MNE’s geographic exposure to violence, the MNE’s the ability to diversify risk, and the existence of the existence of home-host ties.
- Connected MNEs are likely to benefit from the strengthening of a host government’s state capacity and particularly an increase in military power.
- Unconnected MNEs might benefit from a regime change, which opens up opportunities for to create partnerships with the new political leaders.

In contrast, unconnected MNEs might in the long run benefit from a regime change, because this could reduce the advantage of firms originating from a previous colonizer and opens up opportunities for non-connected firms to create partnerships with the new political leaders. This is particularly the case when new leaders are actively seeking out new alliance partners to distinguish themselves from the previous rulers (Bucheli & Kim, 2012; Siverson & Starr, 1994). By entering a country that is likely to go through a change of regime in the near future and partnering up with the opposition party, MNEs can create a considerable political first-mover advantage. Likewise, MNEs that enter an economy immediately after a regime change might face a window-of-opportunity for the creation of connections to speed up the wheels of commerce. Table 5.2 summarizes the implications of this thesis for managers of MNEs.

5.3 LIMITATIONS & FUTURE RESEARCH

5.3.1 Limitations

Although this thesis provides several new insights into the causes and consequences of political conflict, there are some limitations to bear in mind. Most notable, the findings presented in this thesis have been obtained using secondary data sources. Data on political conflict, obtained from the CNTS, UCDP/PRIO or ACLED, is gathered using media sources and accordingly only conflict events that received attention in the media are included in the analyses. This is problematic, because media attention is not random. Coverage is probably better for countries where there is freedom of press and where the information infrastructure is better developed. Both my findings on the causes and the consequences of conflict might be affected by this. Regarding the causes of conflict, a decrease in press freedom might simultaneously reduce happiness and decrease the ability of the media to cover conflict events. Although we include country fixed effects and control for several country characteristics related to press freedom, the estimates of the effect of unhappiness on non-violent conflict are most likely lower bounds. Regarding the consequences of conflict, countries that enjoy more press freedom, might also be more likely to attract FDI and hence it is likely that FDI flows are actually more strongly reduced than our results suggest. Despite these biases, media-based measures of political conflict are currently the best available measure of political conflict, not in the least because managers rely on the same information from media sources to make strategic decisions.

Data on FDI flows is collected in a similar manner to conflict data. Data on greenfield FDI flows are collected through Financial Times newswires, internal information sources, other media sources, project data acquired from industry organizations and investment agencies and data purchased from market research and publication companies. Again it is unlikely that the coverage of FDI projects in the media is random. Firms that feel that their consumers might punish them for their engagement in conflict-afflicted economies, face

incentives to hide these projects from the media. Hence, the negative effect we find of armed conflict on FDI, could merely be the result of MNEs putting more effort into hiding their projects from the media. However, it is unlikely that this can explain our findings on the heterogenous nature of this relationship. At the end of Chapter 3 and 4 I further elaborate on how our moderation analyses could be affected by sample selection bias.

Although I aimed to use state-of-the-art techniques to address endogeneity, I cannot be certain that the relationships found are causal. To claim causality, a randomized control trial would be preferable. In such an experiment the treatment - in this case a war or a negative shock to happiness - should be randomized, and accordingly the difference in the outcome variable – i.e. non-violent uprisings or FDI – between the treatment and control group could be calculated. There are clearly several ethical and practical reasons why running a randomized control trial with wars or negative shocks to happiness is impossible. Therefore, I resort to second-best econometric techniques. In Chapter 2 we estimate a two-stage least-square regression, instrumenting subjective wellbeing with deaths due to infectious diseases, to verify whether the relationships can be interpreted as causal effects. Yet, it is impossible to know with certainty whether our instrument is valid and hence, we cannot rule out that our results are driven by endogeneity. In Chapter 3 and 4 addressing endogeneity is even more difficult, because finding an instrument for conflict is extremely tricky. In these chapters we focus on the mechanisms through which violence could affect FDI and we use these mechanisms to rule out alternative explanations. Here I am also more cautious in claiming causality and discuss in length how endogeneity concerns could have affected the findings in the discussion section of these chapters.

5.3.1 Future research suggestions

In the introduction of this dissertation, I emphasized that the relationship between FDI and prosperity has received considerable attention in the past, and is therefore not part of the research questions of this dissertation. These relationships are depicted with dashed arrows in Figure 5.1. However, the findings presented in this thesis raise several questions about the relationship between value creation by MNEs and prosperity. These questions are targeted to both economists as management scholars. For economists the main question is: ‘Whether MNEs can promote prosperity in conflict-afflicted countries?’. This question could be illustrated by drawing an additional arrow going from political conflict to the arrow from FDI to prosperity in Figure 5.1. To management scholars, my questions can be summarized as: ‘how can firms structure their operations in conflict zones?’. Below I discuss these research directions in depth.

Future research: economics

More research is needed to show whether FDI can benefit conflict and post-conflict economies. This is particularly important because, the international community has repeatedly sanctioned countries experiencing war, disrupting the activities of MNEs active

in these countries and often leading to disinvestments (Bais & Huijser, 2005). In addition, lobby groups mistrusting the operations in conflict countries called for consumer boycotts, reducing the attractiveness of the countries. However, as long as the effect of FDI on these countries is not systematically verified, there is only a weak rationale for these boycotts and sanctions. If MNEs' involvement in conflict countries has a beneficial effect on economic development and reduces political conflict, the way policymakers and the general public regard MNEs active in these countries should be reconsidered.

Previous studies found that in order for countries to benefit from FDI flows into their economy, they need to have an initial stock of 'absorptive capacity', i.e. the ability of local firms to benefit from the presence of a MNE (e.g. Borensztein et al., 1998; Görg & Greenaway, 2004). In the case of conflict countries, this absorptive capacity is most likely missing, because financial markets, human capital and institutional quality have depreciated as a result of conflict. Accordingly, it could be expected that there is little to gain from FDI for a conflict-afflicted economy. However, in most studies on FDI and absorptive capacity conflict countries are excluded from the sample due to data restrictions. It is reasonable to believe that the effect of FDI on conflict-afflicted economies is different from non-conflict countries at a similar level of development, because there is room for reconstruction of the country. Manufacturing and service FDI might help raise the level of human capital and infrastructure FDI could play an important role in the reconstruction of internet connectivity, public transport, ports and roads. This is especially valuable if the domestic private sector has diminished due to conflict and hence, the risk of crowding out domestic firms is limited. Research on the effect of FDI on (post-) conflict economies should take into account the heterogeneity across types of firms, characteristics of the host country and types of conflict.

This thesis cannot distinguish between firms that decide to invest in a country *because of* war and those that invest *despite* war. Firms that invest because of war face incentives to prolong conflict and their FDI might hence not be beneficial to the host country's development, whereas firms that invest despite war might be inclined to take actions to restrict fighting. Of course, firms that willingly prolong conflict could be punished by courts *ex post*. However, actions that might prolong conflict are not always observable, and courts of fragile economies tend to be relatively weak. Hence, it might be preferable to design policies that disincentivize entry by firms that profit from conflict and incentivize entry by firms that profit from peace. In order to design such policies, more research on how to identify war-profiting and the peace-profiting firms is needed.

In addition, whereas previous work on the relationship between FDI and prosperity has extensively analyzed objective indicators of prosperity, the effect of FDI on perceived prosperity is largely unknown (Figure 5.1, arrow from FDI to prosperity). This is surprising, because the perceptions of citizens rather than the objective conditions

influence their actions, including domestic investment decisions, political actions and their willingness to engage in conflict. The assumption that if FDI increases objective prosperity, it will automatically increase subjective wellbeing, is too simplistic. The current anti-globalization sentiments are indicative of this. While the objective benefits of globalization were taken for granted, many citizens nevertheless felt aggrieved which might have contributed to the Brexit vote and Trump's election. Hence, we need an improved understanding of how FDI affects perceived prosperity and how the institutional and cultural context and the type of FDI moderate this relationship.

Similar to the relationship between objective wellbeing and FDI, the relationship between FDI and subjective wellbeing could also go the other way (see bottom arrows, Figure 5.1). MNEs might want to consider the level of subjective wellbeing when taking investment decisions, as subjective data captures country characteristics that remain under the radar using objective data. A happy workforce tends to be more productive (Oswald, Proto & Sgroi, 2015) and expatriates might be more willing to live in countries where perceived quality of life is relatively high (Schotter & Beamish, 2013). Future research could shed light on whether subjective data can explain variation in location choice decisions above what is captured by the traditional objective indicators. Similar to studies on the effect of economic growth on FDI, such studies have to be innovative in terms of identification strategies (e.g. instrument variable analyses and natural experiments) to limit reversed causality concerns, whilst also clarifying the mechanisms through which the effect of subjective wellbeing on FDI operates.

Future research: International Business

Whereas this dissertation focusses on entry decisions into conflict countries, future research in the field of IB could focus on the strategies of firms that own a subsidiary in a conflict zone. What strategic decision could firms would limit MNEs' exposure to (armed) conflict? How can firms design their operations to improve resilience to conflict? How can firms limit consumer boycotts in response to engagement in conflict zones? What is the role of tax havens in keeping investments in conflict countries secret? When is it wise to abandon a subsidiary when a conflict occurs? And if an MNE decides to exit a conflict zone, how could the subsidiary be best dismantled to avoid rebels taking advantage of the abandoned firm? These are all examples of possible future research questions. Because many of these topics are sensitive, innovative research methods are needed to answer these questions. Case studies, possibly combined with a quantitative analysis, and experimental research are valuable methodologies in this context, because they can shed light on mechanisms and address endogeneity.

Future research could also focus on how MNEs in fragile economies can support the prevention of political conflict. Although MNEs might have limited direct influence on the onset of war, they could reduce the extent of human suffering, which could in turn reduce

the probability of political conflict. MNEs could work together with local authorities and NGOs to limit human suffering. When such activities are chosen wisely, they can simultaneously benefit the firm and reduce human suffering – a concept known as Creating-Shared Value (Kramer & Porter, 2011). For example, Mars created a program in Kenya in which the company provided their deliverers with discounted microfinancing so that they could buy a bike. This reduced uncertainties in the Mars supply chain, while also improving the earnings of these deliverers. This exemplifies how MNEs can reduce human suffering, without it negatively affecting their bottom line. Other ways in which MNEs can reduce the probability of intensity of conflict include refraining from selling to those that facilitate conflict or providing emergency relieve in the region. More research is needed on how these types of strategies can be best applied and to what extent they are efficient in reducing conflict risk.

Assuming that the average MNE profits from peace, there is considerable room within IB research to study how firms can reduce human suffering as to limit conflict. Accordingly, there is considerable overlap with development economics, which also aims to promote human prosperity. In addressing research questions related to how MNEs could promote prosperity, interdisciplinary research is invaluable. Whilst economists are knowledgeable on how development programs can be best designed, management scholars know how to maximize benefits for the firm. Also in terms of methodology, spillover effects between the two fields are realizable, especially because experimental research is very appropriate for these types of research questions. In the next section, I outline some of the opportunities and challenges for partnerships between economics and management.

5.4 EPILOGUE

Although this dissertation enhances theory on country risk in several ways, its main goal has not been to develop theory, but to improve our understanding of a phenomenon. This in stark contrast with the current approach in management research, where theory-building is generally believed to be paramount in order to ensure a valuable contribution to the field. The IB field has largely de-emphasized the relevance of phenomenon-based research and has instead stressed theory-building as a prerequisite for publishing in top journals, although the *Journal of World Business* forms a noteworthy exception to this (Doh, 2015). Accordingly, every article published in the top management journals at least claims to make a unique far-reaching theoretical advancement. Watts (2017) describes the consequences of such a theory-building approach as follows: ‘theories pile up in an often incoherent heap, much like the multitude of rooms and stairwells piling up in Sarah Winchester’s house’ (p.2). Because it is difficult – if not impossible – to conclusively test these theories in the real world, their popularity is to a large extent depended on other reasons than their ability to account of empirical relationships.

In economics there is less emphasis on theory-building, not in the least because economists tend to prefer the term ‘model’ over ‘theory’. To quote Dani Rodrik (2015, p.113): “The term ‘theory’ has a ring of ambition”. He argues that theories are presumed to have universal and general validity. Even though the toolbox of an economists holds several so-called theories (e.g. game theory, real options theory, growth theory), in reality they are all models which might hold in one setting, but not in another. Models differ from theories, because they provide at best partial explanations of causal mechanism and interactions. Similar to the role of theories in management research, the importance of models is well recognized in economics: “[Models] make economics a science – not a science like quantum physics or molecular biology, but a science nonetheless” (Rodrik, 2015, p. 5). These models tend to be merely used to clarify hypotheses and explicate assumptions and are seen as tools, not end goals per se. Economics journals also acknowledge the relevance of papers whose main goal is not the advancement of theory per se, but merely finding facts. For example, development economists are nowadays specialized in running small-scale field experiments to solve an issue on the ground, whether it is to reduce birth rates, boosting school participation or increasing savings rates (Ashraf, Field & Lee, 2014; Dupas & Robinson, 2013; Miguel & Kremer, 2004).

Recently there have been attempts to remind (management) scholars that theories are not ends in themselves (e.g. Doh, 2015; Hambrick, 2007). Their main aim is to help us make sense of the world around us by increasing our understanding of phenomena. Theories or models help us organize our thoughts, think of mechanisms and make predictions (Hambrick, 2007). As such, theory-building research is strongly related to phenomenon-based studies. Phenomenon-based research aims to outline and contextualize phenomena, whereas theory-building research focusses explicitly on how and why phenomena occur (Doh, 2015; Gioia & Pitre, 1990). This means that actually in both types of research phenomena are central.

Watts (2017) promotes the idea of solution-oriented research by putting more emphasis on finding answers to practical questions that are salient within the business community or civil society. In contrast to theory-building or phenomenon-based research, which both focus on phenomena, solution-oriented science is motivated by a question or a problem. Examples would be ‘How can we prepare for national disasters?’ or ‘How can I deal with corruption when entering a new market?’ Of course, many studies already address questions that are directly relevant for managers or society. Nevertheless, there are many societal challenges which require scholarly attention and scholars are facing ever increasingly pressured by those outside academy too not only publish but too also have a relevant and impactful research agenda. Buckley, Doh and Benischke (2017) call for more research on so-called ‘grand challenges’, critical global problems that can capture the public’s imagination. Examples of these challenges are poverty, global warming, infectious diseases and of course violent conflict. When working on these challenges, the

development of theoretical approaches will remain extremely important, just not merely for the sake of the theory. Paradoxically, the excessive emphasis on theory-building in management research might have had the unintended effect of preventing the development of theory on new phenomena and challenges (Hambrick, 2007). In addition, a solution-oriented approach can enhance (social) scientists' legitimacy by increasing visibility and usefulness to outsiders. Hopefully this reduces the skepticism against scientists that seems to be growing within society (Gawande, 2016).

Grand challenges do not adhere to disciplinary boundaries. This is exemplified the topic of this dissertation; political conflict is a topic of study in almost all social sciences, most notably economics and business. Hence, to generate a more comprehensive understanding of these grand challenges, an interdisciplinary approach is essential. Although the importance of interdisciplinary research in general - and for solution-oriented research in particular - has been widely recognized (Buckley et al., 2017; Cheng, Henisz, Roth & Swaminathan, 2009; Dunning, 1989; Watts, 2017), truly interdisciplinary work is rare. In order for a study to qualify as interdisciplinary, the approaches from two different disciplines need to be integrated. Introducing an existing framework into in a new discipline does not make a paper interdisciplinary – neither would it contribute to a more comprehensive understanding of a phenomenon. To achieve interdisciplinarity there are two options. A scholar might know the language of both disciplines and be well informed of the developments in both fields, making it possible to integrate state-of-the-art concepts from these fields. In the introduction of this dissertation I explained that being an expert in more than one field is strenuous and the academic incentive system is not designed to make the efforts worthwhile. The other option is to work in a team with researchers from different disciplines. However, to communicate effectively these teams will still require scholars who speak the language of at least two disciplines, although in this case they do not have to be experts in more than one field. In my future career I aspire to become such a bridge-builder and facilitate truly interdisciplinary, solution-oriented research on 'grand challenges'.

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Summary

This dissertation evaluates the causes of political conflict and its consequences for foreign direct investment (FDI). The studies that are part of this thesis aim to better understand the relationships between political conflict, foreign investment and, ultimately, human prosperity. The aforementioned concepts are interdisciplinary in nature and the different chapters included in this thesis reflect this. By combining conceptual frameworks and methodologies from economics and business research, they shed light on the increasing levels of political conflict and the reaction of multinational enterprises (MNEs) to this development. The papers in this dissertation are inspired by the movement within business research to address ‘Grand Challenges’, critical global problems that can capture the public’s imagination. This reflected not only in the interdisciplinary approach, but also in the phenomena-driven perspective (Buckley, Doh & Benischke, 2017).

In Chapter 2 the causes of political conflict are examined. Here the focus lies on civil resistance, the non-violent counterpart of armed conflict. I estimate regression models (OLS, GMM & 2SLS) on a database combining data on non-violent uprisings and subjective wellbeing, covering 118 countries over the period 2007 to 2014. The findings demonstrate that a decrease in subjective wellbeing (i.e. happiness) can motivate citizens to participate in acts of civil resistance. This effect of overall wellbeing on non-violent uprisings is to a large extent the result of changes to satisfaction with living standards and the perceived capability to have a purposeful and meaningful life. Hence, in contrast to previous literature, I find that there are systematic causes of non-violent uprisings, although these causes might be difficult to capture using traditional socioeconomic indicators. There is however no evidence for a direct relationship between unhappiness and armed conflict.

In Chapter 3 and 4 I analyze the consequences of political conflict for Foreign Direct Investment (FDI). In these chapters the focus is on armed conflict. In Chapter 3 I compare the effect of armed conflict to other types of political violence, i.e. terrorism, assassinations and political terror, and estimate a dynamic fixed effects model for a panel of 90 developing countries. The findings demonstrate that only armed political conflict deters FDI, whereas other types of political violence do not affect MNEs’ investment decisions. I also find that the sensitivity of investment by MNEs to political conflict is reduced by (1) the extent to which conflict is localized, (2) whether there are constraints on location choice due to requirements on inputs, (3) the size of economic rents and (4) the extent to which the firm is sufficiently internationalized to diversify the risk posed by conflict. Ultimately, only investment by relatively non-diversified MNEs in the non-resource sector is affected by nationwide armed conflict. This falsifies the claim that all FDI flows are negatively affected by political violence.

Chapter 4 looks at the effect of armed conflict on MNEs' location choice strategies, shedding light on how armed conflict moderates the effect of home-host ties on location choice strategies. Whereas the ways in which international wars can disrupt international (business) relationships are relatively well understood, little is known about how internal conflict – currently the dominant form of armed conflict– affects these relationships. This paper analyzes how armed conflict and political instability moderates the effect of historical ties, specifically ties resulting from colonial history, on FDI. I find that similar to international conflict, internal wars can disturb existing relationships between the MNEs' home and host country and accordingly moderate the effect of ties on FDI. However, smaller conflicts have no effect on the relevance of ties for location choice decisions. These results do *not* support the idea that connected firms can benefit more from the confusion caused by political conflict. In contrast, they seem to have more to lose than those without historical ties to the host country and accordingly face incentives to avoid the outbreak of wars.

Nederlandse Samenvatting

Dit proefschrift onderzoekt de oorzaken van politieke conflicten wereldwijd en de consequenties van deze conflicten voor buitenlandse directe investeringen, ook wel bekend als FDI. De studies die deel uitmaken van dit proefschrift hebben tot doel de relaties tussen politieke conflict, investeringen en menselijke welvaart beter te begrijpen. Deze drie begrippen zijn interdisciplinair van aard en de verschillende hoofdstukken in dit proefschrift reflecteren dit. Door conceptuele kaders en methodologieën uit de economie en bedrijfskunde te combineren, belicht en verklaart dit onderzoek de toenemende mate van politiek conflict en de reactie van multinationale bedrijven hierop. Het onderzoek in dit proefschrift is geïnspireerd op de beweging binnen bedrijfskunde om 'Grand Challenges', grootse kritieke problemen die tot de verbeelding van het publiek spreken, aan te pakken. Dit is niet alleen weerspiegeld in de interdisciplinaire aanpak in dit proefschrift, maar ook in het fenomeen-gedreven perspectief (Buckley, Doh & Benischke, 2017).

In hoofdstuk 2 worden de oorzaken van politieke conflict onderzocht. Hier ligt de nadruk op burgerlijk verzet, de geweldloze tegenhanger van gewapend conflict. Ik schat mijn regressiemodellen (OLS, 2SLS en GMM) op een database die gegevens over burgerlijk verzet combineert met indicatoren van subjectief welzijn in 118 landen in de periode 2007 tot 2014. Uit de bevindingen blijkt dat een afname in subjectief welzijn (oftewel geluk) burgers kan motiveren om deel te nemen aan burgerlijke verzet. Het effect van een vermindering van geluk op burgerlijk verzet is grotendeels het gevolg van veranderingen in tevredenheid met de levensstandaard en de waargenomen mogelijkheden om een doelbewust en zinvol leven te leiden. In tegenstelling tot eerdere literatuur, vind ik dus bewijs dat er systematische oorzaken zijn van burgerlijk verzet, hoewel deze oorzaken moeilijk gedetecteerd kunnen worden aan de hand van traditionele sociaaleconomische indicatoren. Er is echter geen bewijs voor een directe relatie tussen ongeluk en gewapend conflict.

In de hoofdstukken 3 en 4 analyseer ik de gevolgen van politiek conflict voor FDI. In deze hoofdstukken ligt de nadruk op gewapend conflict. In hoofdstuk 3 vergelijk ik het effect van gewapend conflict met dat van andere vormen van politiek geweld, d.w.z. terrorisme, politieke moorden en politieke terreur en schat een dynamisch model voor een panel van 90 ontwikkelingslanden. Hieruit blijkt dat alleen gewapende conflicten investeringen afschrikken. Andere vormen van politiek geweld (bijvoorbe

eld gelokaliseerd conflict, terrorisme en politieke terreur) hebben geen invloed op FDI-stromen. Daarnaast blijkt dat de gevoeligheid van multinationale bedrijven voor politieke conflict beperkt wordt door: (1) de mate waarin conflicten gelokaliseerd zijn, (2) beperkingen aan locatiekeuzebeslissingen door vereisten aan grondstoffen, (3) de omvang

van de surpluswinst, en (4) de mate waarin de onderneming voldoende geïnternationaliseerd is om conflict risico's te diversifiëren. Uiteindelijk worden alleen investeringen door relatief minder geïnternationaliseerde multinationals die actief zijn in de maak- en service-industrie negatief beïnvloed door (landelijk) gewapend conflict. Dit falsificeert de bewering dat alle FDI afneemt in tijden van politiek geweld.

Hoofdstuk 4 kijkt naar het effect van gewapend conflict op de locatiekeuze strategieën van multinationals, waarbij wordt aangetoond hoe conflict het effect van verbanden tussen het huis- en gastland op locatie-keuze strategieën modereert. Terwijl bekend is hoe internationale oorlogen de commerciële relaties tussen landen kunnen verstoren, kijkt dit papier naar het effect van binnenlandse conflicten - momenteel de dominante vorm van gewapend conflict - op deze relaties. De focus ligt op historische verbanden, in het bijzonder, banden die voortvloeien uit de koloniale geschiedenis. De bevindingen laten zien dat, vergelijkbaar met internationaal conflict, binnenlandse oorlogen de bestaande relaties tussen het thuis- en gastland van de MNE verstoren, opdat ze het effect van verbanden op FDI modereren. Kleinere conflicten hebben echter geen invloed op de relevantie van deze banden voor FDI. Deze resultaten tonen aan dat het *niet* klopt dat bedrijven uit landen met banden met het gastland meer kunnen profiteren van de verwarring veroorzaakt door politieke conflicten. Ze lijken daarentegen meer te verliezen te hebben dan multinationals zonder historische banden met het gastland en daardoor redenen te hebben om binnenlandse conflicten en regimeveranderingen te voorkomen.

About the Author



Caroline Theresia Witte was born on the 21st of October 1990 in Zoeterwoude, The Netherlands. She obtained her Bachelor of Arts (BA) degree cum laude in Liberal Arts and Sciences at University College Maastricht (Maastricht University), The Netherlands in 2012. Subsequently, she did a master's degree (MSc) in Economics and Business at the Erasmus School of Economics (Erasmus University Rotterdam). She wrote a master thesis on the determinants of social entrepreneurship and graduated cum laude in 2013. In September 2013, she started her PhD journey at the department of Applied Economics at the

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Caroline's fields of interests include international business, development economics and applied econometrics. She is mainly interested in the strategies of multinational enterprises in fragile economies. She presented her work at several prestigious conferences in the fields of economics and business, such as the Conference of the Center of African Economies in Oxford and the Annual meetings of the Association of International Business (AIB) in Bangalore, New Orleans and Dubai, and won the AIB best dissertation proposal award in 2016. During her PhD she chaired the PhD council of the Erasmus Institute of Management and was a board member of the Young ESE Program. During her PhD, Caroline also had the opportunity to work as an external consultant for the World Bank and to go on a three-month research visit at the University of Oxford. She is continuing her career as an assistant professor of international business at the department of Strategic Management and Globalization at the Copenhagen Business School, Denmark.

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ARTICLES UNDER-REVIEW

Witte, C.T., Burger, M.J., & Pennings, E. (2017). The effect of historical connections on FDI in conflict areas in Sub-Saharan Africa. *Submitted to Journal of World Business*.

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Over the last few years, the world has been shocked by a new wave of political conflict, including the events of the Arab Spring and the conflict in Ukraine. This dissertation evaluates the causes of political conflict and its consequences for investments by multinational enterprises (MNEs). The studies that are part of this thesis aim to improve our understanding of the relationships between political conflict, investment and ultimately human prosperity. These three concepts are interdisciplinary in nature and the different chapters included in this thesis reflect this. By combining conceptual frameworks and methodologies from economics and business research, they shed light on the increasing levels of political conflict and the reaction of firms to this development.

In the first part of this thesis, the causes of non-violent political conflict are examined. The findings demonstrate that a decrease in subjective wellbeing (i.e. happiness) can motivate citizens to engage in acts of civil resistance. In the second part, the consequences of armed political conflict for Foreign Direct Investment (FDI) are examined. The effect of political violence on greenfield FDI is heterogeneous across types of violence, sectors and firms, falsifying the claim that all FDI flows are negatively affected by political violence. In addition, the results indicate that similar to international conflict; internal wars can disturb existing relationships between the MNEs' home and host country.

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