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UNIVERSITY OF CALIFORNIA,
IRVINE

Economic Coercion and the Logics of Global Business

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Political Science

by

Joshua P. Malnight

Dissertation Committee:
Professor Etel Solingen, Chair
Professor Charles Ragin
Professor Marek Kaminski

2017

DEDICATION

To my wife, Laina, my son, William, and my parents, Stephanie and Robert. I couldn't have done it without you.

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Lastly, I would like to thank my wife again. It's my acknowledgments page, so I can do that.

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ABSTRACT OF THE DISSERTATION

Economic Coercion and the Logics of Global Business

By

Joshua P. Malnight

Doctor of Philosophy in Political Science

University of California, Irvine, 2017

Professor Etel Solingen, Chair

How do multinational enterprises (MNEs) in or planning to invest in a target state respond to economic coercion – the threat or imposition of economic sanctions? The ability of states to cajole, coerce, or convince MNEs to alter their investment strategies speaks to the usefulness of economic statecraft and to the potential impact of economic statecraft on the global economy. I argue that explaining MNE responses to economic coercion requires (1) attending to the different pathways through which sanctions coerce MNEs and other economic actors and (2) accounting for systematic differences in MNEs' economic logics – the advantages that enable these enterprises to invest abroad in the first place. Economic sanctions can restrict foreign investment through direct legal restrictions, reputation costs, or negative indirect effects on the target economy. In turn, two economic logics predict whether MNEs will be vulnerable or resistant to these costs. First, MNEs invest in the target state seeking either resources or another market. Second, MNEs require either significant capital investment or relatively little. I develop and test hypotheses about the interactions between sanction costs and MNE logics. I first test the framework using an extreme case: Libya from 1951 to 2005. Libya was subjected to increasingly severe unilateral and multilateral economic coercion, illuminating the processes and sequences of MNE decisions. I trace these processes using case histories, newspaper reports, and archival data. I then examine the frameworks generalizability by examining U.S. outward FDI stocks in the petroleum,

manufacturing, and wholesale trade industries in non-OECD states, Mexico, and Turkey between 1989 and 2005. Using Bayesian time-series cross-sectional multilevel models, I find key differences between industries vulnerabilities to economic coercion. Overall, I find evidence that economic coercion is correlated with minimal disinvestment i.e., investment that leaves a target state. I conclude by examining whether sanctioned states suffer from underinvestment, becoming less competitive destinations for world FDI. My statistical results suggest that while economic coercion does not lead many MNEs to leave a target state, it is more effective at deterring MNEs from making new investments. I conclude with the scholarly and policy ramifications of these results.

Chapter 1

Introduction

How do multinational enterprises (MNEs) in a target state respond to economic coercion – the threat or imposition of economic sanctions? Recent international turbulence illustrates why this question matters. In 2014, the United States and the European Union responded to the Russian annexation of Crimea with economic sanctions, initially imposed against particular individuals but soon expanded to prevent any trade with the military and state-run energy companies. Constrained, the Exxon Mobil oil firm shelved a multi-billion dollar joint-venture with Russian oil company Rosneft to explore for oil in the Russian Arctic (Gardner Fri Sep 19 2014). While Exxon’s investment was canceled until further notice, Royal Dutch Shell expanded its projects with also-sanctioned Russian state gas company Gazprom, maneuvering amid the legal restrictions. These firms shift billions of dollars of investment to comply with the sanctions, aware that other firms would gladly replace them if able. Exxon Mobil and Royal Dutch Shell are both exposed to severe Western sanctions, yet one holds back and the other advances where it can. What explains these differences? Are these differences important? Temporary? What are the mechanisms that lead economic coercion to change MNE responses? How do MNEs operating in the target who are not explicitly restricted by sanctions respond?

The ability of states to cajole, coerce, or convince MNEs to alter their investment strategies speaks to the usefulness of economic statecraft and to the potential impact of economic statecraft on the global economy. The expanded reach of MNEs and the globalizing economy are not abstract scholarly trifles: There are few areas in citizens' and scholars' lives untouched by global investment. According to the United Nations Conference on Trade and Development (UNCTAD), total World MNE investment abroad – foreign direct investment (FDI) – was valued at nearly 25 trillion USD in 2015, over 34 percent of global gross domestic product (GDP). This is up from nearly 12 percent in 1995 and over 24 percent global GDP in 2005. World net inflows were valued at over 1.7 trillion in 2015, worth approximately 2.4 percent of global GDP. As a point of comparison, World exports were valued at approximately 27 percent of global GDP, three percent more than World FDI; in 2015, exports were 28 percent World GDP, surpassed by World FDI. My results suggest a nuanced relationship: while MNEs can and do circumvent economic sanctions, the threat or imposition of economic sanctions can divert investment from a target state, leaving it comparatively poorer than had it gone un-threatened and unsanctioned.

I argue that explaining MNE responses to economic coercion requires (1) attending to the different pathways through which sanctions coerce MNEs and other economic actors and (2) accounting for systematic differences in MNEs' economic logics – the advantages that enable these enterprises to invest abroad in the first place. Put plainly, this two-part argument first defines the stimulus and then explains why MNEs respond so. Furthermore, this framework explains not only variation in MNE responses to economic coercion across industries but also variation within industries. Nor is the framework the only innovation on previous research; the empirical analysis distinguishes between threats of economic coercion and imposed sanctions, underexplored in the sanctions literature overall and doubly so for the study of non-state responses to economic coercion.

Four literatures address how MNEs respond to sanctions, but none with sufficient detail.

First, the international relations state power literature has long questioned how the rise of the MNE and attendant globalization affect international relations. This literature postulates primarily macro-structural factors that may provide scope conditions for any answers to the question but are too broad to be immediately useful. Second, a branch of international relations theory that specifically examines international conflict and interdependence describes how states may act in a globalized world but takes as given the behavior of MNEs. Third, the political risk literature examines how MNEs account for host state politics and societies when they invest abroad. However, this literature has paid scant attention to the particular risks of economic coercion and to risks that originate not solely in the host or home states but from the dyadic risks that emerge from the interaction between the home and host states. Finally, the economic sanctions literature has only yet begun to examine the question, but recent research is worrisome for proponents of economic coercion: any sanction effects on MNEs seem temporary at best.

The paths whereby economic coercion can influence MNE behavior is three-fold. The direct legal restriction, the sanctions instrument itself, proscribes acceptable behavior for all parties and stipulates penalties. MNEs alter their behavior because they are told to do so. The second pathway covers the actual and expected reputational costs, where the MNE loses standing in the eyes of important publics or elites and is therefore denied important resources (or expects it would). The final are indirect costs, negative externalities caused by a sanction such as decreased economic growth. Before the advent of so-called “smart” sanctions, indirect effects were considered an integral way to coerce target regimes: a deprived public would grow unhappy with its rulers, thereby pressuring the rulers to concede to the senders demands. In the context of MNEs, indirect effects reduce the profitability of the target state and may affect MNEs that are not bound by legal restrictions. Indirect effects can also include the target government’s response to sanctions, such as counter-sanctions.

MNEs are not uniformly vulnerable or resistant to these costs. Used to explain the world-

wide distribution of foreign direct investment (FDI), the Eclectic Paradigm provides the scaffolding to explain why the costs of economic coercion do not identically affect all MNE industries (Dunning 1980; Dunning 2001; Meyer and Thein 2014). First, MNEs can be categorized according to their purpose for investing in the target state, seeking resources or another market. Because they export their products, resource-seeking MNEs are likely more resistant than market-seeking MNEs to negative indirect effects, provided those indirect effects do not threaten basic property rights. Second, MNEs can be divided as to their capital requirements, requiring significant capital investment or relatively little. Non-capital-intensive MNEs are “quicker on their feet,” able to leave a target state with fewer costs than their capital-intensive counterparts. Taken together, these two categories create four types of MNEs.

While the framework explains intra- and inter-industry patterns of MNE behavior during economic coercion episodes, an open question remains: does economic coercion reduce aggregate FDI into a target state? The framework predicts, in accordance with commonly observed reality and scholarly research, that MNEs not subject to legal restrictions or reputation costs would replace those MNEs that were. Lektzian and Biglaiser (2013) are stark: economic coercion may have little effect because it only displaces sender MNEs, who are quickly replaced by competitors. However, my framework also predicts that economic sanctions can lower aggregate investment if those sanctions create sufficient negative indirect effects, which affect all MNEs. To examine the net effects of economic coercion, I introduce a new concept and indicator of economic coercion’s effects on MNEs: underinvestment. Underinvestment captures not only the disinvestment from the target state but also the dissuaded, deferred, and rerouted investment. It seeks to better capture the complete counterfactual effect of economic coercion. This complements previous measures of sanction effects on FDI, which examined only disinvestment.

This framework implies many MNE responses to economic coercion, and this project cannot

interrogate them all. I explore 7 hypotheses that probe MNE vulnerabilities to economic coercion, explore differences in sanction costs, and determine the extent of underinvestment in targets. Further development is left for subsequent projects. I test these hypotheses first by examining how U.S. and U.N. economic coercion affected MNEs in Libya. Libya was under some form of economic coercion for over 20 years, and the episode was a surprise success for sanction proponents. I then test how broadly the hypotheses hold by examining whether economic coercion alters patterns of U.S. FDI over time in the non-OECD states, Mexico, and Turkey. Using new data, I examine how these patterns differ across different industries. Finally, I examine whether and when economic coercion creates underinvestment in those same states.

The results support the framework, albeit with caveats. In Chapter 4, the Libyan case confirms the framework's expectations but illustrates a key scope condition: because the events that preceded and triggered economic coercion can also deterred investment, a significant portion of the relationship is spurious. However, it also illustrates a sometimes overlooked strength of economic coercion. While Libyan investment stayed relatively constant or shrunk modestly under unilateral and multilateral sanctions, it increased dramatically once those sanctions were lifted. In short, the sanctions had prevented significant new investment and Libya had suffered from extreme underinvestment. In Chapter 5, I test whether the framework generalizes internationally. The framework generally holds for oil firms but also reveals significant diversity in sanction episodes and across industry types. I find strong differences in sanction effects at the threat stage versus the imposition stage. Researchers have focused on how states respond strategically to threats of economic sanctions but have not explored how economic actors do so; while not explicitly theorized here, this has clear implications for future research. This chapter also provides evidence that narrow reputational costs matter more than broad reputation costs – i.e. that MNEs seem to care more about disapproval from elites than from the public. Chapter 6 develops the conditions under which U.S. economic coercion creates underinvestment. Both U.S. multilateral threats and imposed sanctions

are correlated with underinvestment. This chapter also finds that indirect effects are correlated with underinvestment on average, although these effects differ for states with larger economies versus those with smaller economies, as well as for more developed versus less developed states.

In sum, this project builds upon previous research by establishing the conditions under which economic coercion can alter MNE behavior. These conditions depend on the properties of the sanctions instrument and the economic logics of MNEs in the target state. I provide compelling evidence that MNEs rarely leave a state once they have invested but generally do not invest in states sanctioned or threatened with sanctions.

1.1 Four Theories

Four theories inform this project. Theories from international relations – those that focus on state power and those that explore the dynamics of conflict and interdependence – bound the dynamics and provide scope conditions for this project’s theoretical framework. Yet their foci are too wide to make concrete predictions about the phenomena under study. Similarly, theories that focus on either MNE decision-making or the dynamics of economic coercion are only beginning to explore the research questions of interest in this study.

One of the primary literatures in IR scholarship, the state power and interaction literature has sought to explain international relations in terms of power relationships between states. Pertinent to this project, this literature asks if globalization constrains states or if globalization arose from the primacy of one state? Those who argue the former propose that a globalized economy exerts decentralized market power on states and constrains policymakers.¹ The strongest form of this argument predicted policy convergence among the most

¹There are too many works to mention, but to name a few: see Vernon (1971; 1981), Keohane and Nye (1977), Gill and Law (1989), Goodman and Pauly (1993), Haggard and Maxfield (1996), and Strange (1996).

globalized states, but there are sufficient differences to support the contention that domestic politics remains integral (Drezner 2001; Garrett and Lange 1991; Mosley 2000; Mosley 2003). Hegemonic stability theory, meanwhile, argues that globalization and economic integration results from a sufficiently powerful state (Gilpin 1987; Keohane 1984; Kindleberger 1973; Krasner 1976). As hegemonic power waxes or wanes, so too does global economic integration. Yet evidence suggests that hegemonic stability theory does not explain the results of U.S. economic coercion attempts during the Cold War (Rodman 1995; Rodman 2001).

Another literature examines the nexus of conflict and interdependence. Scholars have debated whether economic interdependence reduces international conflict, and if so, how and why that relationship exists. While liberal peace theorists argue that economic integration reduces the propensity toward war among republics (Kant 1795; Oneal and Russett 1997), others argued that asymmetric trade relationships provide power for one state over another (Cooper 1972; Hirschman 1980; Keohane and Nye 1977; Morrow 1999). Furthermore, levels of trade and interdependence may simply be epiphenomenal of existing levels and expectations of conflict, a signal about the relationship (Morrow 2003; Stein 2003). Even if the liberal theorists are correct, the economic coercion can be both (either) a substitute and (or) a complement for war and other types of conflict: the comparative statics involving economic coercion are unclear. Drezner (1999) argues that the underlying conflict expectations influences the sender's demands and the willingness of the target to accede in economic coercion episodes. This literature is valuable but remains relatively state-centric, taking MNE links as given.

The political risk literature explicitly examines how MNEs deal with systems of authority and political actions. Some theories take a decision-theoretic bent, aiming to explain or improve MNE decision-making under uncertainty (Clark and Tunaru 2013; Kobrin 1979; Robock 1971). IR scholars are among those who focus on the structural and institutional correlates – the so-called “political determinants” – of FDI (Busse and Hefeker 2007; Bthe and Milner

2008; Bthe and Milner 2014; Jensen et al. 2012). The two key variables underlying these works are uncertainty and risk, although scholars contest the definitions. Incipient work on coercion and FDI argues that uncertainty, not risk, drives disinvestment (Biglaiser and Lektzian 2011; Malnight 2016). But as links between economic coercion and MNE behavior, risk and uncertainty are underdetermined (Malnight 2016). Furthermore, the political risk literature has focused on the host-state determinants of FDI, but has only begun to examine home state risks and, equally crucial, the dyadic risks posed by home-host relationships (Meyer and Thein 2014). This project addresses these lacunas.

Along with the political risk literature, the economic sanctions literature is most crucial to this project. It has developed along three lines: determinants of sanctions, determinants of sanction success, and sanction effects. It has begun to examine how economic coercion affects MNEs only recently, and four results bear upon this project. First, Rodman (1995; 2001) evaluates a number of U.S. sanctions episodes and argues that neither hegemonic stability theory nor globalization theory sufficiently accounts for MNE compliance with economic sanctions; rather, the domestic politics of the United States catalyzed enforcement and compliance. Second, MNEs avoid uncertainty rather than risks, and this implies that sanctions coerce MNEs at best temporarily (Biglaiser and Lektzian 2011; Malnight 2016). Additionally, third-party MNEs can circumvent economic sanctions (Barry and Kleinberg 2015; Lektzian and Biglaiser 2013). Finally, MNEs can adopt strategies to avoid the penalties of economic sanctions (Meyer and Thein 2014). My framework builds upon these results.

1.2 The Framework

The book's main argument is in two stages. The first stage posits that economic sanctions impose three different kinds of costs on multinational enterprises. Those costs are: legal (all costs specified by the sanction instrument); reputational (loss of standing in the eyes of

elites or the public); and indirect (negative externalities, such as decreased economic growth, that a sanction can cause in a host state). Legal and reputational costs are created directly by the economic coercion instrument and therefore “act” directly upon MNEs. Put plainly, MNEs alter their behavior because they are told to do so and expect that they will be denied contracts and resources in other arenas. In contrast, indirect costs are transmitted through other variables.² While other categorizations of sanction effects exist (e.g. Crawford and Klotz 1999; Kirshner 1997), this classification systematically groups causal factors often left scattered and to my knowledge is novel to the literature. Furthermore, this classification could be applied to other economic actors, not only MNEs.

The second stage asserts that each type of cost affects an enterprise’s investment calculus according to that enterprise’s underlying economics. Multinational enterprises invest in host states for different reasons such as mining diamonds, selling mobile phones, building (or buying) textile factories, building department stores, or innumerable other purposes. These endeavors follow two economic logics. The first logic concerns an enterprise’s purpose in the host state, which might be to sell its product elsewhere (diamonds, for instance) or in the host state (mobile phones, for instance). Another logic concerns the capital the enterprise requires to produce goods and services. An oil firm requires significant capital investment in the host state, while a consumer goods company requires relatively little. These economic logics in turn determine how vulnerable multinational enterprises will be to the effects of economic sanctions. In fact, economic sanctions can be crafted and enforced in ways that ameliorate or exacerbate those effects.

Table 1.1: Example of industries classified according to their economic logics. Framework developed by Meyer and Thein (2014).

	Capital Intensive	Non-Capital-Intensive
Resource-seeking	Oil and energy firms	Garment industry

²These costs do not have to be instantiated; MNEs can also respond to threats and expected costs.

	Capital Intensive	Non-Capital-Intensive
Market-seeking	Telecommunications	Consumer goods

This framework allows many predictions, as the economic logics predict (in)sensitivities to particular sanction costs. For example, enterprises that have invested significant capital in a sanctioned state and sell their products elsewhere do not rely on the sanctioned state as a market. They can therefore weather all but the direst economic downturns in the sanctioned state (i.e., dire indirect costs). Enterprises that rely on the sanctioned state for local consumption are much more vulnerable to those indirect costs. Furthermore, indirect costs should affect all market-seeking MNEs, even third-party MNEs not bound by legal restrictions. Only the most severe sanctions should dislodge resource-seeking, capital-intensive firms because they are loath to abandon their investments and are not exposed to indirect effects. Sender MNEs should be sensitive to economic coercion motivated by potential high reputation costs, whether they be narrow (involving elites) or broad (involving the public). *Ceteris paribus*, economic coercion based on human rights issues should generate more broad reputation costs than economic coercion motivated by economic disputes. The same should be true of economic coercion arising from security issues, which would have higher narrow reputation costs than economically-motivated coercion.

1.3 Empirics (I): Libya

Libya from 1951 to 2004 provides excellent within-case data. Libya is an extreme case: extreme values on the independent variable allow for clear observations of causal processes and congruence between the variables (e.g. Gerring 2007). Libya was subjected to increasingly

harsh unilateral and multilateral economic sanctions for over twenty years. The Libyan case can be broken up in time: from independence in 1951 to the 1969 Revolution, Libya becomes a preeminent oil power and a destination for European and U.S. investment. This period serves as a useful contrast for the period from the Revolution to 1986, where Tripoli supported international terror and was increasingly in conflict with the United States. As I demonstrate, during this period oil MNEs – including those with parent companies based in the United States – proved robust to U.S. coercion attempts. Disinvestment is relatively low, and significant disinvestment precedes the imposition of serious sanctions. The relationship between economic coercion and some disinvestment is spurious, since the activities that lead to economic coercion can make foreign investment prohibitive. The period from 1987 to 1999 sees Libya become sanctioned by the United Nations and a further round of U.S. sanctions (under the Iran and Libya Sanctions Act of 1996). Again, oil MNEs that are already invested in Libya proved robust to even these sanctions but the Libyan economy certainly suffers. Finally, the period from 1999 to 2004 covers Libya’s abandonment of WMD and its support for international terrorism. As Tripoli orients itself toward the global economy, it becomes clear that Libya was quite ostracized: U.S. investment in Libya more than quadruples from 2004 to 2005 and England, France, and Germany all sign economic and political treaties with the Qadhafi regime. Libya presents a clear example of underinvestment but low disinvestment.

1.4 Empirics (II): Cross-National Investment

To test whether the hypotheses hold more broadly, I develop statistical models of economic coercion and U.S. FDI stocks in non-OECD states, Mexico, and Turkey between 1989 and 2005.³ I estimate the parameters using Bayesian hierarchical linear mixed models (HLMs).

These models are similar to classical OLS regression models but better model time-series,

³U.S. outward FDI data at the aggregate and industry levels are available from the U.S. Bureau of Economic Analysis (BEA). Economic coercion data is taken from the Threat and Imposition of Economic Sanctions (TIES) database of Morgan et al. (2014).

cross-sectional (TSCS) data and use of prior information to in effect create more difficult hypothesis tests for the parameters (Gelman, Hill, and Yajima 2012; Shor et al. 2007). The dependent variables are two types of resource-seeking, capital-intensive industries, extracting and manufacturing, and one type of market-seeking, non-capital-intensive FDI, wholesale trade. I examine differences in sanction severity and indirect effects for these industries. Severe and limited sanctions are defined as multilateral and unilateral threats and sanctions. I measure indirect effects by interacting the economic coercion variables with the basic economic FDI determinant variables – economy size (GDP), development (GDP per capita), and trade frictions (distance). If indirect effects are present, then economic coercion should alter the relationship of these basic variables with FDI and these interaction variables should therefore be negative. I examine reputation costs’ effects on all U.S. outward FDI stocks. Reputation costs are approximated by the issue driving the economic coercion: economics, security, human rights, or any other issue. Human rights-driven coercion should have greater actual and potential broad reputation costs than coercion driven by economics. Security-driven coercion represent issues important to elites and should carry greater narrow reputation costs than economics-driven coercion.

The results suggest significant heterogeneity in economic coercion episodes. U.S. extractive industries disinvestment is negatively correlated with U.S. multilateral threats, but other forms of coercion are not so correlated. U.S. manufacturing FDI, however, is not correlated with any economic coercion. Indirect effects do not appear to be present (or are negligible) for resource-seeking, capital-intensive FDI. As measured, broad reputation costs have little effect relative to more neutral issues; narrow reputation costs do appear to be correlated with lower U.S. FDI compared to neutral issues.

1.5 Empirics (III): Underinvestment

Underinvestment results when MNEs currently in the target leave (disinvestment) and potential investors defer their investment or invest elsewhere. For many questions about economic coercion, it makes sense to model the strategic interactions between the sender and the target, leaving third-parties aside for tractability. However, policymakers care about their states' relative standing to other states, particularly neighbors and peers. Realism has long held that this relative standing is a structural constraint, but I show that it is often an explicit goal of policymakers and pursued for reasons other than power or pure survival. This means that not only is underinvestment an important consequence of economic coercion on a target but also something that many policymakers actively wish to avoid.

I measure underinvestment, the dependent variable, by a state's share of World FDI inflows in a given year.⁴ This measure captures a state's attractiveness as an MNE destination compared to all other states. If a state's net FDI inflows shrink from the previous year but its share of World FDI inflows increases, this indicates that its relative competitiveness has improved relative to the rest of the world. If economic coercion is expected to have any significant effect on MNE behavior, it must be evident in share of World FDI. Similarly to the previously mentioned statistical models, I examine the relationship between economic coercion and underinvestment for non-OECD states (including Mexico and Turkey) between 1982 and 2005. The results provide compelling evidence that economic coercion does deter MNEs, reducing its attractiveness as an FDI destination even in the face of sanction-busting and similar circumvention. On average, indirect effects lead to the most disinvestment for multilateral sanctions. However, I find compelling differences between indirect effects in developed versus developing states.

⁴This data is provided by the statistics division of the UNCTAD, UNCTADStat.

1.6 Conclusion

This project proposes a framework to answer a question that the previous literature could not: how do MNEs considering investing or already invested in a target state respond to economic coercion? This framework build upon international relations theories and most directly on theories of political risk and of economic statecraft. The Libyan case provides clear support for the proposed relationships. While a cross-national analysis finds some supporting evidence, particularly for extracting industries, the results suggest there may be greater heterogeneity among economic coercion episodes than previously accounted for. However, sanction proponents can perhaps breathe easier, as I find compelling evidence that economic coercion can make a state less attractive to MNEs on the whole. Were this not the case, the effectiveness of economic coercion would be indicted indeed.

Chapter 2 details the theories and literatures upon which this project builds. This project has ramifications even for the grand IR theories of last century that asked big questions about the international system. Economic coercion is a clear example of states attempting to exert power and overcome diffuse, external market power. Chapter 3 details the framework. Chapter 4 examines the case of Libya, while Chapter 5 tests the industry-specific dynamics in a cross-national context. Chapter 6 steps back and examines underinvestment, a crucial element of sanction efficacy. Chapter 7 concludes.

Chapter 2

Models of Economic Sanctions and Multinational Enterprises

2.1 Introduction

There are four scholarly lenses that examine how interstate economic coercion might change multinational enterprise (MNEs) behavior. The first lens is the collection of international relations (IR) theories that focus on state power and interaction but treat the power of MNEs as a structural phenomena. This literature suggests important scope conditions both for the likelihood and efficacy of economic sanctions and for the autonomy and prevalence of MNEs. The second lens, also from IR theory, looks upon the intertwined roles that conflict and interdependence play in determining state behavior. Power arises from incentives, asymmetric resources, dependent relationships, and asymmetric information. As with the first school, states are the primary actors and MNEs are important international commercial links. The third lens focuses on MNE responses to the dilemmas of foreign investment caused by states and political processes, broadly categorized as political risk. These often take a

decision-theoretic approach to MNE behavior, treating state institutions as given and state behavior within a probabilistic framework. The last lens concentrates on economic sanctions, particularly their determinants, effectiveness, and outcomes. Though some concepts and relationships herein are also visible in the above theories, much of this literature eschews broad theories for a very sanction-centered approach.

Yet each lens blurs elements pertinent to the research question. The state power and conflict and interdependence literatures suggest important scope and antecedent conditions for the sanction/MNE relationship but they cannot speak to particular sanction outcomes. The political risk literature focuses too much on MNEs in a host state and not enough on home state and dyadic risks. And the economic sanctions literature has only begun to examine how MNEs respond to economic sanctions, leaving the relevant mechanisms remain underspecified. All provide necessary perspectives but incomplete answers to the research question.

2.2 Economic Sanctions and MNEs: Concepts and Definitions

This section summarizes how scholars conceptualize economic coercion and MNEs and presents the definitions that carry forward through this project. Economic sanctions often have negative connotations, but some scholars also refer to so-called “positive sanctions”, also known as inducements (e.g. Haggard and Noland 2012; Solingen 2012; Stein 2012). This project assumes that economic sanctions are negative – sticks used to produce compliance – and will use the term “inducements” to refer to carrots. I follow Drezner’s (2003a, 643) definition of economic coercion: “the threat or act by a sender government or governments to disrupt economic exchange with the target state, unless the target acquiesces to an articulated demand”. Unless explicitly contrasted with sanction threats, the term “economic

sanctions” refers to an episode of economic coercion and therefore may contain a sanction threat. When contrasted with threats, I refer to sanctions imposition to refer to that particular stage of a sanctions episode.

Economic sanctions can be categorized according to the type of commerce they interrupt as leverage. A sender may prohibit exports to the target, halt imports at the border, prevent interstate financial transactions, seize target government and citizen assets, engage in a complete economic embargo, among other options. Governments may be sanctioned, or as has been more prevalent in recent years, individuals may be the targets of so-called “smart sanctions” (Drezner 2003b; Drezner 2011; Lopez and Cortright 2002). Early sanctions sought to impoverish the general target public in the hopes that the public’s dissatisfaction would coerce the target regime. Smart sanctions reflect not just an interest in most effectively pressuring regime supporters but also an acknowledgment that sanctions have different domestic distributional costs in the target.

Sanctions may be imposed for many reasons, but many scholars choose to emphasize sanctions that reflect only issues related to national security, matters of “high politics”. For example, in their groundbreaking studies of economic sanctions, Hufbauer, Schott, Elliott, and others (Hufbauer, Schott, and Elliott 1990) excluded sanctions imposed for purely economic or regulatory reasons. I follow Baldwin (1985; 2000) and Drezner (2003a) and include these “low politics” episodes as sanctions.¹ Another distinction involves the role that sanctions play when imposed as punishments rather than bargaining chips (Cortright and Lopez 2000; Doxey 1983; Klotz 1995).

MNEs, often called multinational corporations (MNCs), “[organize] production of goods and services in more than one country, involving the transfer of assets or intermediate products within the investing enterprise and without any change in ownership” (Jensen et al. 2012, 1).² The study of MNEs – and their investment abroad, called foreign direct investment (FDI) – emphasizes foreign control of operations, as opposed simply to ownership (Kobrin

1977). The definition of FDI reflects this concern: it refers to the purchase of at least 10 percent value of the assets or equity in a foreign concern with the purpose of gaining managerial control (Barba Navaretti, Venables, and Barry 2004; Kobrin 1977; UNCTAD 2014).

The research on MNEs has sought to explain why they choose to maintain ownership internationally, rather than licensing their technology or exporting to the host state. A theory and a framework have arisen to answer this question. The theory argues that firms maintain ownership over international production to reduce their transaction costs. Horizontally integrated firms produce approximately the same product across multiple countries, and may do so because they possess intangible assets or to avoid high import tariffs. Vertically integrated firms produce different parts of a product in different states, maintaining ownership of their production chain internationally, e.g. to maintain low prices of necessary resources. The Eclectic Paradigm, meanwhile, serves as a framework to explain “the totality of firms engaged in foreign value adding activities” (Dunning 1988, 39). It specifies 3 conditions – ownership, location, and internalization conditions – that must be met for a firm to engage in foreign production, i.e., the firm-specific advantages that make foreign production profitable. I will return to the Paradigm in Chapter 3, as its purpose – explaining variation of cross-national FDI – is very useful for this project. Indeed, there is a great deal more to the literature on FDI, but it will be introduced organically in this and subsequent chapters.

2.3 Four Lenses

There are few direct examinations of how economic sanctions might lead MNEs to alter their investment behavior in a target state. In this section, I discuss not only the incipient research on economic coercion and MNEs but also other relevant theories. As with most social phenomena, economic sanctions and MNEs have variegated causes, effects, and scope

conditions and few theories capture every aspect. To that end, I follow an analytically eclectic approach that leans on relevant variables and conditions from multiple paradigms (Sil and Katzenstein 2010). To group these theories, I amend Wallensteen’s (1968) four-fold typology of sanctions theory. He classifies sanctions theories as sender-oriented, target-oriented, sender-target (in strategic terms and in terms of relative standing) oriented, and environment-oriented (focused on the international system and third-party states). While there are many sanctions theories, few examine MNEs specifically, nor does the literature on international business focus on economic sanctions. I categorize the literature as (1) sanction-oriented; (2) MNE-oriented; (3) strategic; and (4) systemic. Below, I proceed in descending order from the broadest theories to the most specific.³ As I will show, the broader theories outline scope conditions – important ones – but do not of themselves explain sufficient heterogeneity.

2.3.1 Systemic Theories: Theories of State Power

The grand theories of international politics rarely address international economic sanctions directly, and theories of economic sanctions generally return the favor.⁴ But while economic sanctions are rarely discussed at the macro-level, the same cannot be said about multinational enterprises and corporations. International relations theorists have long questioned what the rise of the MNE (and attendant globalization, of which MNEs play an integral part) meant for the international system and state power. Dire warnings (and dour dismissals) of how ascendant MNEs would affect the state pock the IR landscape. This subsection briefly surveys those theories. As I will show, these theories best specify potential scope conditions.

The most pessimistic prognosticators argue that globalization and the rise of the MNE fundamentally weakened state power in the international system. This school is exemplified by Vernon (1971; cf. Vernon 1981) and Strange (1996), who predicted state “sovereignty

at bay” and the “retreat of the state”, respectively.⁵ Technological progress and attendant financial and commercial integration (essentially, economic globalization) shift loci of power from states to non-state actors (Keohane and Nye 1977). In this new international system, “power over outcomes is exercised impersonally by markets and often unintentionally by those who buy and sell and deal in markets” (Strange 1996, 13).⁶ The strongest version of this argument holds that globalization presents a relatively uniform and inescapable pressure upon nation-states, exemplified by the argument that state economic policies will converge. Under this perspective, if economic interests dominate, then economic sanctions would only be imposed when MNEs would be least affected. Indeed, the market itself would impose the most effective sanctions, as mobile capital fled to the most hospitable hosts. Yet the strong version of the policy convergence argument has found little support, as subsequent research shows that domestic considerations still matter and the nation-state retains power over much of its domestic policy (Brune and Garrett 2005; Drezner 2001; Garrett and Lange 1991; Mosley 2000; Mosley 2005).

But the strongest versions of these arguments are strawmen. Few scholars would argue that states have uniformly lost power across or in every arena. For example, while domestic institutions are still necessary determinants of domestic policies, Mosley (2005) nonetheless finds evidence of policy convergence in monetary and fiscal policies in developed economies. Of particular interest to this project is the relative convergence of financial controls among the developed states (Goodman and Pauly 1993). Similarly, the study of international regimes sought to understand disparate authority – who including and besides states established norms, rules, and expectations – within particular international arenas (Haggard and Simmons 1987; Keohane 1984; Krasner 1983; Young 1982). Regimes allow for a more nuanced exploration of the sanctions—MNE relationship. First, as many scholars have emphasized, the term “sanction” can infer some infraction of commonly held norms (Bailey 1935; Doxey 1983; Klotz 1995). To the extent that interests diverge, regimes rely on some broad form of sanction (perhaps diplomatic instead of economic) or ability to preempt sanctionable be-

havior. Indeed, scholars speak of sanctions regimes, particularly at the U.N. (Cortright and Lopez 2000; see Hafner-Burton 2012 on human rights). Under this more realistic framework, strong regimes make economic coercion more effective in coercing states and MNE because those sanctions would be assisted by the various non-state actors and transnational actors that support and compose the regime. Market power may constrain the state but when established regimes are buttressed by that power states may more effectively use economic coercion. Strong regimes would not necessarily sanction more often, as potential violators would expect sanctions and therefore only the most resistant targets would break the regime's rules (Marinov 2005 makes a very similar argument about selection effects and costs to target leaders). However, in arenas with weak, nonexistent, or contested regimes, sanctions would likely be ineffective.⁷

The discussion of international regimes provides a useful transition to a competing argument: that MNE power – indeed, interdependence and globalization themselves – are dependent on or epiphenomenal of state power. While technological progress certainly contains the seeds of globalization, political and economic integration do not inevitably follow. Our era of globalization is the second in the past century and a half, proving retrenchment is possible (Frieden 2007). Krasner (1976), for example, argues that economic openness occurs under a hegemonic distribution of economic power, and that more multipolar systems will be closed. Hegemonic stability theory, of the coercive (Gilpin and Gilpin 2001) and the more benevolent varieties (Kindleberger 1986; Keohane 1984), similarly posits that hegemons (at least the two most recent) create international economic openness. Shifts in the distribution of power that lead to greater closure are effectively sanctions of all against all, though they lack the necessary coercive element.

From this perspective, predictions about sanctions and MNEs are indeterminate, other than both are by and large spurious by exogenous shifts in the balance of power – shifts ultimately determined by states (which, as Krasner 1976 argues, can be influenced by domestic politics).

However, one might see hegemonic states use a mixture of sanctions and inducements upon states resistant to the hegemonic order and MNEs would be relatively plentiful.⁸ Similarly, when closure is high, we would see few MNEs and less effective sanctions. Regarding the period under study, the end of the Cold War and post-Cold War eras, the system can be accurately characterized as hegemonic and open, though the financial crisis may be a shock preceding inward turns in worldwide polities.

Salient policy heterogeneity is evidence that states retain autonomy; if there is a trajectory toward relative uniformity caused by globalization, that trajectory is at best quite noisy. Mosley (2003) presents compelling evidence that both state and multinational policy preferences are shaped, reformed, and revised by their negotiations and interactions with one another. Similarly, Keohane and Milner's (1996) edited volume contains forceful arguments for the salience of domestic institutional filters on the exogenous effects of globalization. Indeed, while power-based theories like hegemonic stability theory predict varying levels of economic openness, empirical research suggests that domestic level factors better explain patterns of U.S. sanctions during from 1945 to 1990 (Rodman 2001). Theories emphasizing a decline in U.S. hegemonic power "overstate[d] the ability of the [U.S.] to enforce its preferences in the early Cold War era and understate[d] the potentially coercive impact of denying access to the U.S. market today" (ibid., 231). For example, the U.S. attempted to create a comprehensive net of extraterritorial sanctions against China (CHINCOM) similar those against the USSR (COCOM), but this was abandoned in deference to the U.K..

The stippled history of sanctions successes likely cannot be explain with these theories' broad strokes. Nevertheless, these macro-level theories identify processes in the international system – i.e., the environment in which sanctions are imposed – that act as antecedent conditions and scope conditions bounding sanction effects. Macro-level theories better describe increased MNE investment, although even this prediction misses important cross-national variations. The subsequent subsections explore this variation.

2.3.2 Strategic Theories: Conflict and Interdependence

Another literature examines when and whether interstate conflict and economic interdependence exacerbate or tame one another. The study of economic coercion is critical to this literature. I address three key arguments. The first holds that economic interdependence leads on average to more pacific relationships. The second holds that interdependence leads to indeterminate outcomes. The final argument reverses the previous two causal arrows and examines how conflict lowers interdependence. These theories imply hypotheses about the rates at which economic sanctions will be threatened, the types of conflict and attendant types of sanctions that may arise, and the manner in which economic sanctions will be resolved.

The two competing explanations for how interdependence affects interstate conflict both ignore qualitative changes wrought by globalization (e.g. I. Clark 1999), instead focusing on different levels (absolute and relative to other states) of varying forms of interstate commerce. In other words, they ignore questions of “structural power of state versus markets”, instead examining questions of “power of states in relation with one another, given markets”.

Liberal theorists argue that economic interdependence ameliorates interstate conflict, particularly between republics and democracies (Oneal and Russett 1997; Kant 1795). The proposed logics are two-fold. First, economic interdependence raises the costs of conflict to the extent that conflict would sever such commerce. Second, because republics and democracies are more responsive to the polity as a whole, and because this polity would most directly bear the costs of any economic deprivation, there would be little political incentive to engage in costly conflicts.

Kant did not expect any “perpetual peace” during his lifetime, and the theory is not weakened if one treats these predictions as probabilistic and long-term trends. While some empirical evidence suggests that trade interdependence and FDI interdependence reduce the

likelihood of wars and militarized interstate disputes (e.g. Bussmann 2010; Oneal and Russett 1997; Rosecrance and Thompson 2003), other studies suggest more nuanced relationships exist. Asymmetries of interdependence – classically trade – can lead to power relationships between states (Cooper 1969; Cooper 1972; Hirschman 1980; Keohane and Nye 1977) that affect the forms and frequencies of international conflictst, including economic coercion.⁹ Barbieri (1996), for example, finds that the probability of war is minimized at moderate levels of trade, and increases as interdependence moves from that point. Kleinberg et al. (2012) show that dispersed trade (i.e., the absence of trade concentration on one partner) is correlated with lower levels of interstate violence but other trade relationships are not.

Trade is the most-discussed commercial link but FDI may lead to more peaceable relations. Because FDI is more stable and long-term than trade, the logic underpinning the liberal theory should hold even more for FDI than it does for trade (Rosecrance and Thompson 2003). Subsequent cross-national empirical tests have found just such a relationship (Bussmann 2010; Li 2008; Li and Vashchilko 2010; Polachek, Seiglie, and Xiang 2007). In addition, greater U.S. FDI in host states is correlated with lower probabilities of being sanctioned by the U.S. (Lektzian and Biglaiser 2014). Gartzke et al. (2001) reanalyze Oneal and Russett (1997) and argue that pacific effects arose from capital market linkages, rather than trade and joint democracy. However, recent research argues that some FDI is not dissuaded by conflict: Lee (2014) finds evidence that when petroleum firms expect oil prices to rise, they maintain their presence in states where armed conflict has erupted.

However, the relationship between interdependence and conflict may be spurious. For one, interdependence yields competing incentives to exploit interdependence and to preserve it (Hirschman 1980; Morrow 1999). For example, even while military conflicts between the NATO allies nearly vanished, there were many disputes that arose from the very commercial and trade ties that were present (Stein 2003). One argument holds that states sever trade ties as costly signals to opponents in disputes (Morrow 2003; Stein 2003), but the costly

signalling argument can be taken too far, particularly when it asserts that a state may wish to harm itself more than its opponent to signal resolve (Drezner 1999).

A competing perspective embraces the above logic and asserts that conflict exists relatively exogenous of trade. Rather, trade serves to signal the status of the relationship. As Stein (2003, 11) writes, “trade may reduce conflict because it captures the degree of uncertainty in the relationship: higher levels of trade are associated with greater certainty in the relationship between states, and lower levels of trade are associated with greater uncertainty.” Here, trade serves as the signal but the underlying expectation of future conflict (which may itself be a function not only of past trade, but also of other factors) is the driving force.

Drezner (1999) applies conflict expectations theory to explain divergent patterns of sanctions behavior. First, previous studies show that economic sanctions are applied to a state’s allies as well as its enemies. Why would states sanction their allies, potentially alienating them? Second, sanctions against allies are more likely to succeed (i.e., lead to policy change in the target) than sanctions against enemies. Why would allies yield, when this might invite future demands? Drezner argues that when states expect future cooperation, they are more likely to view decisions in terms of absolute gains. When they expect conflict, they view decisions in terms of relative gains. A target sanctioned by an ally acquiesces because the target expects future cooperation with the sender and therefore values absolute gains. A target sanctioned by an enemy, however, expects future conflict and will be loath to give a disparate advantage to the sender. This theory treats conflict as exogenous a valid assumption for particular sanctions episodes, since expectations of conflict and cooperation accumulate over the long-term, and are unlikely to change drastically in the short-term.

In sum, interdependence may reduce the probability of severe conflicts, though it has indeterminate effects on the probability of low-level to moderate conflicts. This depends on the type of commerce, and FDI seems to be one of the more robust correlates with pacific interstate relationships. To the extent that these linkages cause pacific interstate relation-

ships, many questions remain. While scholars have found FDI to be negatively correlated with both militarized interstate disputes and sanction imposition, these linkages may be the result of relatively exogenous changes in the expectation of future conflict. Interdependence may lead to lower conflict expectations through a number of pathways, within which trade may play a minor or major part.¹⁰ This preexisting state of conflict would determine not just the probability of sanctions imposition and the type of sanction imposed but also the existing MNE relationships.¹¹ Indeed, sanctions scholars often discuss the selection effects that govern observed sanctions (e.g. Drezner 2003a; Malnight 2016; Marinov 2005; Nooruddin 2002), though relatively few expressly account for those effects, particularly in time-series, cross-sectional analyses.

This literature offers useful theoretical purchase, but remains relatively state-centric in its approach. Non-state actors still attempt to engage in interstate commerce despite the state preferences (Stein 2003). Finally, evidence shows that U.S. MNEs often explicitly position themselves as orthogonal to U.S. foreign policy; rather, they emphasize their relationships with host states as being all about business (Rodman 1995; Rodman 2001). The next section examines theories of the multinational enterprise and foreign direct investment to see what might be gleaned by a focus outside the state.

2.3.3 Political Risk

While the conflict and interdependence literature is state-centric, the political risk literature examines how MNEs accommodate, react to, and bargain with host states. Broadly defined, political risk reflects how systems of authority and political actions can affect the profitability of an investment (Alesina and Tabellini 1989; Busse and Hefeker 2007; Jensen 2008b; Jensen 2008a; Kobrin 1979; Kobrin 1987; Moran 1973; Robock 1971). There are many political risk definitions.¹² The Multilateral Investment Guarantee Agency (MIGA) defines political

risk as “the probability of disruption of the operations of companies by political forces and events” (Multilateral Investment Guarantee Agency/World Bank 2011, 21).¹³ MIGA lists 9 particular forms: transfer and convertibility restrictions; expropriation; breach of contract; failure to honor sovereign financial obligations; terrorism; war; civil disturbances; and other adverse regulatory changes. Many definitions also stress sudden and unforeseen shocks that would reduce the profitability of a foreign investment in the host state as elements of political risk (E. Clark and Tunaru 2013; Dupont, Schultz, and Angin 2016; Howell and Chaddick 1994; Robock 1971). MIGA (2011, 21) also says that “political risk is largely determined by uncertainty over the actions not only of governments and political institutions, but also of minority groups and separatist movements” (*italics added*). These two definitions reflect the triple concerns of uncertainty, probability, and consequence (probability and consequence are often combined as expected costs). Malnight (2016) argues that these three elements are analytically distinct and make separable predictions about how MNEs should respond to economic sanctions. For example, a certain sanction would have high expected costs but very low uncertainty. Which drives MNE behavior: the probability of disruption or the low uncertainty? Malnight finds that U.S. FDI invests as if responding to uncertainty more so than to expected costs. This tentatively suggests that uncertainty is the driving force behind political risk.

Political risk is primarily a decision-making framework for firms to compare investments; risk analysis compares costs and benefits, and political risk often simply categorizes particular political costs, albeit with fuzzy boundaries. In this sense, it overlaps with the “FDI determinants” literature, where social scientists look for the institutional and structural correlates of FDI. Within this category, political scientists have focused on the institutions and circumstances correlated with lower investment. One fundamental problem facing foreign investors is the obsolescing bargain, credited to Vernon (1971). States have incentives to make promises to foreign firms that they will not uphold after the firm has invested in the host state. Institutions that lower political risk are theorized to be those that allow gov-

ernments to make credible promises to foreign investors that the governments will respect property rights. Democracy raises the risk of expropriation, once property rights protections are taken into account. If they honor property rights, authoritarian regimes can see high FDI levels (Ahlquist 2006; Jensen 2003; Jensen 2008a; Jensen 2008b; Li 2009b; Li 2009a; Li and Resnick 2003; ONeal and Russett 1997; Resnick 2001). Similarly, host regimes' can tie their hands through domestic legislation and international treaties attract more FDI (Bthe and Milner 2008; King and Roberts 2014; Jensen 2008a; Jensen and McGillivray 2005) as does respect for human rights (Blanton and Blanton 2007). Security also matters, although Biglaiser and De Rouen, Jr. (2007) find evidence that some firms can profit from armed conflict and follow U.S. troops abroad. However, as previously mentioned, MNEs do not seem to invest in war-torn states (Bussmann 2010; Li 2008; Polachek, Seiglie, and Xiang 2007).

From this perspective, economic sanctions will reduce FDI to the extent that they exacerbate political risk. For example, sanctions have been shown to increase leader turnover (Escrib-Folch and Wright 2010; Marinov 2005; McGillivray and Stam 2004), and increased leader turnover could impair a leader's credibility to MNEs. Sanctions can also induce target democracies to restrict civil liberties, with greater losses correlating with stronger sanctions (Peksen 2010; Peksen and Drury 2010). In fact, there is theoretical reason to hold that sanctions should be most effective when they endanger target leaders' power or threaten their resources (Galtung 1967; Marinov 2005; Tsebelis 1990), and sanctions structured to do so would carry inherent risks for MNEs.

It is here that the term "political risk" becomes too vague as a mechanism to link economic coercion and MNE behavior. Do the potential consequences lead firms to avoid the sanctioned state? Are these consequences always negative? Or is it the increased uncertainty – the greater variability over outcomes, both good and bad – that alters firm behavior? The political risk literature often treats both as important drivers but often does not distinguish

them, to their detriment (but see Malnight 2016). Two normally distributed outcomes can have equal expected costs but very different variances. One is certainly more uncertain, but which is more risky?

These questions are not merely academic. Biglaiser and Lektzian (2011) argue that MNEs do not fear the risks or consequences of economic sanctions so much as the situational and policy uncertainty the sanction engenders. Malnight (2016) builds upon this research. He establishes that for discrete outcomes, uncertainty is maximized when all options have equal probability and decreases when any option becomes more likely. For very probable sanctions, uncertainty and risk (expected costs) make competing predictions for MNE responses: If investors disinvest because of uncertainty, a nearly certain sanction will lead to little disinvestment, whereas that nearly certain sanction will lead to great disinvestment if investors disinvest because of expected sanction costs. His results build upon those of Biglaiser and Lektzian: MNE investment behavior is correlated with the probability of economic sanctions in a manner congruent with the argument that they avoid uncertainty more than risks. Furthermore, after controlling for sanction propensity, economic sanctions have positive effects on incoming FDI (Malnight 2016). This result supports the argument that sanctions fear policy uncertainty more so than expected costs, because an imposed sanction would reduce uncertainty. It also suggests that MNEs have factored the expected costs into their investment behavior. Like states, MNEs are strategic and purposive actors that are aware of the state of conflict between two states and would have some prior expectation of political risks and sanction risks.

In sum, political risk is primarily useful as a broad category to capture what MNE decision-makers examine when deciding to invest abroad and thereby give MNEs some agency in the international system. Those primary independent variables within the political risk school are risk and uncertainty. The institutional and circumstantial correlates of political risk – regime type, treaties, respect for property rights, etc. – are the antecedent conditions

with influence them. Therefore, we would expect economic sanctions to alter MNE behavior primarily when they exacerbate or create uncertainty over outcomes. However, there is little literature on how international conditions, such as economic sanctions, affect FDI determinants.

2.3.4 Economic Sanctions

Theories of economic sanctions are predominantly state-centric. While scholars have argued over the definition and determinants of sanction success, sanctions strategy, and the effects of economic sanctions, relatively few studies have examined how MNEs respond to economic sanctions directly. This section assesses those theories in light of the previous literature. There are four main approaches. The first is work by Rodman (1995; 2001), who examines U.S. extraterritorial sanctions during the Cold War and immediate post-Cold War periods. Rodman posits the importance of domestic politics as a catalyst for actual and expected sanctions enforcement. The second approach groups work by Biglaiser and Lektzian (2011), Lektzian and Biglaiser (2014), and Malnight (2016). They examine the relationship between economic sanctions and sender MNEs from a political risk perspective. A third group by Barry and Kleinberg (2015) and Lektzian and Biglaiser (2013) examines how third-party FDI (i.e. MNEs with homes in neither the target nor the sender) respond to sender economic sanctions. Lastly, Meyer and Thein (2014) examine economic sanctions and MNEs also from a political risk perspective but at the firm and state levels.

Domestic Politics Catalyze Enforcement

In the 1982 “Pipeline” sanctions episode, the U.S. attempted and failed to stymie a Soviet-European oil pipeline by sanctioning any involvement of U.S. firms and U.S. technologies even in foreign subsidiaries and affiliates. Two explanations found purchase in the conven-

tional wisdom: first, that the failure demonstrated the decline of the U.S. as a hegemon; second, that the failure proved that firms had become sufficiently global and so could resist state coercion. Rodman (1995; 2001) argues that neither explanation sufficiently explains variation in U.S. extraterritorial sanctions during the Cold War and immediate post-Cold War periods. Hegemonic stability theory predicts that the U.S. would have laid down sanctions by fiat in the early Cold War period and would have seen high levels of compliance by its allies. Rodman argues this was not the case. U.S. Presidents were very accommodating to allies' objections during this time, often to secure cooperation in another arena, and allies successfully resisted attempts to enforce extraterritoriality. Globalization theory, meanwhile, rested on the idea that firms had become sufficiently cosmopolitan in identity and global in presence that they could ignore American power. Rodman also argues against this explanation by indicting its premise. American MNEs were still predominantly American, located the majority of their R&D in the U.S., and relied on the U.S. market for many goods and services.

Rodman (2001, 231) argues instead that the “intensity of interest group, public, and/or congressional commitment to the sanctions” drove compliance with economic sanctions. In particular, this signals “domestic political risk” (ibid., pp. 12 – 15). MNEs have the options to circumvent regulations, but avoid doing so not only because of the official punishments but also because they may lose access to government contracts and influence conduits. Rodman suggests further that intra-industry differences play a role but leaves this for future research (ibid., 232).

Sender MNEs Avoid Uncertainty, Not Risks

As previously discussed, political risk is the mechanism linking sender sanctions to sender FDI. Biglaiser and Letkzian (2011) use a generalized estimating equation (GEE) of directed U.S.-host country-year data to examine the correlations between U.S. FDI stock (as a per-

centage of host state GDP) and U.S. economic sanctions imposition (indicating the first year a sanction has been imposed). In their primary analysis, they run five separate models where the IV – sanctions imposition – has been lagged by two years, one year, zero years, led one year in the future, and led two years in the future ($t(-2)$, $t(-1)$, $t(0)$, $t(+1)$, $t(+2)$) with respect to the year of the DV. They find two key results. First, they find a significant negative correlation between sanctions imposition and U.S. FDI in the year prior to imposition. Sanctions imposition has an insignificant (at the $p > 0.10$ level) effect in the year sanctions are imposed. Furthermore, they find a significant positive correlation with sanctions imposition and U.S. FDI two years after sanctions imposition (they include only those cases where sanctions lasted at least two years). This is a striking finding. Their explanation puts weight on the uncertainty which precedes the imposition of economic sanctions; MNEs reinvest afterwards even though sanctions remain in place because “the uncertainty surrounding the amount of risk decreases” (Biglaiser and Lektzian 2011, 531). Risk plays less of a role because U.S. MNEs will be well aware of the sanctions options available to U.S. policymakers and therefore have some idea of the range of potential outcomes. The same result occurs whether the sanctions are high-cost or not, although there appears to be no reinvestment when the sanctions are imposed alongside international institutions.

The analysis is the first large-N study of MNE behavior in sanctioned states. However, there are some issues. First, Biglaiser and Lektzian (2011) test whether U.S. FDI influences the U.S. decision to impose economic sanctions by using a two-stage instrumental variable regression to examine whether U.S. FDI affects the probability of economic sanctions, which would influence the result of those sanctions. They find evidence to suggest that simultaneity is not a factor, but this is subsequently refuted by Lektzian and Biglaiser (2014), who find U.S. FDI does in fact influence U.S. sanctioning behavior. This may not matter, as the simultaneous equation model still shows similar sanction correlation coefficients. Second, the implication is that threats of economic sanctions must drive disinvestment, but this is not expressly tested nor even explicated. Using the Hufbauer et al. (2007) data set,

Biglaiser and Lektzian only code imposed sanctions. An equally compelling but unexamined hypothesis is that the connection is spurious: the events that trigger the economic sanction in fact also triggered disinvestment. Lastly, a possible issue arises when they control for high-cost versus low-cost sanctions (the same issue is present in Lektzian and Biglaiser 2013, discussed below). High-cost and low-cost sanctions are coded by Hufbauer et al. (2007) not by the content of the sanction itself, but by the costs inflicted on the target as observed after the fact. This surely includes lost FDI, as well as deleterious effects to FDI determinants such as GDP growth. Even if measured only in terms of lost trade, a significant portion of trade arises from FDI-related activities (especially intra-firm trade), to the extent that some economists exclude trade as a covariate with FDI in their models (Blonigen and Piger 2011). This is less of an issue in Biglaiser and Lektzian's main analysis, which does not differentiate between low-cost and high-cost sanctions, but invalidates the support for their hypothesis that high-cost sanctions are correlated with decreased FDI.¹⁴

Malnight (2016) builds on their novel finding that uncertainty, rather than risk (in terms of expected costs), may drive MNE behavior, and addresses the issues raised above. Using the Threat and Imposition of Economic Sanctions (TIES) dataset (Morgan, Bapat, and Kobayashi 2014), Malnight extends the uncertainty argument made above while accounting for sanction threats. Since the uncertainty argument holds that sender MNEs fear preceding uncertainty more than potential consequences, then U.S. firms must be more likely to disinvest when sanctions are most uncertain than when sanctions are most likely to be imposed (i.e., certain sanctions). Malnight uses a model calibrated with out-of-sample prediction to first estimate the propensities that each state in a given year will be sanctioned by the U.S. or threatened with U.S. sanctions. Second, he then regresses these values along with actual U.S. sanction threats and impositions on U.S. FDI inflows. He finds evidence consistent with the uncertainty hypothesis: U.S. FDI has a curvilinear relationship with sanction propensity, temporarily decreasing as propensity increases but increasing after a set point. Furthermore, when sanction propensity is accounted for, economic sanctions have a positive and significant

effect on U.S. FDI – a strong implication of the uncertainty hypothesis.

Third-Party MNEs Circumvent Sanctions

Because economic sanctions primarily restrict sender MNEs, other scholars have examined how coercion alters third-party MNE behavior. For sanction hawks, the results are disheartening. Lektzian and Biglaiser (2013) find evidence that third-party MNEs are opportunists that replace U.S. FDI when it leaves a state sanctioned by the U.S.. Barry and Kleinberg (2015) build upon this research. They find that U.S. firms shift investments to third-party states that give them indirect access to a state sanctioned by the United States. States with a history of busting U.S. sanctions or upon whom the target state is trade-dependent are likely to receive greater U.S. FDI when the U.S. sanctions a target. This corroborates Early's (2009; 2011; 2012; Early and Spice 2015) evidence that trade reroutes through third-parties, even allies and – when sanctions are imposed through institutions – fellow institution members.

There is much to recommend these analyses (although as previously mentioned, Lektzian and Biglaiser include an inappropriate high-cost variable), and some criticisms. In particular, Barry and Kleinberg's analysis have four strengths. First, they disaggregate developed and developing states because FDI behaves differently in those two populations. Second, they treat U.S. FDI – their DV – in absolute terms, rather than measuring it as a percentage of GDP and possibly inducing correlations with their IVs and a GDP denominator (Li 2009a). Third, they use an inverse-hyperbolic sine transformation on their DV to account for skewness (Burbidge, Magee, and Robb 1988). Finally, they include global FDI as a control variable to account for exogenous shifts in the world economy (Li and Resnick 2003). However, despite the utility of the gravity model for explaining FDI (Anderson 2011; Egger and Pfaffermayr 2003; Kleinert and Toubal 2010), no study besides Malnight (2016) has utilized the model, although Barry and Kleinberg do include many of the controls. However, Malnight (2016)

neither controls for World FDI nor disaggregates developed and developing states, as do Barry and Kleinberg.

Firm Strategies to Avoid Economic Sanctions

Lastly, Meyer and Thein (2014) examine how MNEs operating in Burma respond to the U.S. and European sanctions and build a theory of host-based firm responses to home state institutions. Fieldwork and interviews were conducted in 1996, 1997, 2007, 2010, and winter 2011/12, which cover the imposition and eventual cessation of E.U. sanctions. They identify 3 home state institutions with which MNEs must contend: regulative institutions, normative institutions, and cognitive institutions. Firms were variably vulnerable not only to these institutions but also to economic competition from other FDI. While European and U.S. firms worried not just about regulations but also about public opprobrium at home, East Asian MNEs had no such compunction. Indeed, the ASEAN nations engaged the Burmese regime.

They categorize potential firm responses as follows. Firms may be able to maintain their strategies. Some must disengage – either exit or avoid investment. Others engaged in “low-profile strategies”.¹⁵ Many needed to manage relationships with the host government. And finally, many also needed to engage stakeholders in the home state and in prominent markets. All the while, Meyer and Thein note that firms were in constant competition with foreign firms, and some Western firms, denied first-mover advantage in key industries, abandoned the country altogether.

I use parts of Meyer and Thein’s framework for my own, as discussed in the next chapter.

2.4 Conclusion

The preceding theories illuminate how economic sanctions might alter MNE behavior in sanctioned states. We expect economic sanctions to be circumscribed, at least in the short-term, by international regimes, the openness of the international system, and expectations of interstate conflict. MNEs evaluate the institutions, risk, and uncertainty of their host states. While economic sanctions may exacerbate these risks, the evidence suggests economic sanctions increase uncertainty for MNEs but that MNEs can escape sanction costs.

Yet these theories have only begun to explain how economic sanctions work. Evidence suggests that they rely on various mechanisms, both economic, political, and normative, to motivate MNEs. These mechanisms would be applicable not only to future economic coercion but also the study of statecraft more generally. Nor have the above theories, Meyer and Thein excepted, yet examined how the economic logics of particular MNE industries are differentially affected by economic sanctions (or indeed, other political factors). Both of these facets will be developed in the next chapter, which develops such a theory based around the combined logics of sanctions and foreign investment.

Chapter 3

How International Economic Coercion Affects Multinational Enterprises

This chapter proposes a theory to explain MNE behavior in response to international economic coercion. This theory proceeds in two parts. The first specifies three mechanisms through which economic sanctions might affect MNEs. The mechanisms are (1) direct legal restrictions, (2) direct reputation costs, and (3) indirect political-economic effects. These mechanisms have rarely been differentiated and, to my knowledge, never so categorized in the literature. The second argument maintains that these mechanisms have differential effects on MNEs according to their economic attributes. These attributes are identified according to a theory of FDI behavior, the Ownership-Location-Internalization (OLI) Paradigm, also known as the Eclectic Paradigm (Dunning 1988b; Dunning 1998; Dunning 2001). The OLI Paradigm explains the global distribution of FDI based on firm economic advantages within the host state. This makes it ideal to examine not only how economic sanctions can alter these global patterns but also how particular industries (though not necessarily particular firms) would react to interstate economic coercion. These OLI attributes represent inherent frictions that ameliorate the three sanction effects. Therefore, this theory thus advances our

understanding of economic coercion by offering a more detailed anatomy of how economic sanctions function as policy instruments. It also avoids a purely state-centric approach by illuminating how MNEs navigate this particular tempest of the global political economy.

Section lays out the three sanction mechanisms. Section explains the OLI-derived MNE typology. MNEs subsidiaries and affiliates in a host state can be (1) resource- or market-seeking and (2) capital-intensive or not capital-intensive. These dichotomies categories create a 22 typology of MNEs. Section details additional variables that any realistic theory must accommodate. Having laid out these premises, Section describes the dependent variable: observable altered MNE behavior. Section describes the scope conditions that circumscribe the theory. Section develops the hypotheses to be tested in subsequent chapters.

3.1 Specifying Sanction Mechanisms

Economic sanctions interrupt commerce and exchange. In this section, I explain how this might occur for MNEs operating in the target state. Economic sanctions can alter MNE behavior in three ways. The first is the legal restriction, the sanction itself as law or directive. It specifies penalties, to whom the sanction applies, what is limited, and the institutions that will enforce the sanction. Simply put, an MNEs may disinvest because it is told to do so. The second is the reputational cost of violating the economic sanction in law or intent. Even MNEs that are not explicitly barred from continuing exchange with the target may cease exchange because of the potential loss of standing in the eyes of elites or the public.¹ The last comprises the indirect political and economic costs that can arise when economic sanctions make the target unprofitable. We can better understand how sanctions work by examining these three constituent mechanisms.² While they are interrelated, these three mechanisms

¹MNEs that already operate in the target are often exempt from coercion.

²For example, Malnight (2016) argues that “political risk” is too broad a term. Each sanction pathway generates different political risks for MNEs.

are able to be analyzed separately.

Economic coercion restricts economic intercourse at the threat and sanction stages. At the threat stage, these mechanisms work in anticipation. At the sanction stage, the mechanisms work in anticipation and as instantiated.

3.1.1 Legal Restrictions

The legal restrictions stipulate sanctions costs, directives, and conditions as a legal instrument.³ This can change over time as a threat becomes legislation or a directive. Once a sender threatens a target, the relevant actors can see the parameters surrounding the potential sanctions instrument, which is eventually instantiated as the sanction itself. This process provides all parties – sender, target, and third-party states, as well as non-state actors such as MNEs – with focal points (Schelling 1980, 53–83, *passim*) for their expectations regarding the senders’ intent and potential actions.

For one, the legal restriction defines the behavior or event that precipitated or triggered the sanction.⁴ Some scholars argue that sanctions must punish “acts which are judged improper or deviant in terms of some accepted standard” (Doxey 1980, 486).⁵ This perspective, while valid, constrains our selection of sanctions cases beyond our current usage of the term “sanctions”. This shift has occurred as economic sanctions have become viewed as policy instruments and tools of statecraft, as means rather than ends (Baldwin 1985; Baldwin 2000; Cortright and Lopez 2000). While I adopt the broader sanctions-as-means perspective, the role played by the triggering event should not be ignored. In terms of the legal restriction,

³Wallenstein (1968) calls this “the content of the initial declaration” (252, italics in original).

⁴Baldwin (2000) calls this the scope of the sanction.

⁵Doxey also emphasizes the necessity of collective censure in a sanction. This is predominantly a legal perspective that treats international economic sanctions as attempts to replicate domestic governments’ abilities to punish on the international sphere (e.g. Briery 1931). Contrast this with Baldwin (1985; 2000) and Cortright and Lopez (2000), who emphasize the goals of statecraft and the role that sanctions play in bargaining and compromise.

the trigger or precipitating event influences the range of proscribed actions; beyond that, it can produce reputation costs, which I will address further in section REF, below.

Second, the legal instrument stipulates to whom the ban applies. Who is sanctioned?⁶ Are the sanctions smart and targeted, or comprehensive? While the sanctions literature has yet to find decisive evidence in favor of the efficacy of smart sanctions, the international community has nevertheless pressed for them as the new standard (Drezner 2003b; Drezner 2011).⁷ After Russia annexed Crimea, the U.S. began by restricting particular individuals from traveling, transferring capital, or otherwise engaging in commerce abroad; the sectoral sanctions were a subsequent step. The legal restriction also specifies what domestic actors within the sender or third-party states that are also subject to the ban. A sanction, after all, obliges domestic actors to abandon their economic goals for the national interest. These specifications can be nuanced (for example, some sanctions exempt existing contracts).

Third, the legal instrument also specifies what and how commerce is restricted. Financial sanctions block capital flows, trade sanctions block flows of imports and exports, and aid sanctions end flows of foreign aid to the target. Sanctions may ban travel or diplomacy. Full embargoes represent complete cessation of all trade, capital, and aid, while minimal sanctions may simply amount to tariffs on one or two imports from the target. The type of interrupted commerce has different effects. For example, Kirshner (1997a, 21–31) argues that trade sanctions are the least efficient type of sanction because they require a high degree of sender and third-party state cooperation to isolate a target from the global economy. Aid and finance sanctions, by contrast, are more effective than trade sanctions since those flows are less globally dispersed.⁸

Fourth, legal restrictions specify who is imposing and responsible for the sanctions. Economic

⁶Baldwin (2000) calls this the sanction “domain”.

⁷But see Major and McGann (2005), who argue that comprehensive sanctions are a priori more effective.

⁸Money power, his object of study, is most effective of all though it can only be exercised over a relatively brief time frame. Trade sanctions, if maintained, may be among the most effective over the long term (Kirshner 1997a).

sanctions that are imposed through international institutions are seen as more “legitimate” (Doxey 1980) and may be more effective (e.g. Martin 1992; Martin 1993).⁹ Multilateral sanctions are more difficult to coordinate, due to the competing interests of senders (Bapat and Morgan 2009; Hufbauer, Schott, and Elliott 1990; Hufbauer et al. 2007; Martin 1992; Martin 1993).

Lastly, the economic sanction specifies penalties for domestic and third-party actors who do not follow the sanction directives (Bapat and Kwon 2015; Meyer and Thein 2014; Stein 2012). Domestic firms and MNEs must account for these penalties when crafting sanction strategies (Biglaiser and Lektzian 2011). Coercion is imperfectly applied (Bapat and Kwon 2015), so firms may gamble on sufficient profits that obviate any potential sanction penalty. MNEs are motivated more by uncertainty than by potential sanction consequences (Biglaiser and Lektzian 2011; Malnight 2016).

By no means do the legal restrictions guarantee compliance. Sanction-busters and “Black Knights” either support the targeted state outright or allow their domestic actors to circumvent sanctions, to the sanction-buster’s profit (Early 2009; 2011; 2012; Hufbauer, Schott, and Elliott 1990; Hufbauer et al. 2007; McLean and Whang 2010).¹⁰ Sender MNEs may try “low-profile strategies”, where MNEs continue to operate in the target but avoid outside attention, for example by discontinuing media advertisements (Meyer and Thein 2014), or by trading prohibited goods through shell corporations (Kaempfer, Lehman, and Lowenberg 1987). After the U.S. imposes economic sanctions on a target state, Barry and Kleinberg

⁹This latter claim is somewhat disputed. Hufbauer et al.’s (1990) data revealed unilateral sanctions to be more effective, while Bapat and Morgan (2009) argue otherwise. Partially, this is due to case selection: Bapat and Morgan (2009) use Morgan et al.’s (2009) TIES dataset, which includes “low-politics” issues (e.g., disputes over trade or environmental policies), whereas Hufbauer et al. (2007) focus on security-oriented high-politics sanctions. Wallenstein (1968, 248–49) takes a similar approach, using sanctions to refer to “measures of high importance and impact” and relegating other economic restrictions to the category of “specific economic actions”. For him, “most of the trade between the parties” must be constrained to be considered a sanction (ibid., 248). I view this as different in degree, not kind, and pair these cases together along a continuum of what is banned (a similar argument is provided in Drezner 2003b).

¹⁰Black Knights are generally assumed to support the target for political, rather than purely economic reasons. While the term “sanction-busters” is the more inclusive, it generally refers to economically motivated states (Early 2011).

(2015) find evidence that U.S. FDI increases into the target's major trading partners, providing direct evidence of sanctions-busting by MNEs. Despite these exceptions, the legal restrictions introduce expected punishments and define the institutional parameters within which MNEs must operate.

3.1.2 Reputation Costs

Reputation costs accrue when MNEs continue to invest in a sanctioned or threatened target, causing key constituents and stakeholders to withdraw resources beyond those specified legal restrictions. Two questions determine how reputation costs accrue: who judges, and who is judged? In this project, I will focus on MNEs as the objects of judgment, but both the sender and target regimes can face reputation costs from economic sanctions. As for who judges the MNEs, a useful dichotomy examines broad versus narrow reputation costs. MNEs incur broad reputation costs when their reputations sour among relevant domestic publics. MNEs incur narrow reputation costs when relevant domestic elites are critical of MNEs. Domestic public and elite relevancy increases as an MNE's market exposure to them grows. MNEs are most often concerned with sender publics and elites because they are most likely to care about the sanction.

Reputation matters because the relevant publics and elites can remove resources from MNEs. Domestic publics transmit reputation costs in their roles as consumers and as interest groups for public policy. They may boycott an MNEs products and push for legislation, including further sanctions. Kaempfer, Lehman, and Lowenberg (1987) discuss the role of sender and target interest groups in influencing the respective sender government and target government policies. One example is the Divest campaign against South Africa. During the 1980s and early 1990s, an active campaign increased public pressure on corporations either to cut ties with the South African apartheid regime or to adopt more inclusive business practices

(Kaempfer, Lehman, and Lowenberg 1987; Kumar, Lamb, and Wokutch 2002). This pressure led the University of California system to disinvest approximately \$3 billion (Morain 1990). Similarly, civil rights groups in Europe and the United States pushed for private boycotts and public campaigns against MNEs in Myanmar (Meyer and Thein 2014). These episodes also show that interest group pressure may precede and precipitate economic coercion.

Elite reputation costs occur when the ruling coalition or government is displeased with the behavior of an MNE and punishes it by removing resources or favor.¹¹ These can occur even when sanctions are merely threatened. For example, while an amendment to the Iran Sanctions Act (ISA) was being discussed by the U.S. Congress (HR 2880), the Indian firm Reliance Industries Ltd. announced that it would comply with the potential amendment and stop selling Iran refined gasoline. This occurred after “several Members of Congress urged the [U.S. Export-Import] Bank [...] to suspend assistance to Reliance on the grounds that it was assisting Iran’s economy...” (Katzman 2009, 6–7). The government – in this case, individuals with indirect influence over a key part of the state bureaucracy – had power over particular firms; in the case of Reliance, the Ex-Im Bank had provided \$900 million in financial guarantees. Such disfavor can damage a firm’s ability to profit from future government access (e.g. contracts, loans, etc.).

This mechanism should not be controversial. The MNE literature emphasizes – and continues to grapple with – the fact that MNEs must engage politically with foreign publics, governments, and other authoritative stakeholders (Boddewyn 1988; Kumar, Lamb, and Wokutch 2002).¹² Furthermore, an MNE “commits more than a relatively large amount of capital – it also commits its prestige” (Cohen 2007, 38). Political risk analyses have generally

¹¹To some extent, reputation costs are built into the legal restrictions when the executive is given discretion to apply penalties. In this instance, an MNE’s ability to affect other issues the sender cares about means that the MNE faces few negative reputation costs. While not explored here, reputation costs can bite the hand that sends.

¹²As mentioned in the previous chapter, a dominant strand of the political risk literature has sought patterns between host state institutions that could lower MNE profits (Jensen 2008; Jensen et al. 2012; Kobrin 1977; Kobrin 1980; Robock 1971).

focused on the target state, though they do acknowledge roles for home state institutions in generating risks (e.g. Meyer and Thein 2014). Yet economic sanctions present both home- and host-state risks for MNEs, and these risks arise from the relationship between the two states – what might be called “dyadic” political risk. Reputation costs are clear examples of this type of risk.

An understanding of economic coercion is incomplete without acknowledging the reciprocal relationship between institutions and norms, for example in the study of international regimes. International regimes can drive a convergence of institutions and norms and can result from such a convergence. Senders often justify economic sanctions because they reinforce global norms. Some work has explored the consequences of moral opprobrium during sanctions episodes. For example, Klotz (1995) argues that widespread moral opprobrium reinforced global norms of racial equality and that this gave South African sanctions their sting, rather than material or strategic considerations. Doxey (1983) also makes norm violation – rule-breaking – a necessary part of her definition of sanctions; Hovi et al. (2005) also begin their sanctions game after the Target violates an international norm. Similarly, Peterson (2014) finds human rights sanctions lead non-sanctioned states to improve their human rights records.

A final pathway for reputation costs may exist even when sanctions are symbolic. Senders may also impose economic sanctions to assuage domestic audiences (Lindsay 1986; Wallenstein 1968; Whang 2011), although these symbolic goals may exist alongside or supplement foreign policy goals by making the threats more credible (Baldwin 1985; Dorussen and Mo 2001; Lektzian and Sprecher 2007; Martin 1993). Two corollaries follow. First, sender threats also signal sender credibility to MNEs and other domestic actors. Second, MNEs may face their own audience costs – and subsequent public divestment – if they are found to be violating economic sanctions, either de jure or in principle. Meyer and Thein (2014) find just such public opprobrium to be a worry of U.S. and European MNEs in Myanmar,

and Kaempfer, Lehman, and Lowenberg (1987) observe similar behavior in the divestment effort toward South African apartheid. Peterson (2014), provides evidence that human rights issues, in particular, generate broad reputation costs.

The preceding discussion has established that reputation costs exist not only for states but also for MNEs. The size of these costs are debatable, particularly relative to operating costs and the costs created by the other sanction pathways. But, more importantly, the emphasis in the academic literature indicates these costs matter to MNEs, both *de facto* and *in posse*. While these costs occur alongside the sanctions legal instrument, they can nevertheless be analyzed distinctly.

3.1.3 Indirect Political and Economic Effects

The final pathway by which economic sanctions may affect MNE behavior arises from the indirect effects of economic sanctions that increase operating costs in the target economy. For example, an MNE producing consumer goods in the target may find its business less profitable if the sanction lowers economic growth in other sectors. While not legally subject to the sanction or facing reputation costs, the firm nevertheless would suffer because a sanction was threatened or imposed. Sanction theories have treated such indirect effects as integral elements of regime coercion, but their effects on MNEs have yet to be explored.¹³

Sanctions' distributional effects on a target polity matter not only because they alter the odds of sanctions success but also because they can create significant indirect effects for MNEs. Target institutions and structures that divert and channel sanction consequences like distributaries from a stream do so not only for political coalitions but also for MNEs. Recent scholarship has examined how the grand strategy pursued by a target ruling coalition – namely whether the coalition embraces the global political economy or cordons it off

¹³For example, see the debate on comprehensive versus “smart” sanctions, *inter alia* Drezner (2003b), Kaempfer and Lowenberg (1988), and Major and McGann (2005).

– might moderate sanction outcomes (Solingen 2012). For example, Haggard and Nolan (2012) argue that the Kim Jong Il regime pursued a strategy that made them dependent on sanctions and near-complete international economic ostracism. Such coalitional strategies are important antecedent conditions for this framework, since they affect both the probability sanctions will be imposed and the type of foreign investment.¹⁴ They also play important roles as moderating and intervening variables. By conditioning the target regime’s response to sanctions, they refract the sanction into positive and (more likely) negative indirect effects on MNEs. For example, target counter-sanctions would affect some commerce between the target and sender that had previously avoided direct sanction. Counter-sanctions are more likely under an inward-looking regime that directly benefits from protecting less-competitive domestic industries. Similarly, economic sanctions will likely hobble those coalitions that have benefited from international exchange, strengthening coalitions and groups that prize autarky.¹⁵

Many indirect effects also arise as the international economy responds to economic coercion. Supply chains may be disrupted permanently or temporarily. Increased interest rates due to increased political risk would raise borrowing costs. Exchange rates might shift unprofitably (Kirshner 1997a; 1997b). These are risks that MNEs may find manageable but nonetheless costly; on the margins, the risks create incentives for MNEs to invest elsewhere.

It is important to reiterate that indirect effects were the immediate aim of comprehensive sanctions since they were seen as necessary to coercion.¹⁶ Galtung (1967) criticized the

¹⁴These relationships will be discussed as antecedent conditions later in this chapter.

¹⁵Perhaps this relationship should not be overstated, as many examples of sanctions successes (or at least, non-obvious failures) exist as counterpoints. To pick a recent and powerful counterexample, the United States and the P5+1 have recently loosened economic sanctions on Iran. These sanctions were imposed upon a ruling coalition that was more inward-looking than the coalition that negotiated the sanctions rollback. Economic sanctions can but do not always strengthen inward-looking coalitions.

¹⁶At the most extreme, and generally outside the scope of the economic coercion episodes discussed here, lies economic warfare. Pape (1997), among others, separates economic warfare from economic sanctions. The economic embargoes of World War I were thought to be so devastating that sanctions were considered a brutal weapon: “We succeeded in bringing death through privation to some 760,000 people in Germany alone up to the Armistice [...] The world has concluded [...] that this blockade weapon is more indivisible and far more deadly than had been formerly supposed [...]” (Forster 1926).

“naive model” of economic sanctions that assumed that economic deprivation led inexorably to public opprobrium against the target regime. But both his criticism and its object assumed that economic deprivation accompanied economic sanctions. Indirect effects may be neither necessary nor sufficient for compliance, but they are nevertheless important parts of sanction theory.

3.1.4 Summary

Table 3.1, below, summarizes the three pathways described above. I have described how economic coercion would provide incentives against MNE investment in the target state in those three interrelated pathways. These pathways group similar microfoundations into useful analytic categories. Furthermore, these pathways are contingent. For example, broad reputation costs seemed key to creating elite reputation costs for sanction to South Africa (Klotz 1995; Kumar, Lamb, and Wokutch 2002; although see P. I. Levy 1999), but broad costs did not arise, for example, in the recent WTO sanction threat from Canada and Mexico against the United States (Reuters 2015). Nevertheless, these pathways allow scholars to make focused comparisons of sanction episodes. Figure REF, below, displays how economic coercion episodes could be compared with this scale.

Nevertheless, the theory remains incomplete without examining MNEs and their potential responses. I turn to this subject now.

Table 3.1: Summary of the three pathways through which economic sanctions might alter MNE investment behavior in target states.

Sanction Pathway	Description	Example
Legal Restriction	Stipulated costs, directives, and conditions of the legal sanctions instrument. Officially designates the targets and senders, and provides them (and third-party actors) with parameters for future behavior.	Prohibition of exports or licensing of U.S. technology to firms associated with the Russian government.
Reputation Costs ¹⁴	Penalties that accrue when key stakeholders withdraw their support. This may be immediate or potential (i.e., occur in the future, as with threats). Narrow reputation costs refer to governments and elites, while broad costs refer to those imposed by domestic publics.	Fear of losing access to U.S. Ex-Im Bank led an Indian firm to avoid investing in Iran’s oil industry. U.S. MNEs in South Africa that persisted despite U.S. sanctions risked boycotts from the Divest movement.
Indirect Effects	Costs that accrue when the MNE continues to operate in the target, or that would accrue were the MNE to do so. These costs are created by the sanction but are filtered through the target political economy before reaching the MNE.	BP’s loses \$9.1 billion from investment in Rosneft oil company in Russia due to sanction- and oil-price- induced currency drop, among other problems (Baker 2015).

3.2 The Economic Logics of MNEs

This section examines MNE vulnerabilities to the varied costs of economic coercion. It describes regular MNE characteristics that make them more or less resistant to economic coercion.

The Ownership-Location-Internalization (OLI) framework (sometimes called the Eclectic

Paradigm) seeks to explain the global FDI distribution (Caves 1996; Dunning 1980; 1988b; 1992; 1998; 2001).¹⁷ This framework can also be used to differentiate MNE types according to MNEs' underlying economic logics. This in turn allows deeper exploration of the theoretical sanction pathways. The framework seeks to explain “the totality of firms engaged in foreign value adding activities” (Dunning 1988a, 39).¹⁸ It explicitly does not seek to explain the behavior of particular firms, despite being based on firm-level assumptions. It specifies three conditions that must be met for firms to engage in foreign production. These firm-specific advantages make foreign production more profitable than alternative transnational activities. However, these same advantages may make MNEs vulnerable to economic coercion.

3.2.1 Ownership, Internalization, and Location Advantages

First, the firm must possess ownership advantages over other firms (particularly domestic firms in the host state). These might be intangible assets, such as a particular management or organizational structure. Firms can maximize their profits by retaining ownership of these intangible assets when:

1. buyers and sellers are unable to agree on appropriate prices due to information asymmetries;
2. intangible assets are essentially public goods, like knowledge, which can be easily put

¹⁷There are many FDI and MNE categories. Some studies have examined FDI as a population (e.g. Jensen 2008), categorized according to industry (e.g. Blanton and Blanton 2009; Kobrin 1987), or defined by their level of MNE centralization (e.g. Wells, Jr. 1971). Another dominant categorization, which is partially subsumed within the OLI framework, is the distinction between horizontally integrated and vertically integrated firms (Barba Navaretti, Venables, and Barry 2004; Caves 1996; Oatley 2011). Cohen (2007) critically engages much of the FDI literature and finds many categorizations lacking, unable to deal with very heterogenous FDI. His points are well-taken. Nevertheless he acknowledges that “for MNCs outside the natural resources sector, the vast majority of decisions on where to invest are made on the basis of two criteria”: market expansion and protection; and efficiency (ibid., 350). These are reflected in my categorizations below.

¹⁸Dunning calls the OLI Paradigm a framework, rather than a theory as “[i]t prescribes a conceptual framework for explaining [...] the level and structure of a country’s international production, be that of its own firms in other countries or of foreign firms in their midst” (1988b, 39). Caves disputes the term, arguing that the results are logically derivative from transaction-cost theory (Caves 1996, 4–5).

- to work elsewhere and are therefore under-priced at their marginal cost of zero; and/or
3. intangible assets are diffuse and difficult to lease out (Caves 1996, 4).

Beyond intangible assets, MNEs may simply wish to manage uncertainty over all any owned assets and therefore wish to maintain ownership over them.

Internalization advantages are closely related to ownership advantages. A firm has internalization advantages when it is more useful for the firm to use these advantages within the enterprise rather than rent them out, as one could with a licensing agreement (Caves 1996, 5; Dunning 1988b). This can minimize the risk of losing intellectual property. It may also allow the enterprise to ensure low prices along its supply chain by owning all the constituent links or to control the quality of its products.

Finally, a firm with ownership and internalization advantages must be able to profitably use the factor resources of a particular country more profitably than the target state's local firms. This is the location advantage. It may have greater brand recognition in the host state, better or extraction or manufacturing technology than local firms, or similar technology but a more profitable organizational structure.

The three advantages mutually support and define one another – the “why”, “where”, and “how” of international production (Dunning 1988b, 50-51). The next subsection uses some of these advantages to classify MNEs according to their advantages.¹⁹

¹⁹An alternative classification differentiates between horizontal and vertical integration (Barba Navaretti, Venables, and Barry 2004; Caves 1996; Dunning 1988b). Horizontal integration refers to firms that reproduce their plants or services at each location. Horizontal FDI should look primarily for access to markets, and might be prominent where trade costs or other entry barriers are high, thereby justifying the initial investment (Barba Navaretti, Venables, and Barry 2004, 30). Vertical integration, meanwhile, internalizes its production chain by purchasing foreign firms that procure the raw materials, produce the intermediate product, or refine the final good (in some combination or the other). For example, a firm may purchase a supplier of inputs to ensure low future prices and prevent contract renegotiation. Vertical FDI should seek low input/factor costs, such as low wages and good transport and trade links (*ibid.*, 30). This distinction is subsumed within the typology presented in Table 3.2.

3.2.2 Using OLI Theory to identify FDI types

MNE respond to economic sanctions according to their memberships in two categories. The first categorizes firms according to their reason for choosing their location: do the MNE seek access to markets or natural resources? The second classifies MNEs according to the amount of capital investment in the host state: is the enterprise capital-intensive? Table 3.2, below, captures the four types of FDI created by these two categories and provides example industries.

Table 3.2: Typology of FDI based on reason for investing abroad and necessary capital investment. Categories taken from Meyer and Thein (2014).

	Capital-Intensive	Non-Capital-Intensive
Resource-Seeking	(I) Highest exit costs and high opportunity costs. Likely vertical integration. Tangible assets. Ex: Oil and gas.	(II) Lower exit costs, but potentially high opportunity costs. Horizontal integration, intangible assets. Ex: Garment industry.
Market-Seeking	(III) Moderate exit costs. Vertical or horizontal integration. Tangible assets, though intangible also possible. Ex: Telecommunications.	(IV) Lowest exit costs. Horizontal integration, intangible assets. Ex: Consumer goods, services.

Resource-seeking, capital-intensive enterprises (cell I) are likely vertically integrated (e.g. to control their supply chains) and likely have tangible asset advantages over domestic firms (e.g., superior technology to better exploit the natural resources). Oil companies are an ex-

ample of this type. Resource-seeking, non-capital intensive enterprises (cell II) exploit lower costs, perhaps due to better technology, but intangible assets (e.g., superior organizational systems) likely play prominent roles. Subsidiaries and affiliates in the garment industry that exploit lower labor costs in the host state and the parent enterprise's global distribution networks fall under this type. Generally, resource-seeking enterprises export their wares from the host. Market-seeking, capital-intensive enterprises (cell III) have superior technology but seek access to the host state's domestic market. MNEs in the telecommunications industry, for example, construct cell phone networks to access an untapped market. Finally, market-seeking, non-capital intensive enterprises (cell IV) sell products or services to the host state market. These may be consumer goods firms, for example, that rely on global brand recognition and want to avoid tariff or transport costs.

An MNE's economic logic – its cell in the typology above – determines its sensitivity to particular coercion pathways. It also affects the way it penetrates and accommodates host state politics.²⁰ Resource-seeking firms often export resources to sell elsewhere, and so are less sensitive to fluctuations in the host political economy. However, they are sensitive to reputation costs with the sender state if the sender comprises a large share of the intended market. Similarly, market-seeking firms are less sensitive to reputation costs in the sender state, because the target state represents a larger market-share of their business. The U.S. furor over Apple's production of iPhones in China matters less now that China is becoming an iPhone market (this example also displays the mutability of these categories, as China is rapidly attracting more market-seeking FDI). However, market-seeking firms are more sensitive to downturns in a target's political economy. Capital-intensive firms must take greater pains to protect their investments in the target states because their time horizons are necessarily much longer. These firms make political and business alliances to isolate themselves from shocks. *Ceteris paribus*, market-seeking non-capital intensive FDI would

²⁰See Kobrin (1987) for discussion regarding the differences in host—MNE bargaining power between manufacturing and extractive MNEs.

face the lowest exit costs, and would be expected to be the first firms to disinvest from a sanctioned state.

In sum, this typology enables detailed theorizing about MNE resilience to different sanction costs. Explicit predictions will be developed in Section REF-3.4.

3.3 Other Relevant Variables

This framework is yet incomplete. Four additional variables remain that are necessary to examine the research question. The first is the strategy of political survival pursued by the target state's ruling coalition. This strategy influences (a) the likelihood of being sanctioned, (b) what sanctions are subsequently imposed, (c) the MNEs that invest or plan to invest in the state when economic coercion begins, and (d) its response to economic coercion, which in turn produces many indirect effects for MNEs. The second variable is preexisting sanction risk and uncertainty. Evidence links MNE disinvestment with the uncertainty preceding economic sanctions and suggests that MNEs may be able to adapt to the sanctions themselves. The third variable is the home state of the MNE. The home state influences MNE susceptibility to the first and second sanction pathways. The final variable is the stage of economic coercion. Economic coercion generally begins with an explicit sanction threat, and this threat may or may not lead to an imposed sanction. Previously mentioned studies suggest different dynamics within each stage.

3.3.1 Ruling Coalition in Target States: Inward- and Outward-Looking Strategies of Political Survival

Ruling coalitions pursue strategies to enable them to survive politically and maintain their positions. These strategies condition how the target pursued foreign investment, interacted with the sender(s), and will respond to economic coercion. The strategies exist along a continuum between two ideal types. Ideal-typical outward-looking coalitions benefit from greater integration with the world economy. These coalitions pursue strategies of economic liberalization, including lowering trade barriers, supporting competitive exporters, and reducing government expenditures through privatization and decreases in military expenditures (Solingen 1998). Political liberalization can accompany economic liberalization, particularly if this institutionalizes the economic reforms and prevents retrenchment.

Ideal-typical inward-looking coalitions pursue strategies to protect those harmed by greater integration with the world economy for economic, political, or ideological reasons. Noncompetitive industries, often state-run, seek protective tariffs and economic subsidies. Military regimes protect industries for national security concerns. Similarly, nationalistic and fundamentalist ideologies benefit from positioning themselves in opposition to foreign ideologies and neighbors.

Existing ruling coalitions fall between these two ideal-typical poles. They are classified according to their preferences, as opposed to their observed behavior. The latter are not immediately determined by the former, since coalitions are constrained by their institutional and political environments. Consider how an outward-looking ruling coalition might be constrained in Pakistan. Pakistan's entrenched military (an inward-looking group) would restrict the options of our hypothetical outward-looking coalition; a similarly oriented Danish coalition would likely find Denmark's military establishment less restrictive.²¹ Previous

²¹It may be worthwhile to classify hardened national institutional arrangements as summarily "inward-looking" or "outward-looking", though they may be trending in one direction or the other.

studies – both those focusing on FDI and those focusing on sanctions – have generally focused on regime types, rather than coalition strategies.²² Regimes and strategies do not necessarily determine one another.

Coalition strategies may serve as antecedent conditions that influence economic coercion as well as the target’s preexisting FDI. Outward-looking coalitions actively seek foreign investment to improve their domestic economy. Inward-looking coalitions protect domestic industries from international competition and as such are much more skeptical of FDI, imposing many conditions on MNEs. Many inward-looking coalitions lucky enough to sit atop oil reserves, for example, sought at least some degree of foreign assistance (and technological expertise) from MNEs. Yet these relationships were tense, evidenced by the waves of nationalizations in the late 1970s and early 1980s. Nationalization proved to be self-defeating, and subsequent policies sought more managed control of MNEs and host resources, while retaining technical expertise (Kobrin 1985; Minor 1994). Inward-looking coalitions tend to limit FDI to few extraction industries. The divergent relationships of oil-rich Dubai and Saudi Arabia with the global economy illustrates the influence of dominant coalition strategies.

When economic coercion begins, a target regime’s response is heavily influenced by its model of political survival (Haggard and Noland 2012; Solingen 2012). Economic sanctions will cause fewer political consequences for inward-looking coalitions than for outward-looking coalitions. Furthermore, inward-looking coalitions are more likely to adopt nationalistic rhetoric to rally domestic support and obviate political consequences. North Korea, possessing a nearly ideal-typical inward-looking coalition, called recent U.S. sanctions “an open declaration of war” (Sang-hun 2016). Ruling coalition orientation therefore serves not only as an antecedent condition preceding economic coercion but also as an intervening variable

²²As discussed last chapter, this generally reflects a focus on institutions rather than actor preferences. For example, Lektzian and Souva (2007) argue that sanctions create rents that can be more easily captured by autocratic governments than democratic ones, given their smaller selectorates. While autocracies and rent-seeking are certainly strongly correlated, not all autocratic regimes draw support from pure rent-seeking. Modern China provides a prominent example of an autocratic regime that draws its legitimacy from economic growth.

when coercion occurs. ### Preexisting Sanction Risk

The uncertainty preceding economic coercion may condition MNE responses to subsequent economic coercion (Biglaiser and Lektzian 2011; Malnight 2016; Rodman 1995). Two premises support this claim. The uncontroversial first holds that uncertainty is costly to MNEs. The more contentious second maintains that MNEs are able to circumvent the costs created by economic sanctions on the target. Together, they imply the primary driver through which sanctions can alter MNE behavior is uncertainty about sanction initiation and scope. The argument can be made with varying strength. What might be called the “Weak Uncertainty Argument” weights the first premise more than the second. Uncertainty is costly because it prevents MNEs from committing to profitable action. As outcomes become more probable – i.e., more certain – then MNEs will be more likely to pursue a particular endeavor. Individual MNEs can perhaps ameliorate some downsides presented by economic sanctions, but not MNEs as a population.

The second argument, the “Strong Uncertainty Argument”, requires that MNEs as a population can foresee and compensate for a sufficiently broad range of adverse sanction consequences once those consequences actually occur. This is not implausible, as MNEs actively work to ascertain potential hazards and to prevent them. Just as states trade with one another with knowledge of their current state of conflict (Stein 2003), MNEs are aware of the general level of potential conflict between states. Furthermore, MNEs have maintained risk management departments for decades to assess and compensate for political risk abroad (Kobrin 1979) and have access to a variety of political risk indicators (Howell and Chadwick 1994; Jensen and Johnston 2011). Increasingly global financial markets do allow for some hedging against future risks, and political risk insurance is available from both private and public sources (Gordon 2009).²³ Able to compensate for sanctions costs, MNEs

²³There is another version of this argument that places all its weight on the second premise. Given sufficient foresight and insurance markets, MNEs would be able to compensate for any sanction costs. Yet casual inspection of any economic downturn suggests that relatively few economic agents properly insure themselves against all possible risks. Indeed, a fundamental uncertainty about future outcomes has been

are constrained by situations where outcome probabilities are murky, when all outcomes are relatively likely, or when outcome distributions are “fat-tailed”. A nearly certain economic sanction can still be a profitable investment, because a profitable plan exists and can be committed to. Here, the sanction pathways operate in the short term (e.g. Biglaiser and Lektzian 2011) but even more so in anticipation (Malnight 2016). MNEs must account for the potential consequences of economic sanctions – and can do so – but need sufficient information to commit to a particular strategy.

In sum, the Weak and Strong Uncertainty Arguments hold that uncertainty may condition the effects of economic coercion on MNEs. To ignore preceding sanction uncertainty would be to potentially omit an important variable.

3.3.2 Home State of the MNE

The location of the parent firm matters because sender MNEs should be more sensitive to legal restrictions and reputation costs. Opportunistic third-party MNEs may replace sender MNEs that disinvest from a sanctioned state (D. Lektzian and Biglaiser 2013). This does not necessarily extend to a sender MNE’s affiliates and subsidiaries located abroad. Many states, including such stalwart U.S. allies as the United Kingdom and Canada, have laws prohibiting their MNEs and inward FDI from abiding by U.S. extraterritorial sanctions (Barry and Kleinberg 2015; Rodman 2001). Evidence suggests that sender MNEs may “bust” economic sanctions by rerouting through appropriate foreign subsidiaries and affiliates (Barry and Kleinberg 2015).

attributed to the mistakes made by investment banks preceding the Great Recession (Dizikes 2010).

3.3.3 Stage of Economic Coercion

The final variable accounts for the sequence of events during an economic coercion episode. Many imposed economic sanctions, but not all, are preceded by an explicit sanction threat. Similarly, not all sanction threats are followed by an imposed sanction (T. C. Morgan, Bapat, and Krustev 2009). Generally, work on the threat stage has developed theory (Drezner 2003a; Lacy and Niu 2004; Krustev 2010) and the quantitative literature has ignored the stage.²⁴ As mentioned in Section 0.1, scholars have found that MNE responses may change over the course of economic coercion. They may disinvest at first, but then reinvest after sanctions have been in place (Biglaiser and Lektzian 2011; Malnight 2016).

3.4 The DV: Altered MNE Behavior and Underinvestment

The preceding framework seeks to explain and predict how MNEs will alter their behavior when economic coercion occurs. It relies upon a counterfactual: what is the difference between MNE responses to sender states' economic coercion versus their responses to no economic coercion given the same preceding target behavior? For example, examining the effect of economic coercion on Russia following its annexation of Crimea requires comparing our reality to a counterfactual where Russia still annexes Crimea but is unsanctioned.²⁵ The “true” effect of the economic sanctions on Russia is the difference between reality and this hypothetical world.

MNEs have many responses available to economic sanctions. They may do nothing. They

²⁴But see Peterson (2013). Whang, McLean, and Kuberski (2013) combine both theory and quantitative analysis. Miller (2014) focuses on deterrence, which may be characterized as an implicit threat.

²⁵Counterfactuals have a rich history in the study of IR (e.g. Lebow 2010; J. Levy, Goertz, and Goertz 2007; Tetlock 1996). Formal treatments can be found in, inter alia, Morgan and Winship (2014) and Pearl (2000; 2009). Pearl's methods, while model-dependent, are very useful in specifying precise causal counterfactuals.

may increase investment in the target state, or remove it. This may include shifting strategies, for example by licensing technology to target domestic firms rather than maintain ownership (although sanctions may prevent licensing as well – indeed any transfer or use). They may reroute current or planned investment through third parties (Barry and Kleinberg 2015). They may also decide to cancel planned investment, which would be difficult for analysts to observe but nevertheless could be a significant cost for target states and target publics, not to mention the affected MNE.

The most common conceptual indicator of altered MNE behavior is disinvestment, the removal of existing investments and the cancellation of pending investments. This is the most straightforward and tangible evidence of altered behavior but it does not account for all of the effects of economic coercion when compared to counterfactual world where economic coercion was never initiated. Economic coercion can also dissuade future investment. The investment may be lost or it may be redirected. A garment factory planned for Myanmar may be constructed instead in Vietnam or Bangladesh. These latter activities may be directly unobservable and may increase or decrease over time.

If such altered behavior exists (i.e., if economic coercion has effects beyond disinvestment), it would be evident predominantly in the change in FDI competitiveness of the target. I define underinvestment to be the missed investment opportunities and development accruing to a sanctioned state due to its decreased competitiveness as an economic destination. Its relative position to global investors would be most evident in the state’s share of World FDI. I define underinvestment as:

$$Underinvestment_{i,t} = E\left[\frac{FDI_{i,t}}{FDI_{World,t}} \mid Coercion = 1\right] - E\left[\frac{FDI_{i,t}}{FDI_{World,t}} \mid Coercion = 0\right]$$

If economic coercion cannot create underinvestment when it is meant to do so – if it cannot make the target a less attractive destination for FDI – than economic coercion fails a crucial test of its effectiveness. Existing evidence suggests that MNEs temporarily disinvest from sanctioned states and can replace their investment by sanction-busting. Disinvestment measures are not necessarily insufficient, but they do not measure redirected investment from the target to other states. This redirection can strengthen regional rivals and surely affects the target regime’s decisions before and during economic sanctions. Underinvestment captures the net effect of all any redirection better than other indicators. In sum, underinvestment supplements previous conceptions and measurements of FDI behavior.

3.5 Scope Conditions

Scope conditions define when a theory is applicable and determines when cases are irrelevant (Gerring 2012; Mahoney and Goertz 2004; Ragin 2000; 2008; 2014; Seawright and Gerring 2008). The previous chapter outlined such scope conditions. The foremost scope condition is the international system: is it sufficiently homogenous to analyze economic coercion episodes and MNE behavior? The post-WWII era has been treated as a relatively homogenous unit of worldtime, although some studies do separate the pre- and post-Cold War periods. This may be due in part to U.S. hegemony and the international institutions and economic system it supports. However, the post-WWII era has not been homogenous for FDI, nor for economic sanctions. First, FDI plays a relatively small role in the U.S. and global economies until the 1970s and 1980s, when it quickly becomes an integral economic linkage. Second, following the 1981-2 attempt of the U.S. to prevent its MNEs’ foreign subsidiaries and affiliates from participating in a Soviet—European gas pipeline, many European states passed legislation specifically preventing those subsidiaries and affiliates from participating in future extraterritorial sanctions (Rodman 2001). The early 1980s therefore mark a qualitatively

different environment from previous years for economic sanctions – primarily those of the U.S. – and MNEs. The theoretical framework is discontinuous over these gaps, so I bound the theoretical perspective by constraining the world-time to 1982 and afterward. Having delimited the theoretical framework, I now lay out the hypotheses.

3.6 Hypotheses

The theory presented above makes more predictions than this project can undertake. Much of this chapter discussed the relationships among variables, leading to 6 hypotheses.²⁶

Hypothesis 1. *Resource-seeking, capital-intensive (RSCI) FDI will only disinvest from the target state when severe coercion is threatened or imposed, ceteris paribus.*

Hypothesis 2. *Indirect effects will have little to no effect on RSCI FDI.*

Hypothesis 3. *Indirect effects will have significant effects on market-seeking, non-capital-intensive (MSnCI) FDI.*

Hypothesis 4. *Economic coercion imposed to curb human rights abuses will lead to lower levels of FDI than economic coercion imposed over economic disputes.*

Hypothesis 5. *Economic coercion in response to security issues will lead to lower levels of FDI than economic coercion imposed over economic disputes.*

Hypothesis 6. *The indirect effects of economic coercion should lead to underinvestment in the target state.*

Hypothesis 7. *Severe economic coercion should lead to underinvestment in the target state.*

²⁶At this juncture, I am agnostic about the differences between stages of economic coercion for their effects on MNEs. Not because these stages are invalid, but because the threat and sanction stages are under-theorized as far as their effects on MNEs. As previously mentioned, Biglaiser and Lektzian's (2011) results map onto differences in threats and sanctions but they do not explicitly specify whether effects preceding sanction imposition are due to threats. The empirical chapters will examine these hypotheses for each stage and the results will provide data for future theorizing. As an unofficial hypothesis, we might expect that the threat stage will see greater disinvestment than at the imposition stage.

3.7 Conclusion

This chapter outlined a framework to explain how MNEs respond to economic coercion by identifying specific economic coercion mechanisms and discriminating across MNE types. Each coercion mechanism affects MNEs according to the economic logic leading MNEs to invest and retain product ownership in the target state. I categorized these logics according to OLI theory. These logics MNEs refract the effects of economic sanctions on MNEs in qualitatively different ways.

However, a theory that stopped here would underfit our prior knowledge – our common, everyday understanding of economic sanctions. First, systematic patterns in the target ruling coalition’s strategy of political survival (inward- or outward-looking) cannot be ignored. Second, MNEs are likely aware to some degree of the risk of a state’s sanction risk. Third, MNEs would be less susceptible to economic sanctions if their home firm (or subsidiaries or affiliates) were not under the legal jurisdiction of the economic sanction. But a third-party MNE is not necessarily immune to these effects – particularly the third pathway, indirect effects. Finally, different dynamics may exist when an economic sanction is threatened versus when it is imposed. These additional variables complicate the analysis but add necessary explanatory power.

The ultimate change in MNE behavior is the decision to disinvest or avoid investment in the sanctioned state. This is, after all, a goal in many – if not all – attempts at economic coercion. In addition to disinvestment, I also develop a concept to more fully capture the total effect of economic coercion: underinvestment. Underinvestment captures not only decreased investment but also increased investment to alternative destinations. If economic coercion is to have any coercive effect on MNEs, there must be evidence of underinvestment.

The theoretical framework is too broad for this project to completely explore. This is because economic sanctions and FDI are not only created by complex social, political, and economic

processes but also drive similar and equally complex outcomes. More simply, there are undoubtedly antecedent conditions, intervening and mediating variables, confounders, and probable equifinality (inter alia, Gerring 2012; S. L. Morgan and Winship 2014; Ragin 1987; Van Evera 1997). I identify prominent variables from the literature and then control for them, ideally without sacrificing too much parsimony.

Having developed the framework, I hypothesized strengths and weaknesses of MNE types according to each pathway. Chapter 4 tests the framework against the case of Libya. Chapter 5 examines whether the framework generalizes and tests Hypotheses 1 – 5. Chapter 6 tests hypotheses 6 and 7.

Chapter 4

Economic Coercion and Multinational Enterprises in Libya

4.1 Introduction

The theoretical framework introduced last chapter seeks to explain MNE behavior across and within industries when those MNEs' host state is subject to economic coercion. In brief, it specified relationships between:

1. The three different costs – legal, reputational, and indirect – imposed on MNEs by economic sanctions; and
2. The economic logics undergirding each firm's ability to invest abroad.

While sanction costs and MNE economic logics are the primary concepts of interest, other variables act as relevant antecedent conditions and intervening variables:

3. The orientation of the target's ruling coalition toward the global political economy,

which as an antecedent condition jointly influences the probability of economic coercion and the target's level and types of FDI, and as an intervening variable plays a key role in determining indirect effects;

4. Preexisting sanction risk as estimated by MNEs and other international actors (including the target state), which would condition both target state and MNE responses to economic coercion;
5. MNEs' home states, which determine their legal restrictions and condition their reputation costs; and
6. The stage of economic coercion.

This chapter links those variables together by tracing them over time over an extreme case of economic coercion: Libya, from 1951 to 2005. Extreme cases have extreme values on one or more of the independent variables and exemplify the important causal processes (Gerring 2007, 101 – 105). Such cases establish the theory's internal validity, i.e. the extent to which the theory can explain a particular case (Gerring 2007, 37, 43 – 50). Libya is such a case. The discovery of oil soon after Libyan independence in 1951 soon made Libya one of the richest countries in the world in per capita terms. The 1969 Revolution set the stage for increased tensions with the United States, culminating in strong – yet ineffective – unilateral economic sanctions and limited military engagement. Continued Libyan support for terrorism led to the first United Nations multilateral counterterrorism sanctions in 1992 (Cortright and Lopez 2000, 121). After over 20 years under at least some form of economic coercion, Libya's Lockerbie reparations and abandoned weapons of mass destruction (WMD) program made the case a surprise success.

This chapter makes a structured, focused comparison between the relevant variables over time (George and Bennett 2005; Van Evera 1997, 58–63). The dependent variables are changes in the amount and composition of foreign direct investment. The independent variables are

the sanction costs brought to bear in each period, the political-economic environment that provided risks and opportunities for MNEs, and the orientation of the ruling coalition toward the global political economy. I analyze Libya from its independence in 1951 to the year after the end of U.S. sanctions in 2005, focusing on the post-1969 Revolution period.

Libya exemplifies the resilience of resource-seeking, capital-intensive (RSCI) MNEs to economic coercion and imposed sanctions. It also demonstrates that for MNE as well as states, sanction effects may appear minimal because most changes occur before the sanctions are imposed and sanctions are imposed on the most obstinate regimes.¹ For all intents and purposes, the only FDI that remained in Libya once sanctions were imposed was that related to oil extraction and refining.² However, most oil investment remained, even as Libya faced increasing restrictions, first by the U.S. and then by the U.N.. U.S. FDI only left when explicitly required. Even after the Lockerbie bombing and the attendant U.N. sanctions, Libya retained foreign investment. During the sanctions episode, economic coercion appeared unsuccessful in coercing FDI. The scale of its isolation became apparent once the sanctions were lifted; along with economic reforms, the lifting of sanctions led to an explosion of investment from abroad.

4.2 Setting the Scene in Pre-Qadhafi Libya: 1951 - 1969

From its independence in 1951 to the revolution in 1969, Libya went from being one of the poorest in the world to one of the wealthiest. The monarchy was broadly open to the outside

¹On sanction selection effects, see, *inter alia*, Drezner (1999; 2003), Marinov (2005), and Nooruddin (2002).

²Most firms were either directly involved in oil extraction or refining or provided services to those firms or employees. A few MNEs worked with the government on major engineering projects, for example Halliburton's work on the Great Manmade River (Rodman 2001, 111–13).

world and generally amiable to U.S. and British military presences. Following the discovery of oil in 1953, the government welcomed investment by foreign firms. Libya awarded its first two oil concessions in November 1955, and within two months had awarded 47 more (Sicker 1987, 23 *passim*). The Petroleum Law of 1955, “one of the most progressive and creative in the Middle East”, aimed to completely fund the government from oil revenue, revenue that could be funneled to development projects across the state (Vandewalle 2006, 55 *passim*).³ Diplomatic cables from Ambassador Newsom to the State and Commerce Departments emphasize Libyan economic development, technical training for Libyans, and developing Libya as a destination for U.S. imports and investment (Newsom 1966b). In 1966, Newsom estimated that U.S. investment in Libya was approximately one billion USD, with around 1,700 U.S. nationals living in Libya. While most investment was concentrated in the oil industry, Newsom was “very impressed by the increasingly large number of American businessmen from other sectors of the U.S. economy who see in Libya a potentially significant market for their exports, managerial skills, and technical advice.”⁴ Other Western powers, including Japan, were also energetically pursuing opportunities in Libya. Overall, U.S. and Western investment was heavily focused on the oil sector, but other opportunities were available and there was expectation that even these minimal segments would grow.

While there was no economic coercion during this period, it is necessary to discuss the orientation of U.S. firms toward the U.S. government, the Libyan government, and MENA governments in general. In general, U.S. oil companies attempted to walk a fine line as impartial economic actors, independent of U.S. foreign policy, and would even resist or eschew U.S. government efforts at assistance.⁵ For its part, the U.S. government consented.

³Cf. Sicker (Sicker 1987, 23–24), who argues the terms were far more beneficial to the oil firms.

⁴For example, before 1969, Hilton Hotels was pursuing Libyan partners to build a hotel in Libya, in which Hilton would retain a 40% stake (Campbell 1967). While the government would not invest, the Officer in Charge of Libyan Affairs believed that there was “ample private Libyan capital available”.

⁵Of the embassy’s relationship with U.S. oil firms, Amb. Newsom wrote, “Our association with and cooperation with the American oil companies are designed to render all appropriate assistance consistent with the *independence of those companies* and the fact of their basic relationship with the Libyan government” (Newsom 1966a).

For raw materials and oil markets, Krasner (1978, 14) argues that U.S. policy sought first to increase competition, to ensure supply second, and finally to “promote broad foreign policy objectives.” Multinational firms could and did resist U.S. government attempts to use those firms as elements of foreign policy (Krasner and Affairs 1978, 19 – 20; Kudrle and Bobrow 1982; Rodman 1995). This independence factors into the ability and willingness of U.S. policymakers to impose direct sanctions costs – either more stringent legal restrictions or impose reputation costs in other arenas.

By 1969, the Libyan monarchy was quite corrupt and had established sole control of oil rents [Anderson (1994); Bearman (1986), 45 *passim*; Vandewalle 2006, 62 – 72]. While the regime had initially pursued a more outward-looking, developmental orientation toward the global economy, the Libyan monarchy likely would have succumbed to the oil curse had it remained in power (Ross 2012).

The existing political and economic risks were not negligible, but it is safe to say that few expected a Black Swan like Mu’ammār al-Qadhafi. Domestic unrest, motivated in part by Arab nationalism, was obvious, and oil firms were aware of the potential for a revolt (Bearman 1986, 48). Nevertheless, U.S. policy was initially conciliatory toward the Revolutionary Command Council (RCC) that overthrew the monarchy and later Qadhafi himself. For their part, oil MNEs expected that their technology and technical expertise made them indispensable for Libya and therefore did not overworry: according to World Bank data, in 1970 net FDI inflows to Libya totaled just over 317 million USD.

4.3 Nationalizations and Terrorism: 1969 - 1986

From 1969 to 1979, Libya’s relations with the United States grew increasingly tense (indeed, its international relations generally grew more fraught). From 1980 to 1986, the United

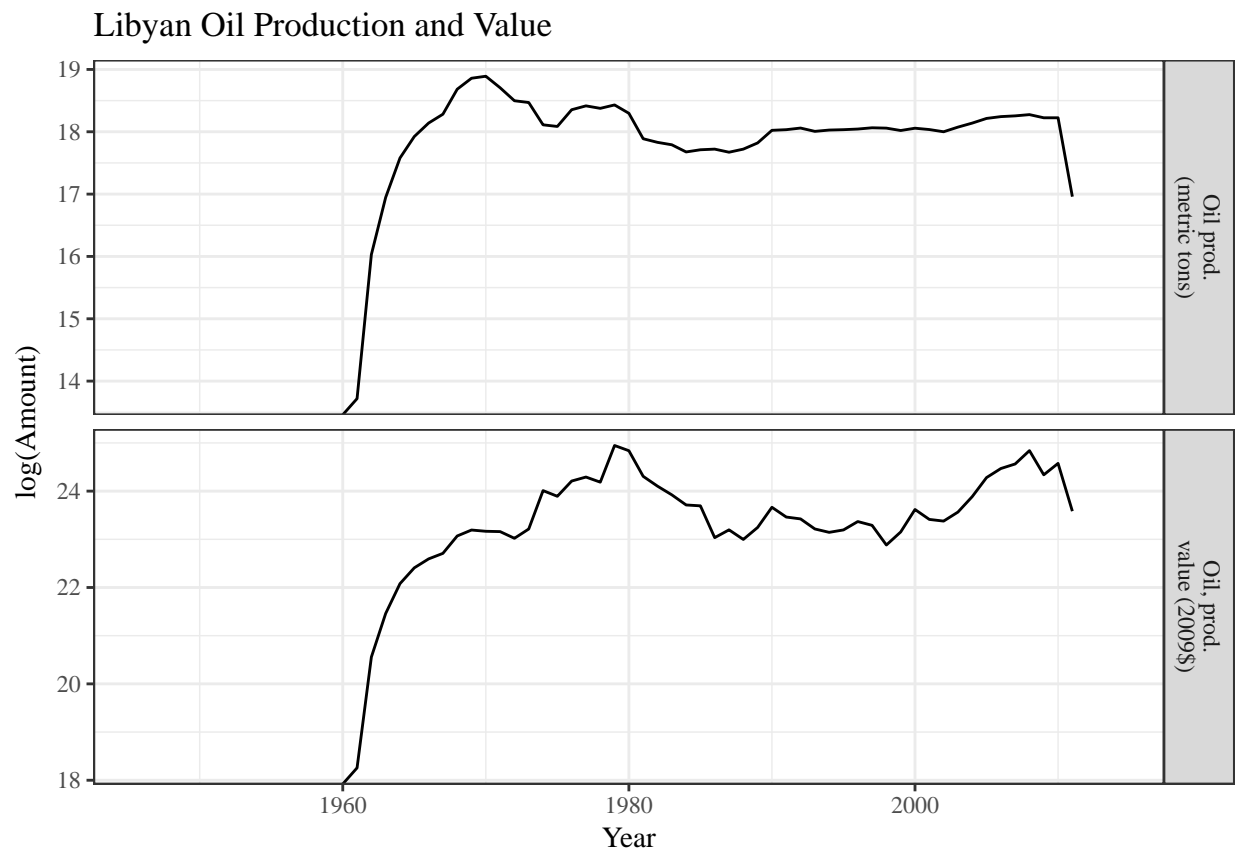


Figure 4.1: Libyan oil production and value by year. Oil production is measured in metric tons and valued in 2009 USD. Source: Ross (2012) data in Teorrell et al. (2016).

States took unilateral coercive action against Libya, continually increasing its diplomatic, economic, and even military pressures. Pertinent to the theory, the conditions that led to economic sanctions also drove nearly all FDI but that of oil from the state and precluded further FDI. Qadhafi emerged from the junior officers of the RCC as the leader of the revolution. Driven by Nasserism – nationalism and Arabism, with oil as the lever of power – and Socialism (Sicker 1987, 47–48), Qadhafi’s constant “tinkering” with institutions soon led to totalitarianism (Sicker 1987, 21). In 1971, the regime renegotiated oil contracts in the Tripoli Agreement, and in 1973 the government nationalized the oil companies, acquiring 51 percent of their assets and the business. By 1978, the regime had abolished private markets and industry and installed committees to run the most companies, including the oil industry.

Oil was the engine for Libyan development and to project its influence on the world stage (Anderson 1994). Even before nationalization, the regime strong-armed Western oil firms into cutting back production and raising the price per barrel they paid the government to extract and process the oil. The top panel of Figure 4.1 shows Libyan oil production peak in 1970 (160 million metric tons, valued at approximately 11.5 billion 2009 USD) and decrease until the mid 1980s, while the bottom panel shows revenue peak in 1979 with less production (101 million metric tons at 68.2 billion 2009 USD). Flush with this cash, the Qadhafi regime was aggressive on the world stage, funding freedom fighters and terrorist groups the world over (e.g. Black September in 1972 and support for the IRA), developing its military, and sparring with its neighbors. A brief flirtation with Egypt (that would have led to coupling in the form of an Arab superstate) from 1969 to 1973 ended with the “[termination of] all military and economic ties” in 1974 and four days of sustained fighting from July 21-25, 1977 (Sicker 1987, 56). In 1979, the U.S. embassy was sacked and burned and Libya was declared a state sponsor of terror by the U.S. State Department. Tensions continued to mount, and multiplying unilateral sanctions and even military action ended with an ostensible cessation of U.S. economic presence in Libya in 1986.

World Foreign Direct Investment in Libya

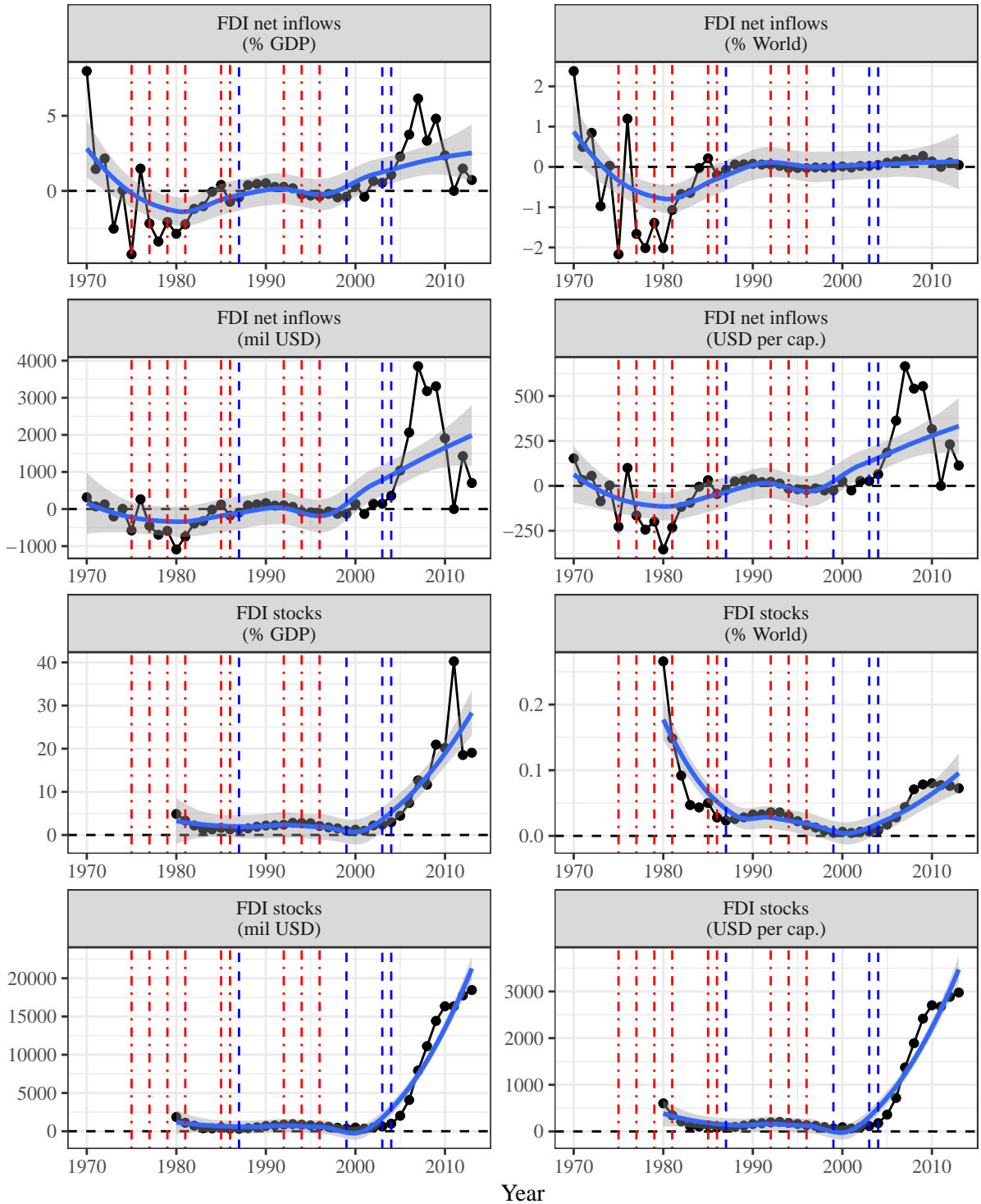


Figure 4.2: Libyan FDI Stocks and Inward Flows. Red dot-dashed lines indicate years that U.S. sanctions are imposed. Blue dashed lines indicate reforms and removed sanctions. Source: FDI Data: UNCTADStat, unctadstat.unctad.org.

As seen in row 2, column 1 of Figure 4.2, FDI inflows decrease sharply from 317 million USD in 1970 to negative 201 million in 1973 and negative 1 billion in 1980. These statistics capture disinvestment motivated by the MNEs themselves and also the loss of equity from Libyan nationalizations. In 1986, for example, when the United States Treasury Department required U.S. oil firms to disinvest completely from Libya (within the next 3 years), disinvestment exceeded investment by 176 million USD. It is important to note that despite the nationalizations, Libya's support for terror groups, and potential political retribution in their home states, most oil MNEs remained in Libya throughout this period. Indeed, only two firms left on their own accord – Exxon in 1981 and Mobil in 1982/3, for “for business reasons alone” – and other firms were obstinate despite warnings from the Reagan administration in 1981 that the U.S. could no longer guarantee the safety of Americans in Libya (Sicker 1987, 118). U.S. oil firms felt secure in their belief that their technology and technical expertise was essential to the success of the Libyan project.⁶

Indeed, the story over this period is of increasingly stringent U.S. sanctions that did not coerce U.S. MNEs until the end. Most decreases in FDI preceded the imposition of severe sanctions. Variation over particular sanction costs clarifies the sanction—industry dynamics. First, direct regulations increased steadily over the period. While the U.S. began to restrict some exports to Libya in the early 1970s – for example, an order of U.S. cargo planes that were denied export licenses – the first true sanctions occurred in September 1975, when the U.S. restricted strategic equipment and training for Libyans. Diplomatic sanctions and military action followed: the closing of the U.S. embassy in Tripoli in 1980, the closing of the Libyan embassy in DC in 1981, and the downing of two Libyan aircraft over the Gulf of Sirte. In 1982, the United States banned all exports to Libya except food and medicine and banned the import of Libyan oil into the United States. In 1985, the U.S. banned all imports of refined petroleum products from Libya. Finally, in 1986 three drastic steps: all

⁶Libya was very reliant on U.S. firms, technology, and personnel. American oil companies accounted for approximately 2/3 of Libya's oil exports, and American experts also worked for other non-American companies in Libya (Ottaway 1981).

goods and services were embargoed in January and U.S. companies were prohibited from doing any business with Libya; by June, these firms were forced to withdraw; and Libyan assets in the U.S. were frozen (Morris 1986; Vandewalle 2006, xxi-xxiii). Yet the waxing restrictions did not correspond to a steady waning of U.S. FDI in Libya.

Second, the negative indirect effects of economic do not appear very different than the preceding economic and political risks that MNEs faced from 1969 onward. Qadhafi was “doctrinal, as opposed to pragmatic” in his socialism, and this meant an inhospitable environment for private economic activity – both Libyan and foreign (St. John 2012, 148). Those firms that stayed or flourished were able to craft mutually beneficial relationships with the Libyan government. These relationships benefitted MNEs because oil firms were not producing for domestic Libyan consumption; rather, their market was abroad, and oil was a relatively fungible (or perhaps launderable) commodity to sell on the global market. Consider the shortages (e.g. food, toilet paper) that beset the Libyan population as the period wore on and the flourishing of black markets. Profit in legal markets was severely constrained and therefore implausible. Any MNE that attempted to produce for domestic Libya consumption would only prove profitable if it engaged in considerable rent-seeking with the government.

The linkages between FDI and the government illustrate the importance of reputation costs – in this case, their initial absence. When the Reagan administration banned imports and exports to Libya in 1982, it let oil firms know that its actions were merely a “symbolic gesture” (Sicker 1987, 118). U.S. firms had to walk a fine line to manage both the Qadhafi regime and the U.S. government, and they often ignored the latter or shifted responsibilities onto foreign subsidiaries (Rodman 2001, 111 - 113).⁷ The Reagan administration ramped up its efforts to curb U.S. FDI in the service of national security (e.g. Lindell 1986). It was only

⁷These two empirical facts – the willingness to work with the Libyan and other autocratic regimes and the desire for MNEs to act as international actors – drove many of the questions of the early literature on MNEs and political risk. On MNE preferences for autocracies, see, inter alia, Oneal (1994), Resnick (2001), and Li and Resnick (2003). On MNE identity and national security, see discussions in Gilpin (1975) and Rodman (1995; 2001).

in 1986 – following terrorist attacks in Rome and Vienna and the U.S. bombing of Tripoli and Benghazi – that these efforts were seriously pursued.⁸

This should not be simplified as a just-so story of sufficient will. As will be discussed below, U.S. MNEs were able to circumvent parts of the 1986 embargo. Rather, for a variety of institutional, structural, and coalitional reasons, U.S. MNEs initially had less to fear from retribution from the Reagan administration than they did from the Qadhafi regime. When Tripoli completely nationalized oil firms, as opposed to claiming a 51 percent share, it did so because of diplomatic disputes, as with BP in 1971 or oil firm intransigence (Bearman 1986, 90). The Reagan administration had used its discretion to loosely enforce sanctions and U.S. firms circumvented them. Furthermore, the international oil market had been a seller's market, and at this stage Europeans were unwilling to sanction Libya even as Libyan agents broke their laws (Vandewalle 2006, 133). Ironically, as MNEs in Libya diversified their holdings to protect themselves from Libyan leverage, they exposed themselves to greater reputation costs from the U.S. government (Rodman 2001, 111 – 113).

In sum, the period between 1969 and 1986 was characterized by significant increased political and economic risks for MNEs driven by an inward-looking coalition. Much of any correlation between disinvestment and economic coercion was spurious: the actions of the Qadhafi regime drove both disinvestment and U.S. sanctions, and most disinvestment preceded coercion. Altering U.S. MNE behavior required the Reagan administration to issue the most restricting unilateral legal restrictions and tell U.S. oil firms directly to leave Libya.

⁸Indeed, the Times of London reported in May 1986 that “[t]he Reagan administration has become increasingly embarrassed by the continued operation of the oil companies after the U.S. bombing of Libya” (Morris 1986).

4.4 Lockerbie and Multilateral Sanctions: 1987 - 1999

Under increasing domestic and international economic constraints in the middle and late 1980s, the Qadhafi regime began to reevaluate many of its policies. It would be easy to overstate the reforms, but in 1987 Tripoli began pursuing political and economic liberalization programs and reintroduced the private sector. In 1993, Qadhafi even suggested guaranteeing foreign capital investment and protecting foreign industries in Libya; these reforms were passed in 1994 – though they were soon proved to be “stillborn” (Vandewalle 1998, 152).⁹ Similarly, while the U.S. had given U.S. MNEs three years to remove their investments from Libya in 1986, in 1989 the Reagan administration began to lift prohibitions against those companies who had not yet left, such as the Oasis Group of U.S. oil companies (comprised of the Conoco Petroleum Corporation, Marathon Oil, and Amerada Hess), from trading with third-party intermediaries (*St. Louis Post-Dispatch (Missouri)* 1989; Sciolino 1989). It is a dark irony for Libyan reformers, then, that Pan Am flight 103 exploded over Lockerbie on December 21, 1988, soon foreclosing compromise and ostracizing Libya from the international community. A joint U.S.–U.K. investigation implicated two Libyan security officers who found haven in Libya. Similarly, four Libyan intelligence officers were indicted for the bombing of French UTA flight 772. These final straws led to multilateral economic sanctions – United Nations Resolutions 731 and 748 – that condemned Libya for its support for terrorism, prohibited the sale of aircraft and weapons to Libya (and supporting training or equipment), and denied the Libyan national airline from operating abroad. The sanctions would be lifted when Libya ceased supporting terrorists, turned over the Lockerbie suspects, and paid compensation to the Lockerbie victims. These sanctions were extended in 1993 in U.N. Resolution 883, which froze all Libyan government foreign assets held abroad – except those funds related to petroleum.

In 1996, the U.S. Congress passed the Iran and Libya Sanctions Act (ILSA) to counter

⁹Alongside these halting and ineffective reforms, Qadhafi also began to pursue WMD in 1995.

Iranian and Libyan WMD development and to punish Libya's refusal to comply with U.N. sanctions. Any investment worth more than \$40 million in the Iranian or Libyan energy sectors would be sanctioned, faced between 2 and 6 possible penalties.¹⁰ The President was given the authority to waive sanctions. The sanctions were extraterritorial – that is, unlike previous sanctions, this legislation would punish any firm or entity, U.S. or foreign (including foreign subsidiaries of U.S. firms), that invested in the Iranian or Libyan energy sectors. In the short-term, ILSA compounded existing sanctions but there is little deviation from pre-existing trends (see rows 2 and 4 in Figure 4.2). While investment from new firms was stymied, firms already in Libya amended old contracts to engage in new investment (O'Sullivan 2003, 201).

To summarize changes in economic coercion over this period: Legal costs increased when multilateral sanctions were imposed, as did reputation costs – both from already high levels. The PanAm and UTA incidents catalyzed the West and created both broad and narrow reputation costs for MNEs.¹¹ In particular, the pressure of the Lockerbie families on the U.S. government proved very effective in moving sanctions forward (Vandewalle 2006, 172). Reputation costs and direct costs were intertwined – the opprobrium against the bombings allowed the U.N. Security Council to create internationally legitimate multilateral sanctions (Hurd 2005). In 1987, the Qadhafi regime had begun to pursue economic strategies that might have reduced – slightly – the negative indirect effects of previous rounds of economic sanctions (and Tripoli's own previous mismanagement), but the regime's support for terrorism further constrained their options. U.N. member states generally complied with the

¹⁰Those penalties included: 1) the prohibition of Export-Import Bank financing; 2) export sanctions (licenses, goods, or technology); 3) prohibition of loans from U.S. financial institutions; 4) loss of access to U.S. government financial services (for financial institutions); 5) procurement sanctions (loss of contracts with the U.S. government for any goods or services); and 6) additional sanctions within the purview of the International Emergency Economic Powers Act (“UNITED STATES: IRAN AND LIBYA SANCTIONS ACT OF 1996” 1996).

¹¹These reputation costs had developed before U.N. sanctions. Rodman (Rodman 2001, 112) writes: “While the cost of losing access to Libya decreased, the risks of flouting American preferences rose. Given the extreme antipathy toward Libya in the United States, a continued association with Libyan oil might have been risky vis-a-vis Congress, shareholders, and customers.” After Lockerbie, these difficulties grew.

US Outward FDI Stocks in Libya, Selected Industries

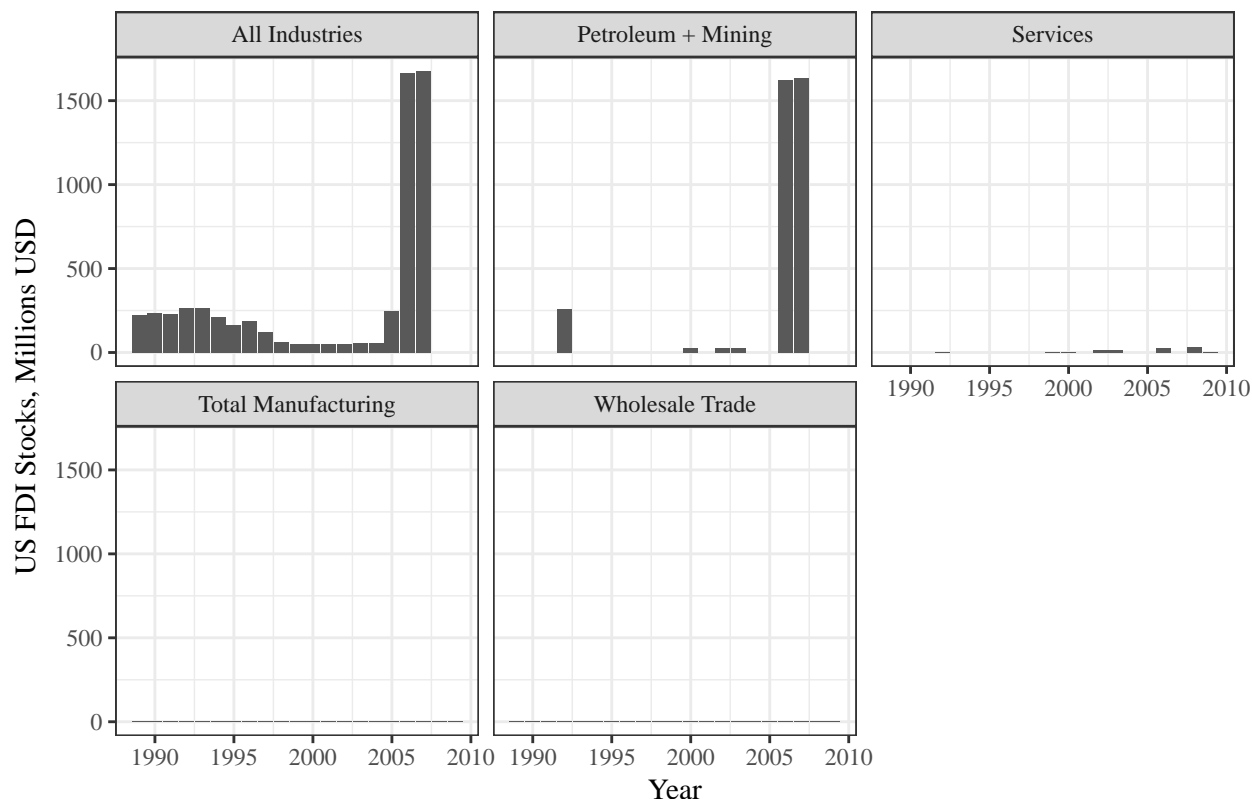


Figure 4.3: US Outward FDI Stocks in Libya. Some missing ‘petroleum+mining’ data reflects BEA omission, not zero investment. Nearly all investment in Libya is petroleum and oil investment. Source: U.S. Bureau of Economic Analysis (BEA).

sanctions – generally (Cortright and Lopez 2000, 113–20).

Total net FDI inflows had been positive 1988 through 1993 but were negative thereafter until 2000 and 2002. In their review of Libyan sanctions, Cortright and Lopez (Cortright and Lopez 2000, 113) find that only one firm, Royal Dutch Shell, left Libya because of the travel difficulties created by the U.N.’s aviation sanctions. While data for the United States is spotty, Figure 4.3 shows that the U.S. maintained a presence in Libya from 1989 onward, though there may be a slow decrease until 2005. This reflects the exception built into ILSA: existing U.S. investments were exempt from the restrictions. As will be discussed in greater detail below, ILSA’s potential went untapped as the Clinton administration used its discretion to avoid blowback from the European powers.

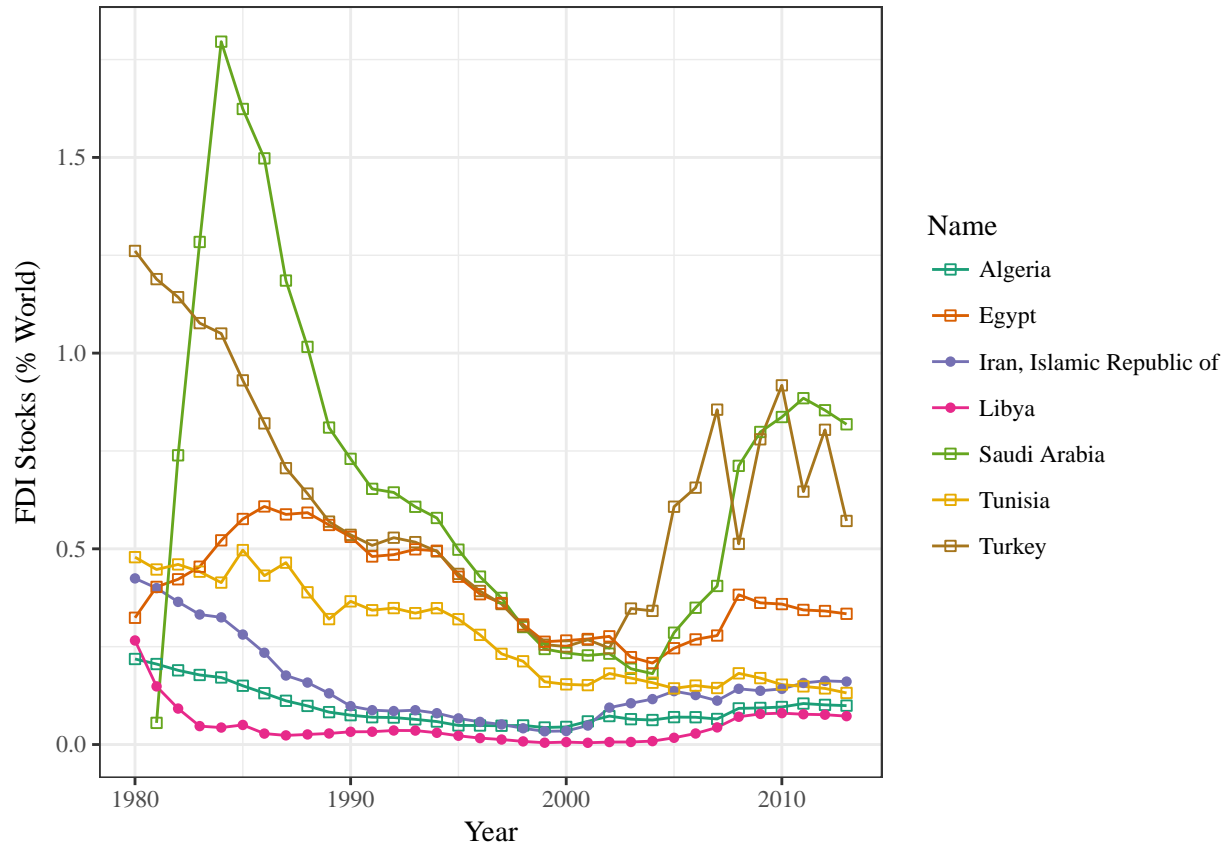


Figure 4.4: Shares of World FDI Stocks for Libya and Its Regional Peers and Rivals, 1980-2013. Source: UNCTADStat.

However, examining only raw levels of FDI misses a key part of the picture. Figure 4.4 displays FDI stocks for Libya and rival MENA states measured as a percentage of total World FDI stocks. During this period, Libya consistently ranked at the bottom of the pack. Furthermore, while Libyan raw stocks stay relatively stable (Figure 4.2), as a destination for World FDI it grew increasingly uncompetitive. In 1980, Libya drew more of a share of FDI than its neighbor Algeria and close to recent rival Egypt’s share. Afterward, nearly all Libya’s neighbors received more inward investment as a share of World of FDI than Libya. Finally, as described in greater detail below, the increase from 2000 to 2010 in Libyan net FDI inflows and stocks as percentages of World FDI shows how severely coercion had isolated Libya.

The Qadhafi regime demonstrated a legitimate desire to alter its strategy of political sur-

vival and pursue political and economic reforms, though even many of the domestic-level reforms would prove ineffective. A major factor inhibiting effective reform was that the regime could not overcome the underlying incentives of the distributive state and implement market-based reforms (Vandewalle 1998, 155–61). Nevertheless, Libya attempted to negotiate with Western powers as soon as U.N. sanctions were threatened in 1992. That year, the secretary-general of Libya’s General People’s Congress denounced terrorism and advocated rapprochement with the West (Cortright and Lopez 2000, 111–12). Qadhafi sought an international tribunal for the trial of the Lockerbie bombers, but the U.S. and U.K. held firm for a trial in one of their two countries.

Ironically, Qadhafi’s original position closely resembled the ultimate outcome. Pressures from the Arab League and the Organization for African Unity brought the U.S. and U.K. to the bargaining table, and in 1998 U.N. Resolution 1192 made the following threat to Libya: turn over the Lockerbie bombers and sanctions will be removed; otherwise, further penalties will be applied. Qadhafi complied.

4.5 Engagement and the End of Economic Sanctions: 1999 - 2005

On April 5, 1999, Libya surrendered the two Lockerbie suspects into custody for trial at the Hague. International support for – and adherence to – the U.N. sanctions was dwindling, but Tripoli yielded to the more moderate demands. The Qadhafi regime began courting the West immediately. U.S. State Department officials visited in 1999, and the U.S. began negotiations with Libya on ending sanctions. Libya met most of its financial obligations, compensating the Lockerbie and UTA victims (sometimes claiming responsibility, other times not). European heads of state were eager to court Libya as well: in 2004, Britain’s Blair, France’s Chirac, and

Germany's Schroeder all visited Libya and negotiated political and economic deals in 2004 (St. John 2012, 240–41). The EU lifted its sanctions the same year. When Libya announced the end of its WMD program in 2003, a renewed relationship with the U.S. followed, albeit haltingly.¹²

Yet this period clearly shows the unobserved deferred investment caused by economic coercion. Figure 2 clearly shows the evidence that Libya had suffered from underinvestment. According to UNCTAD data, Libya's share of World FDI stocks increased from 0.0063 percent in 2000 to 0.0802 percent in 2010 – 12.3 times its earlier share. Figure 3 shows the dramatic increase in outward US FDI stocks in Libya following the removal of sanctions. U.S. outward FDI stocks increased from 58 million in 2004 to 247 million USD in 2005 and 1.6 billion USD in 2006.

Cortright and Lopez (2000) argue Libya is a success for multilateral economic sanctions. The U.N. sanctions were focused (targeting Libya's aviation and arms industries) and aimed at bargaining rather than punishment. It is difficult to disentangle the effects of U.S. sanctions; while they laid the groundwork for the later multilateral sanctions, they are coincident with increased Libyan global malfeasance. However, the Libyan FDI that remained after the One September Revolution in 1969 was predominantly petroleum-related, and an equilibrium between foreign companies and Libya was reached by the time the Reagan administration began to ramp up its unilateral sanctions. Because its sanctions were unilateral, it had few options when U.S. MNEs rerouted their business through foreign subsidiaries. While U.S. MNEs altered their behavior primarily because of reputation costs (Rodman 2001, 111–3), they also maintained their Libyan businesses and occasionally flouted U.S. government directives. In their analysis of coercive diplomacy, Jentleson and Whytock (2005) argue that the Reagan administration's approach was a failure, that multilateral sanctions “had mixed results”, and that the direct diplomacy of Clinton and Bush II performed the best.

¹²Arguably, this period could be divided in two: 1999-2003, when Qadhafi pursues initial engagement; and 2003 onwards, when Qadhafi truly changes his strategy of political survival and abandons WMDs.

Their analysis confirms the narrative established above that Qadhafi changed his strategy of political survival – indeed, had begun to do so in the early 1990s, albeit unsuccessfully.

In sum, then, the Libyan episode provides evidence for the hypotheses addressed in Chapter 3. RCSI FDI proved resilient to all but the most severe economic sanctions and to indirect effects. When economic sanctions were removed, underinvestment had clearly been present, given the sudden increase in Libya’s share of World FDI. The story above certainly exists alongside other explanations of Libyan behavior. It would be folly, for example, to ignore the structural effects of the international oil market. But it would similarly be unwise to ignore the role of economic coercion both as a consequence and a driver of international conflict.

4.6 Conclusion

Table 4.1: Summary of the Libyan case variables over the four time periods.

Period	Investment	Economic Coercion	Target Coalition Strategy of Political Survival	Pre-Existing Sanction Risk
1951 - 1969	Oil-dominant, but some fledgling diversity.	None.	Intitially outward-looking, but trending toward rentier state, the regional norm.	Low to moderate. Coup expected, although not quite one so dramatic.
1969 - 1986	Oil-dominant, significant nationalization, some disinvestment before sanctions imposed.	Increasing unilateral U.S. sanctions. Low European cooperation. Low to moderate U.S. MNE compliance and cooperation.	Imperialistic but economically inward-looking. Private industry banned. Completely reliant on oil.	High for most industries. U.S. petroleum MNEs, however, are confident they are indispensable to Libyan oil production.

Period	Investment	Economic Coercion	Target Coalition Strategy of Political Survival	Pre-Existing Sanction Risk
1987 - 1999	Oil-dominant, inflows decreasing over the period, particularly after U.N. sanctions.	U.N. multilateral targeted sanctions and asset freezes. Continued U.S. sanctions.	Initial movements toward re-engagement with the global political economy, but cut short by Lockerbie. Diplomatic pivot toward Africa.	Starts high – sanctions added until 1994 – but then decreases; sanction-busting increases.
1999 - 2005	Dramatic increases when sanctions are lifted.	Decreasing over the period, nearly all removed by 2005, including U.S.	Re-engages the global political economy, particularly European powers. Increases diplomatic presence in Africa.	Low. Qadhafi abandoned WMD pursuit and support for terrorism.

The Libyan case places the variables in stark relief – perhaps too stark. One weakness of an extreme case is that the case may be an outlier – that in the greater population, the observed dynamics are smaller and/or swamped by other phenomena. Yet while few states have been so sanctioned, rarity does not mean unimportant. Let us first examine the episode. The Libyan case illustrates both MNE resilience and sensitivity – no mean feat. U.S. and other oil MNEs already in Libya proved resilient to coercion. To some extent this resulted from competitive pressures that provided incentives for the U.S. to avoid reputation costs. Indeed, after mandating the cessation of all U.S. activity in Libya within three years of 1986, the Reagan administration began to allow exceptions at the deadline in 1989. Furthermore, even under the U.N. multilateral sanctions, U.S. and European petroleum and mining MNEs maintained their presence. Indeed, the U.N. sanctions avoided penalizing the oil sector, focusing instead on aviation and armaments. But consider the result when sanctions were

removed: foreign investment, particularly from the U.S. dramatically increased. U.S. outward FDI stocks quintupled from 2005 to 2006. The removal of sanctions coincided with a re-engagement with the global political economy. While crediting the removal of sanctions with the entirety of this effect is improper, it is nonetheless far more probable than not that the removal of sanctions had some positive effect (rather than none at all). Economic coercion prevented or dissuaded FDI from entering Libya more than it drove FDI out.

Because Qadhafi abandoned nuclear weapons and support for international terrorism, the Libyan sanctions are often considered successful. In terms of preventing FDI, the sanctions might also be considered successful. Yet consider how severe the sanctions had to be to reach this result: U.S. unilateral embargoes followed by U.N. condemnation and sanction. This level of severity is rare indeed. In the following two chapters, I examine whether the Libyan dynamics hold more generally.

Chapter 5

Sanctions and Cross-National Patterns of Industry-Level FDI

5.1 Introduction

The winds of economic coercion uproot some MNEs in a target state but leave others in place. The previous chapter established that variation in sanction costs affected U.S. MNEs in Libya differently across and within FDI sectors. While that case provided evidence for the proposed causal paths, it remains to be seen whether the results hold more broadly. This chapter examines the theory's external validity, *i.e.* its ability to explain a wide array of cases. I develop statistical models to evaluate the relationships between U.S. economic coercion and U.S. FDI in non-OECD states, Mexico, and Turkey between 1989 and 2005.¹ The hypotheses introduced in Chapter 3 make predictions about specific quantities within or derived from the statistical models.

This chapter proceeds as follows. Section 2 defines the quantities and relationships that will

¹Underinvestment is examined in chapter 6.

inveigh for or against the hypotheses. Section 3 describes the data. It describes the measure of MNE behavior, U.S. outward FDI stocks; develops measures of economic coercion severity and of the issues driving economic coercion; and discusses controlling for variables that can confound the analysis. Section 4 models the relationships between MNE behavior, economic coercion, and controls using the “gravity” equation. Only recently applied to the study of FDI, the gravity equation is the keystone upon which the quantitative study of international flows has been built (Anderson 2011).² Section 5 presents the results. Contrasting previous studies that model these relationships with a maximum likelihood approach, I use Bayesian hierarchical linear models with regularizing priors to reduce the probability of over-fitting, prevent inadvertent “p-hacking”, and impose more conservative tests on the hypotheses (Gelman, Hill, and Yajima 2012; Gelman et al. 2008; McElreath 2016). Section 6 concludes with discussion.

5.2 The Hypotheses

To analyze these relationships, I define the specific quantities of interest that will provide evidence for and against the hypotheses introduced in the previous chapter:

1. **Hypothesis 1:** *Resource-seeking, capital-intensive (RSCI) FDI will only disinvest from the target state when severe coercion is threatened or imposed, ceteris paribus.*

In other words, RSCI FDI under severe coercion should be less than it would be under limited or no coercion and FDI under limited coercion should be approximately equal to that under no coercion at all. Or:

²The attentive reader may note that a model of flows is being used to examine stocks. While Section 4 addresses this objection, note for now that economic studies of FDI have applied the gravity model not only to FDI flows but also FDI stocks and found the model appropriate (Blonigen and Piger 2011).

$$E(FDI_{RSCI}|Coercion_{Severe}) < E(FDI_{RSCI}|Coercion_{Limited})$$

$$E(FDI_{RSCI}|Coercion_{Severe}) < E(FDI_{RSCI}|Coercion_{None})$$

$$E(FDI_{RSCI}|Coercion_{Limited}) \approx E(FDI_{RSCI}|Coercion_{None})$$

2. **Hypothesis 2:** *Indirect effects will have little to no effect on RSCI FDI.* Economic coercion will have negligible *indirect effects* on RSCI FDI when, for coercion C , controls X , and interactions $C \times X$:

$$E(FDI_{RSCI}|C + X + C \times X) - E(FDI_{RSCI}|C + X) = 0$$

3. **Hypothesis 3:** *Indirect effects will have significant effects on market-seeking non-capital intensive (MSnCI) FDI.* Therefore, in contrast to Hypothesis 2:

$$E(FDI_{MSnCI}|C + X + C \times X) - E(FDI_{MSnCI}|C + X) < 0$$

4. **Hypothesis 4:** *Economic coercion imposed to curb human rights abuses will lead to lower levels of FDI than economic coercion imposed over economic disputes.* The expected U.S. FDI in a state that suffers under U.S.-imposed human rights coercion should be less than that under coercion driven by economic issues.

$$E(FDI_{All}|Coercion_{HumanRightsIssue}) < E(FDI_{All}|Coercion_{EconomicIssue})$$

5. **Hypothesis 5:** *Economic coercion in response to security issues will lead to lower*

levels of FDI than economic coercion imposed over economic disputes. The expected U.S. FDI in a state that suffers under U.S.-imposed security coercion should be less than that under coercion driven by economic issues.

$$E(FDI_{All}|Coercion_{SecurityIssue}) < E(FDI_{All}|Coercion_{EconomicIssue})$$

5.3 Data: MNE Behavior and Economic Coercion

5.3.1 The Dependent Variable: MNE Behavior

When economic coercion begins, foreign firms already invested in the sanctioned state may (a) license proprietary technology rather than maintain ownership, if not expressly prohibited by the sanction; (b) “sanction-bust” by re-routing investment through third-party subsidiaries or affiliates; (c) maintain their current investment but delay or terminate future prohibited investment; (d) maintain their current investment but delay or terminate future non-prohibited investment; (e) disinvest partly or completely; or (f) increase their investment in the sanctioned state. Firms not already invested may (a) invest less than previously planned, (b) invest as much as previously planned, or (c) invest more than previously planned. While the particular decisions of MNEs are significant, the end result of these variegated decisions is seen in the resultant FDI positions in the target state.

I measure these FDI positions using industry-level U.S. outward FDI stocks in target states. Few bilateral FDI data are readily available, and even fewer differentiated by industry. The U.S. Bureau of Economic Analysis (BEA) publishes industry-level outward U.S. FDI stocks (measured at historical cost) between 1989 and 2014. The BEA removes any data that would identify a particular company in a given country-year, and omits specifying any FDI stocks

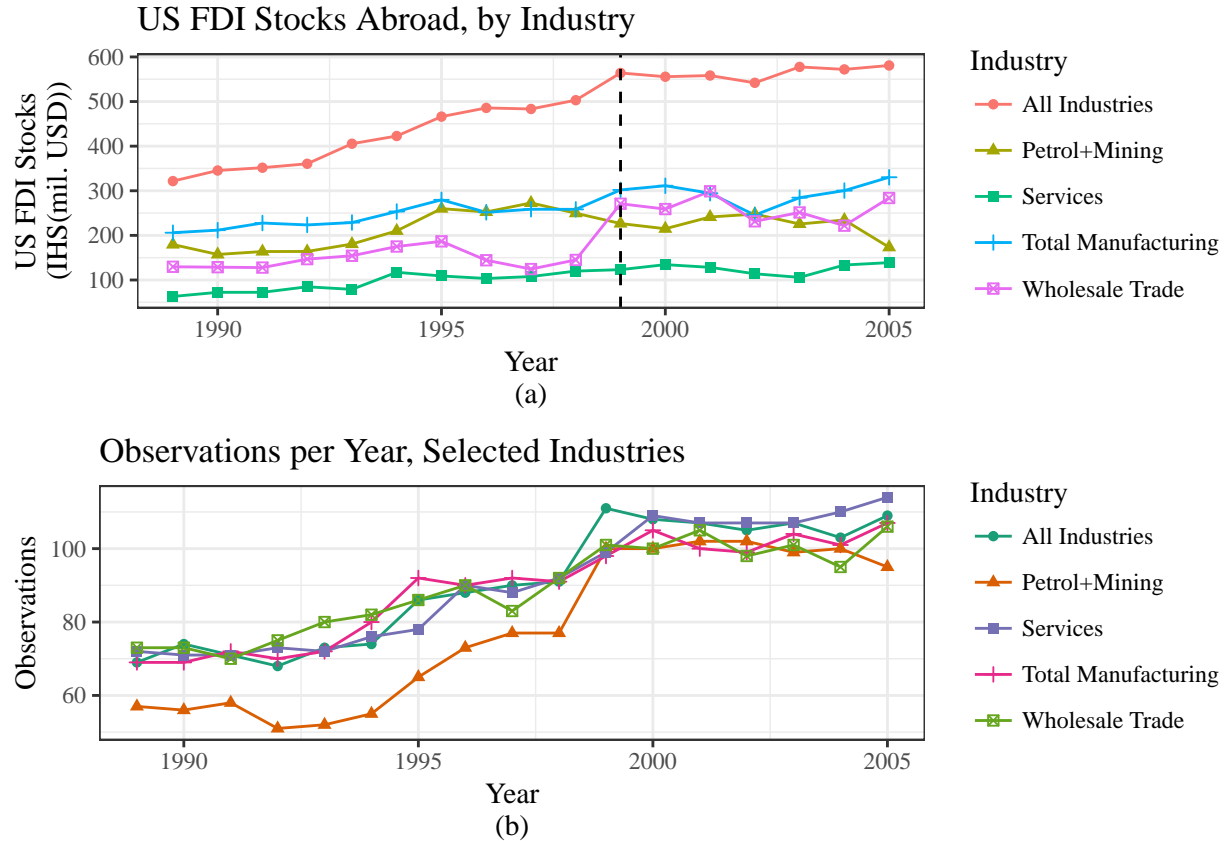


Figure 5.1: Country-year total FDI stocks (panel (a), top) and observations (panel (b), bottom) of industry-level US FDI outflows. All observations are from the set of non-OECD states, Mexico, and Turkey. The dotted line in panel (a) marks 1999 as the year where the BEA changed its FDI classification. The most prominent change was the disaggregation of the petroleum industry into its constituent functional parts, e.g. mining.

between $-\$500,000$ and $+\$500,000$. I code the former as missing and the latter as zeroes. Despite these limitations, the BEA remains the best source for publicly available data with this detail. Panel (a) of Figure 5.1 displays the total U.S. outward FDI stocks per year for selected industries. Panel (b) displays the observations per year, i.e. the number of states with available FDI data in a particular year.

These industry-level stocks can be mapped onto the aforementioned four-fold MNE typology. The hypotheses specify two MNE types: resource-seeking, capital-intensive (RCSI); and market-seeking, non-capital-intensive (MSnCI). The former encompasses the petroleum, mining, and manufacturing industries, among others. From 1989 to 1998, the BEA recorded

all oil MNE activity under the *petroleum* category, but from 1999 onwards has recorded oil company activities according to their constituent functions, such as *mining*. I combine these two indicators into one variable, **petroleum+mining**. While visual inspection suggests relative stability from petroleum categorization to mining (see Figure 5.1a), I also include an indicator variable for the post-1998 years in the petroleum-mining models. I also run another set of RSCI models with *total manufacturing* U.S. outward FDI stocks. MSnCI industries include *services* and *wholesale trade* firms. I analyze the latter. I do not analyze the other two MNE types, though data is available.³ The fourth hypothesis applies to aggregate U.S. FDI, so I include total U.S. outward FDI stocks as well. I exclude all missing values from the data. Table 5.1 summarizes the ranges for these variables.

The DV stipulates observation relevancy. Arguably, geographical factors influence petroleum+mining FDI more so than manufacturing, and there may be systematic differences in those states that receive U.S. petroleum FDI. More importantly, it may be impossible – or nearly so – for some states to receive that FDI. For that reason, in the petroleum+mining FDI models discussed below, I exclude any state that receives no petroleum or mining FDI over the entire period. All other FDI models include all non-OECD+MT states.

Scholars have established that MNEs have different investment criteria for developing and developed states (Barry and Kleinberg 2015; Blanton and Blanton 2007; Blonigen 2005). Furthermore, pre-existing levels of conflict and interdependence affect both U.S. FDI and U.S. statecraft. For example, Drezner (1999) argues that both target and sender deploy different strategies based on their expectations of future conflict. To account for investment criteria and conflict expectations, I remove all observations from OECD states except Mexico and Turkey (OECD-MT). The OECD-MT states are deeply legally, politically, and economically interconnected with the U.S. and the expectations of those bilateral relationships are qualitatively more certain and pacific than the U.S.’s other relationships.

³ *Utility* FDI can be considered market-seeking and capital intensive. Finally, resource-seeking non-capital intensive FDI includes textiles and perhaps even holding companies that engage in regulatory arbitrage.

Table 5.1: Summary of U.S. outward FDI stocks for all industries, the petroleum and mining industries, the total manufacturing sector, and the wholesale trade sector. Amounts are in millions USD at historical cost. Negative amounts represent debt from the U.S. parent to foreign affiliates and subsidiaries. Variables are subject to an inverse hyperbolic sine (IHS) transformation and scaled in the models.

All Industries	Petrol+Mining	Total Manufacturing	Wholesale Trade
Min. :-1344	Min. :-355.0	Min. : -253	Min. :-542.0
1st Qu.: 15	1st Qu.: 0.0	1st Qu.: 0	1st Qu.: 0.0
Median : 146	Median : 3.0	Median : 3	Median : 1.0
Mean : 2067	Mean : 320.8	Mean : 684	Mean : 102.5
3rd Qu.: 1098	3rd Qu.: 191.5	3rd Qu.: 159	3rd Qu.: 43.0
Max. :76390	Max. :8163.0	Max. :22629	Max. :3774.0
NA's :401	NA's :616	NA's :424	NA's :425

5.3.2 The Independent Variable: Economic Coercion

The theory predicts that MNE behavior will change according to different dynamics within and across economic coercion episodes. Observable differences in U.S. outward FDI stocks should correspond to differences in (1) U.S. economic coercion severity, (2) coercion indirect effects that reduce the target's profitability or investment viability, and (3) the issues driving U.S. coercion. The variables used to capture these dynamics are the dichotomous indicators summarized in Table 5.2. I capture limited and severe coercion respectively by dividing coercion episodes into *unilateral* and *multilateral* threats and sanctions. If indirect effects are present, then the criteria that MNEs used to invest abroad will change when coercion is applied. To capture those effects, I interact the coercion severity variables with the basic economic FDI determinants in the gravity model. Finally, to evaluate reputation costs I categorize coercion episodes by the issue driving the coercion.

The Threat and Imposition of Economic Sanctions (TIES) data set (Morgan, Bapat, and Kobayashi 2014) provides data on economic coercion episodes from 1945-2005. Unlike previous data sets, each episode is divided into threat and imposition stages, where appropriate. Cases without an end date but marked as ongoing were coded as ongoing until 2005. Some episodes lacked both an end date and information about whether they were ongoing; due to

insufficient data, those episodes were coded as ending in the final year for which information was available.⁴

Multilateral Sanctions and Severity

There are many plausible ways to characterize economic coercion as severe or limited but none are perfect. Each sanction is crafted to inconvenience the target regime to a specific degree, but its effects may be unintentionally larger or smaller. However, any sanction severity measure must be determined from data preceding other sanction effects.⁵ For example, in their study on sanction effects on US FDI inflows, Biglaiser and Lektzian (2011) include a measure of “high-cost” sanctions that was estimated after the fact. These measures necessarily include any decreased FDI and therefore would merely insert a measure of the dependent variable among the independent variables.⁶ This only begs the question. Broad measures of economic costs that could encompass or result from decreased FDI are therefore inappropriate measures of severity.

Sanction severity can be approximated by unilateral and multilateral coercion, *i.e.* between coercion imposed by one state and that imposed by multiple states. The literature has long debated whether multilateral sanctions are more effective at coercing target states than unilateral sanctions (Bapat and Morgan 2009; Drezner 2000; Martin 1992). However, here coercion success – in terms of changing target policy – is a secondary concern. Compared to an otherwise similar unilateral sanction, a multilateral sanction by definition multiplies the direct legal restrictions to which MNEs will be subject and increases potential reputation

⁴In most cases, this was the episode’s start year. These cases are most likely very minor and had little effect. I thank Navin Bapat and Yoshiharu Kobayashi for their suggestions regarding this issue.

⁵The Hufbauer et al. (1990), Hufbauer et al. (2007), Morgan et al. (2009), and Morgan et al. (2014) data include variables that retroactively estimate the costs of economic sanctions. The latter two data sets attempt to include prospective measures when possible, but these are sparse in the data.

⁶It is also plausible that reduced FDI and the sanctions could jointly cause “high costs” while being otherwise independent. In general, conditioning on any variable that could result from both the IV and the DV – a collider – confounds an analysis. For further discussion, see Pearl (2009) and Morgan and Winship (2014).

costs. Even when ostensible accomplice senders let MNEs and subsidiaries “sanction-bust”, an MNE would incur costs if only to keep up appearances.⁷ I therefore create the following 8 dichotomous variables that indicate the presence of:

1. any threat of U.S. unilateral sanctions;
2. any threat of U.S. multilateral sanctions;
3. any threat of non-U.S. unilateral sanctions;
4. any threat of non-U.S. multilateral sanctions;
5. any imposition of U.S. unilateral sanctions;
6. any imposition of U.S. multilateral sanctions;
7. any imposition of non-U.S. unilateral sanctions; and
8. any imposition of non-U.S. multilateral sanctions.

These indicators are not exclusive: a target could be sanctioned by the U.S., sanctioned by another sender or group of senders, and threatened by the U.S. simultaneously.

The Indirect Effects of Economic Coercion

Hypotheses 2 and 3 make claims about the indirect effects of economic coercion. I use interactions between economic coercion variables and relevant controls to capture indirect effects.⁸ If economic coercion has indirect effects exist, they alter MNEs’ decision calculations once in place. For example, the size of a target’s economy is a prime driver of investment because for foreign investors market size represents new markets and economic potential.

⁷The uni/multilateral distinction also captures increased potential reputation costs; indeed, reputation and direct costs are created by the same inciting event and likely correlated. I correct for some of these effects by including non-U.S. economic coercion episodes. Since the dependent variable is U.S. FDI, including non-U.S. coercion episodes helps control for broad, non-U.S. reputation costs. However, these hypotheses focus on sanction *severity* more than identifying an individual pathway.

⁸There are many ways to test indirect effects, such as structural equation models (Pearl 2001; Pearl 2009; VanderWeele 2009). My method is more parsimonious. Furthermore, in this context the assumptions necessary to buttress multiple equations outweigh the cost of my approach.

If economic coercion created negative externalities in this economy, foreign investors would evaluate those new markets differently than they had before sanctions were threatened or imposed. In a statistical model without an interaction term, the coefficient measuring market size would represent the average covariance over all states, sanctioned and not. An interaction would capture systematic deviation from the ways MNEs choose to invest in unsanctioned states. Formally, while interaction terms are often written as $Y = \beta_C C + \beta_X X + \beta_{C \times X} (C \times X)$, this is equivalent to $Y = \beta_C C + (\beta_X + \beta_{C \times X} C) X$. The latter equation better shows how the added effect of coercion C influences the effect of X on Y .⁹ Therefore, I interact the eight economic coercion variables listed above with the following (logged then scaled) gravity variables:

1. the economic size of the target (GDP);
2. the level of development and relative population wealth, per capita GDP, and its squared term (GPDpc and GDPpc²);¹⁰
3. the distance between the U.S. and the target state (log.km.to.US);
4. economic growth (GDPgr); and
5. the previous year's FDI stock.¹¹

The Reputation Costs of Economic Coercion

I measure reputation costs by categorizing U.S. economic coercion episodes according to the issues driving those episodes. Economic coercion resulting from disputes over economic issues

⁹Western (1998) provides an example also within a Bayesian framework.

¹⁰The early model-building process focused on properly specifying the probability model using *only the gravity coefficients above* (i.e., excluding any coercion IVs, lagged variables, or other controls). As discussed below, this was in part to verify commonly used logs transformations of those variables. A component residual plot suggested that logged GDP per capita had a quadratic relationship with the IHS-transformed U.S. FDI stocks.

¹¹The reader may worry that this proliferation of variables risks “p-hacking”, or finding statistically significant results that are in fact random noise. I address these concerns in Section 3, but briefly: The statistical models I have chosen use weakly informative “regularizing” priors, which yield more conservative tests than common regression models because they produce a posterior probability interval that is more likely to include zero than standard frequentist confidence intervals (McElreath 2016).

(tariffs, dumping, etc...) should generate less moral opprobrium than economic coercion triggered by human rights concerns. Coercion motivated by economics may carry narrow reputation costs – costs among elites – but these costs are not necessarily different from that of any other coercion, nor easily discernible beforehand. Coercion motivated by human rights concerns is more likely to generate broad reputation costs. Similarly, economic coercion arising from security concerns – from “high politics” – should be correlated with less FDI than coercion arising from economic issues. Therefore, to capture reputation costs, I categorize economic coercion (threats and sanctions) as arising from either (1) economics, (2) human rights, (3) security, or (4) other issues. Since U.S. FDI would be most sensitive to U.S. reputation costs, I measure only U.S. economic coercion. This creates eight dichotomous variables for U.S. issue coercion, divided by stage into threats and imposed sanctions.

Table 5.2 summarizes the independent variables.

5.3.3 Controls

The framework specifies four other variables that could confound the analysis: the strategy of political survival pursued by the target state ruling coalition; the target’s pre-existing risk of economic coercion; the home state of the MNE; and the stage of economic coercion. The last two are relatively straightforward and have been discussed above; however, the first two are formidable to measure, particularly across time and space. The controls below are limited but nevertheless capture key behaviors of ruling coalitions and sanction risk.

Quantitatively measuring ruling coalitions’ strategies of political survival is no easy task. Solingen (2001) argues that key observable characteristics of outward-looking ruling coalitions are openness to foreign investment, increased trade, and an emphasis on macroeconomic stability, including reduced expenditures on state-run industries bureaucracies and the military. Other studies have taken a more reductionist approach, often measuring coalition

Table 5.2: Summary of the independent variables. Rows 2 through 9 display reputation costs indicators for the issues driving coercion. The bottom eight rows display the sanction severity indicators: unilateral coercion versus multilateral coercion. Episodes are divided by stage into threats and imposed sanctions; and by sender, be it the United States (or coalition including the U.S.) or one or more non-U.S. senders. The second column shows the number of observations (1935 in total), while the third column displays the fraction each row comprises of the total number of observations. Columns 4 and 5 display mean RSCI FDI for each group.

Coercion	Obs	n/All	Mean Petrol-Mining FDI	Mean Manufacturing FDI
All (Coerced and Not Coerced)	1935	1.00	218.6	534.1
Iss. Economics, US Sanction	123	0.06	634.5	4272.2
Iss. Economics, US Threat	77	0.04	539.8	2666.5
Iss. Hum. Rights, US Sanction	115	0.06	446.9	263.6
Iss. Hum. Rights, US Threat	20	0.01	627.4	513.5
Iss. Others, US Sanction	202	0.10	410.3	1223.0
Iss. Others, US Threat	169	0.09	260.8	916.4
Iss. Security, US Sanction	178	0.09	140.6	423.8
Iss. Security, US Threat	64	0.03	281.8	769.3
Non-US Multilateral Sanction	156	0.08	437.2	1789.3
Non-US Multilateral Threat	73	0.04	675.0	822.3
Non-US Unilateral Sanction	88	0.05	470.0	2558.4
Non-US Unilateral Threat	37	0.02	291.8	1695.6
US Multilateral Sanction	164	0.08	241.8	358.3
US Multilateral Threat	57	0.03	100.6	336.4
US Unilateral Sanction	308	0.16	541.0	2071.2
US Unilateral Threat	248	0.13	373.3	1412.6

orientation by trade openness (imports plus exports as a share of GDP) and the change of trade openness over time (e.g. over a 3-, 5-, or 10-year period). Trade openness is an insufficient indicator of coalition orientation. It may also be unnecessary, as Blonigen and Piger (2011) exclude trade openness because it is endogenous to foreign investment. I follow their approach and exclude trade openness as a control. To capture openness to foreign investment, I use two indicators. The first indicates whether a target has at least one bilateral investment treaty (BIT) with the United States. This variable is coded as “None,” “Signed”, or “In Force.”¹² The second is the Chinn-Ito Capital Openness Index, standard-

¹²This measure was coded by the author from UN Conference on Trade and Development treaty data, available at unctad.org. The author’s code and data can be found at joshmalnight.com.

ized to a minimum of 0 and a maximum of 1 (Chinn and Ito 2008). I proxy spending on state industries by including military spending as a percentage of target GDP. To control for the extent to which the government is reliant on domestic energy sources for its revenues, I also include a measure of natural resource rents, as a percentage of GDP.¹³

To account for pre-existing sanction risks, I follow Biglaiser and Lektzian (2011) and account for the security environment, coding whether the state is in a civil war or a militarized interstate dispute according to the Uppsala Conflict Data Program (UCDP). Scholars have argued whether foreign direct investors prefer autocratic and democratic institutions. Using Polity 2 data, I trichotomously code each case as being either an Autocracy, which has a Polity 2 score between -10 and -6, inclusive; a Democracy, which has a Polity 2 score between 6 and 10, inclusive; or otherwise an Anocracy.¹⁴ Table 5.3 summarizes the controls.

Table 5.3: Summary of control variables. When included in the model, GDP, GDP per capita, and distance have been logged and scaled. Military spending, natural resource rents, and GDP growth have been scaled (i.e., had their means subtracted and were divided by their standard deviations).

Name	Mean	Range	Sum	Obs
Autocracy	0.2	[0.00 to 1.00]	480.0	1935
Capital Open	0.4	[0.00 to 1.00]	735.7	1935
Civil War	0.2	[0.00 to 1.00]	356.0	1935
Democracy	0.4	[0.00 to 1.00]	775.0	1935
GDP Growth	4.1	[-51.03 to 106.28]	7949.7	1927
log(Distance)	9.1	[7.73 to 9.70]	17531.6	1935
log(GDP)	23.2	[18.46 to 28.45]	44855.8	1935
log(GDPpc)	7.2	[3.91 to 10.96]	14011.8	1935
MID	0.0	[0.00 to 1.00]	49.0	1935
Mil. Spending (per GDP)	2.8	[0.03 to 39.62]	4700.5	1653
Post-1998	0.5	[0.00 to 1.00]	878.0	1935
Resource Rents	11.7	[0.00 to 84.47]	22583.5	1930
US BIT In Force	0.2	[0.00 to 1.00]	350.0	1935
US BIT Signed	0.1	[0.00 to 1.00]	138.0	1935
Year-1989	8.5	[0.00 to 16.00]	16461.0	1935

¹³Natural resource rents and military expenditure data are available from the World Bank’s World Development Indicators, but have been aggregated as part of the Quality of Government (QoG) data from the Quality of Government Institute (Teorell et al. 2016).

¹⁴These variables are also collected in the QoG data (Teorell et al. 2016).

5.4 Methods: Modeling Economic Coercion and MNE Behavior

5.4.1 The Gravity Model

The gravity model has been a mainstay in the study of international trade flows, but has been recently and fruitfully diversified to the study of other flows, including migration, capital, and FDI (Anderson 2011; Bellos and Subasat 2012; Kleinert and Toubal 2010; Schmeiser 2013). The gravity model analogizes international flows to gravity: as the gravitational force between two objects is directly proportional to the product of their masses but inversely proportional to the distance between them, bilateral flows between two states are proportional to their sizes (generally the sizes of their economies) but inversely proportional to the frictions between them (including distance). The gravity model can be derived from multiple theoretical assumptions and is therefore robust (Kleinert and Toubal 2010; Schmeiser 2013). For countries i and j and year t , and letting α_0 be an intercept, $\eta_{i,j}$ be stochastic error, and β_p be coefficients, the basic gravity model for FDI can be expressed as (e.g. Silva and Tenreyro 2006):

$$FDI_{i,j,t} = \alpha_0 \frac{Economy_{i,t}^{\beta_1} * Economy_{j,t}^{\beta_2}}{Distance_{i,j}^{\beta_3}} \eta_{i,j}$$

More complex models introduce controls as multiplicative terms. The model has generally been estimated by taking the logs of both sides and then running a linear regression. This is inappropriate for two reasons relevant to this analysis. First, the residual error resulting from a regression of a log-transformed gravity model will not be distributed normally when heteroskedasticity is present, a likely occurrence (Burger, Oort, and Linders 2009; Silva and

Tenreyro 2006). Second, the log of zero does not exist, while dyads without trade or other international flow do. To deal with these zeroes scholars propose: dropping those cases; adding 1 to each zero case; using Poisson regression; or using the inverse-hyperbolic sine (IHS) transformation, which acts in effect as a log that can handle zero and negative values (Burbidge, Magee, and Robb 1988; Kristjnsdttir 2012). The most common solutions are adding 1 to each case or using Poisson pseudo-maximum likelihood models with country fixed effects.

These solutions are inappropriate for the FDI data considered here. First, neither net FDI inflows nor, counter-intuitively, FDI stocks are measured in ways that make them non-negative. Negative net FDI inflows – inflows minus outflows – measure net disinvestment of existing investments. FDI stocks are often measured in a similar manner, as the value of equity and assets held by the domestic parent against the foreign affiliate. When loans from the affiliate to the parent far outweigh transfers and purchases flowing the other way, the home FDI position is recorded as negative (OECD 2016). Despite the difficulties this poses to the analysis, this debt cannot be considered insignificant *a priori* because negative FDI positions reflect important business relationships between two states and should be included. Therefore, I keep these observations and use the inverse-hyperbolic sine (IHS) transformation.¹⁵

Since the gravity model arose to analyze non-negative absolute trade flows from country i to country j , the reader may wonder whether it is appropriate to model FDI stocks. While the international relations literature has been bullish on net FDI inflows (e.g. Li and Resnick 2003; Jensen 2003; Li 2009), it has yet to explicitly reference the gravity model. The gravity model is not necessarily better suited to net FDI inflows over stocks; unlike imports or exports, net FDI inflows are not non-negative and are not unidirectional, i.e. they are *net* flows. FDI stocks, meanwhile, represent the accumulated inflows that would result from

¹⁵ $IHS(x) = \log(x + \sqrt{x^2 + 1})$, which is approximately equal to $\log(2x) = \log(2) + \log(x)$ for positive values, equal to zero for zero values, and approximately equal to $-(\log(2x))$ for negative values.

a gravity-like process, as the volume of trade in a given year represents the accumulated business deals and established networks between two states. Furthermore, the economics literature has applied the model to affiliate sales (since this measures a directional flow, a more appropriate measure) and to FDI stocks (Blonigen 2005; Blonigen and Piger 2011). A final reason to use FDI stocks is empirical: In initial models for this analysis using only basic gravity variables, FDI stock models generate posterior predictive distributions that more closely resemble the data than models using net FDI inflows, or for that matter changes in FDI stocks.¹⁶

To conclude, the gravity model serves as a useful foundation for analysis. The dependent variables are transformed using the inverse hyperbolic sine to accommodate the negative FDI positions. The basic gravity variables – GDP, GDPpc, GDPpc², and distance – are logged. All continuous variables are then scaled to ease computation.

5.4.2 Building on the Gravity Model

The models linking U.S. economic coercion to U.S. outward FDI stocks in country i in year t ($Y_{i,t}$) use the following deterministic (non-stochastic) template:

$$IHS(Y_{i,t}) = V_{i,t} * G + X_{i,t} * C + W_{i,t} * B + Z * b_i$$

Where V , X , and W are matrices of observed data for the gravity variables, economic coercion, and other controls, respectively, for country i in year t . G are the population gravity parameters, C are the population economic coercion parameters, B are the population con-

¹⁶Gelman and Hill (2007) emphasize iterative model-checking, particularly by comparing the distribution of data used to generate the model to data predicted from the model, often graphically. Basic yet powerful, these graphs can clearly reveal a model's strengths and weaknesses. Models that generate predictions that deviate grotesquely from the data should be seen as fundamentally flawed and inappropriate for inference. I discuss some of these weaknesses in Section 4 and suggest refinements for future models.

trols. Z are indicators for state-level random coefficients and b_i are the state-level random effects. Each state has a random intercept to account for different initial FDI stocks and random linear time slopes to “de-trend” broad changes in FDI over time for each state.¹⁷

If indirect effects exist, then MNEs will alter the criteria they use to invest when coercion occurs. This suggests that the relationships with existing economic indicators will be altered – in other words, interaction effects will be present. The most basic relationship would exist alongside the gravity variables and other economic determinants. Appropriately modifying the general model above gives:

$$IHS(Y_{i,t}) = V_{i,t} * G + X_{i,t} * C + U_{i,t} * Interactions_{C \times G} + W_{i,t} * B + Z * b_i$$

5.4.3 Specifying Prior Distributions and the Full Model

I analyze the relationships among the data using Bayesian hierarchical linear models. A full discussion is beyond the scope of this chapter, but here is an overview.¹⁸ The common regression model specifies a likelihood function and estimates model parameters by maximizing that function. The likelihood function takes a hypothesis as given and provides the likelihood of observing data D . The Bayesian approach follows Bayes’ Law, multiplying the likelihood function by the prior distributions for parameters to arrive at a *posterior distribution*. The posterior distribution measures the probability the hypothesis is true given the data (inverting the relationship of the likelihood function).¹⁹ Prior distributions represent initial

¹⁷This captures secular increases in the level of FDI stock. As Figure 5.1a shows, aggregate FDI stocks display broadly linear relationships over time. Random slopes allow each state to have its own linear trend over time, as well as allow the estimation of a population-level time trend in U.S. outward FDI stocks. It is similar to Buthe and Milner (2008), who de-trend the population, but follows the advice of King and Roberts (2014) to allow each state its own trend.

¹⁸For deeper introductions, see Gelman and Hill (2007), Gill (1999; 2014), or McElreath (2016).

¹⁹Formally, Bayes Law can be written as $Pr(H|D) \propto Pr(D|H)Pr(H)$, where the left-hand side is the posterior distribution and the right-hand side is the likelihood ($Pr(D|H)$) multiplied by the prior $Pr(H)$ distribution. Posterior distributions are more easily interpretable than likelihood distributions.

beliefs about parameters and can incorporate any additional knowledge about the parameters. From a Bayesian perspective, most maximum likelihood estimates correspond to flat prior distributions over the parameters. Flat priors treat every conceivable parameter value as equally likely *a priori*. Yet there is usually some background knowledge, for example, that makes a β coefficient of 1,000,000 more or less probable than a coefficient of 1. For scaled variables such a large effect size would be unlikely. We can add information without unduly biasing an analysis by using “weakly informative” priors that put lower probabilities on very unlikely values but do not overwhelm the data (Gelman, Hill, and Yajima 2012). For example, specifying a sufficiently wide normal prior distribution over the possible values a regression parameter incorporates our prior beliefs that, for example, the threat of U.S. economic coercion very probably will not reduce FDI in a target by a trillion dollars – although if the data strongly supports this conclusion, the prior information is weak enough not to abrogate it. This specification has the added benefit of making zero more likely than under traditional regression methods, creating a more conservative test for each coefficient. This is particularly important for preventing “false” significance, particularly with interactions and ameliorates the difficulties of multiple comparisons (Gelman, Hill, and Yajima 2012). This serves as a useful point of comparison for the models: wide probability intervals around zero reflect relatively uninformative data and our conclusions should be tentative. Tight bounds around a particular value reflect much more informative data and robust conclusions.

The full probability model with all indirect effects can be written as follows:

$IHS(Y_{i,t}) \sim Normal(\mu_{i,t}, \sigma^2)$	Likelihood
$\mu_{i,t} = V_{i,t} * G + X_{i,t} * C + U_{i,t} * Interactions_{C \times G}$ $+ W_{i,t} * B + Z * b_i$	Mean fn.
$G \sim Normal(0, 2.5^2)$	Prior
$C \sim Normal(0, 2.5^2)$	Prior
$B \sim Normal(0, 2.5^2)$	Prior
$Interactions_{C \times G} \sim Normal(0, 2.5^2)$	Prior
$\sigma^2 \sim HalfCauchy(0, 1)$	Prior
$b_0 \sim MVNormal(0, S)$	Prior
$S = LRL$	Covariance fn.
$L = \begin{pmatrix} \sigma_{b_0} & 0 \\ 0 & \sigma_{b_{year}} \end{pmatrix}$	
$\sigma_{b_i} \sim HalfCauchy(0, 1)$	Var. Priors
$R \sim LKJ(1)$	Prior

As points of comparison, I include two additional models. In addition to the interaction model above (the “Indirect Effects” model), I include a model without interaction terms, equivalent to setting the interaction coefficients to zero. Comparing the “Indirect Effects” and “Direct Only” models provides further evidence for or against Hypotheses 2 and 3: if the “Direct Only” model fits substantially better (worse) than the “Indirect Effects” model, it implies that the indirect effects are negligible (important). Finally, I include a “Coercion” only model to examine how the coercion coefficients shift when the full battery of controls

is added.

Table 5.4: Three model types applied to each DV-IV pair specified by the hypotheses.

Model	Coercion Variables	Control Variables	Interactions
Coercion Only	Yes	No	No
Direct Only	Yes	Yes	No
Indirect Effects	Yes	Yes	Yes

5.5 Results

5.5.1 Hypothesis 1: Sanction Severity and U.S. RSCI FDI

Hypotheses 1 and 2 respectively examine the direct and indirect effects of economic coercion on U.S. outward RSCI FDI stocks. To test Hypothesis 1, I compare the expected FDI under multilateral U.S. economic coercion to that under unilateral U.S. coercion and in the absence of coercion. Figure 5.2 displays the estimates of the eight coercion coefficients for the “Coercion Only”, “Direct Only”, and “Indirect Effects” models. These coefficients estimate the marginal FDI difference between an uncoerced state and one subject to that form of economic coercion.²⁰ The four panels in the top tier (a) display the estimates for the “Coercion Only” and “Direct Only” models and the two RSCI dependent variables. The bottom tier (b) displays the “Indirect Effects” model results. The thick blue bars represent 50% probability intervals (PIs) around the median and the thin black bars represent 95% PIs.²¹ Beginning with the top row (a), total U.S. manufacturing FDI appears to be little affected even by U.S. multilateral coercion, as both 50% PIs around the median include

²⁰For the indirect effects models, the coefficients measure the marginal effects when all interaction terms are equal to zero (the population average).

²¹Median values represent the midpoint of the posterior distribution. Posterior intervals (PIs) should be interpreted similarly to, though more easily than, normal confidence intervals. For some parameter with a PI of $[a, b]$, there is a 95% probability that the parameter falls between the specified values a and b , given the data and the model. Table 5.5 provides the coefficient medians and 95%PIs to two decimal places.

The Direct Effects of Economic Coercion on U.S. Manufacturing and Extractive (Petroleum and Mining) FDI

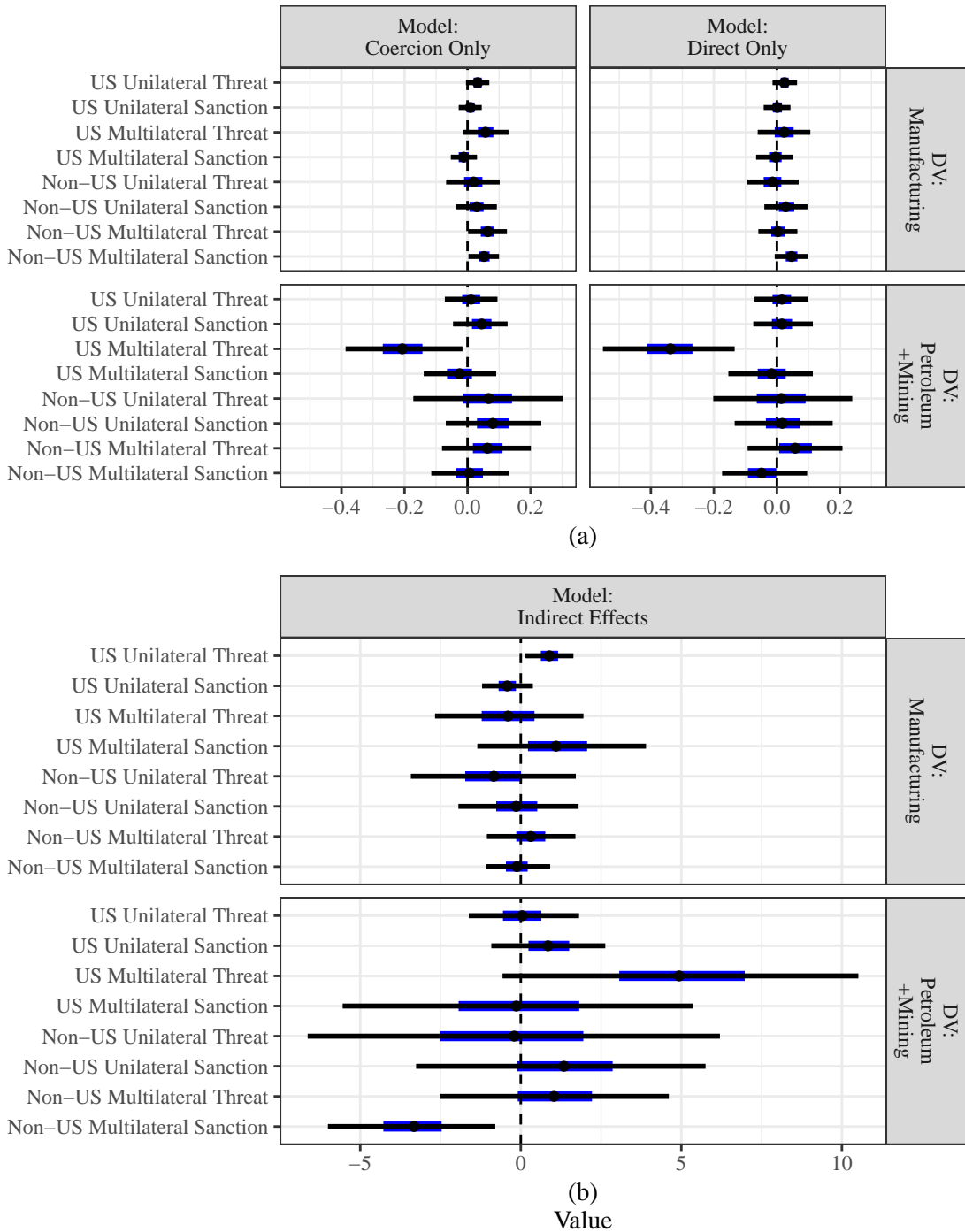


Figure 5.2: The direct effects of economic coercion on U.S. outward RSCI FDI stocks (IHS transformed and scaled). When indirect effects are included in the model, the direct effects are much more uncertain but potentially larger. Based on leave-one-out (LOO) criteria, the ‘Direct Only’ model (right column of panel a) better explains the data than the other models (panel b and the left column of panel a).

zero. These intervals are smaller than the $\text{Normal}(0, 2.5^2)$ prior distributions, indicating that there was sufficient data to make relatively certain predictions of minimal effect. Non-U.S. multilateral sanctions are correlated with greater than average U.S. total manufacturing FDI. So is a U.S. unilateral threat that predicts a median marginal change of 1 million dollars in increased U.S. FDI (95%PI: [0.1, 2.5], mil USD).²² The top row of panel (b) shows the direct effects from the “Indirect Effects” model. This model requires the data to explain more parameters than the two previous models, and this is reflected in the greater uncertainty around the estimates (note that the x-axis for panel (b) is wider than those of panel (a)). The 50% and 95% PI bands for U.S. multilateral coercion are wider than those for U.S. unilateral coercion, and the effect of U.S. unilateral threat remains positive. These results provide little support for Hypothesis 1.

Yet more than manufacturing, the petroleum industry is the quintessential RSCI sector. The second rows of panels (a) and (b) in Figure 5.2 present coefficient estimates for the relationship between economic coercion and U.S. outward petroleum and mining-related FDI stocks. The lower row of panel (a) displays some consistent results: only U.S. multilateral threats are correlated with reduced petroleum and mining FDI. Yet the second row of panel (b) provides contradictory evidence. The “Coercion Only” and “Direct Only” models (panel (a)) show strong evidence (with a greater than 0.95 probability) for Hypothesis 1 at the threat stage, while the “Indirect Effects” model (panel (b)) provides evidence against. Resolving this dilemma requires adjudicating between the appropriate models: does one best explain the data, or are both equally plausible? I use leave-one-out information criteria (LOOIC) to compare the three models (Gelman, Hwang, and Vehtari 2014).²³ In comparison to the

²²These values are computed by taking the inverse IHS transformation of the coefficients in Table 5.5.

²³LOOIC is similar to the Akaike Information Criterion (AIC) used for frequentist models. LOOIC prevents over-fitting better than other model selection criteria such as deviance information criteria (DIC) (Gelman, Hwang, and Vehtari 2014). The LOOIC for the petroleum and mining “Direct Only” and “Indirect Effects” models were 1052.1 and 1091.6, respectively. As with AIC, the lower value is preferred. LOOIC can be used on its own or used to compute the expected log predictive density (elpd), which measures how well a model predicts one observation using all the others. The difference in the expected log predictive density between two models similarly provides evidence for favoring one over the other. The difference in the elpd for the “Direct Only” and “Indirect Effects” petroleum+mining FDI models was -19.7 (se = 7.0), strongly favoring

Table 5.5: Median values and 95 percent probability intervals (PIs) for the direct effect coefficients linking economic coercion to U.S. outward RSCI FDI stocks (IHS transformed and scaled). One asterisk (*) indicates the coefficient is positive or negative within a 50 percent interval around the median, while two asterisks (**) indicate the same for a 95 percent interval.

Name	Model	Manufacturing	Petroleum +Mining
Non-US Multilateral Sanction	Coercion Only	0.05, [0, 0.1]**	0.01, [-0.12, 0.13]
Non-US Multilateral Sanction	Direct Only	0.05, [-0.01, 0.1]*	-0.05, [-0.17, 0.1]*
Non-US Multilateral Sanction	Indirect Effects	-0.12, [-1.08, 0.92]	-3.33, [-6.01, -0.79]**
Non-US Multilateral Threat	Coercion Only	0.06, [0, 0.12]**	0.06, [-0.08, 0.2]*
Non-US Multilateral Threat	Direct Only	0, [-0.06, 0.06]	0.06, [-0.09, 0.21]*
Non-US Multilateral Threat	Indirect Effects	0.31, [-1.06, 1.7]	1.03, [-2.53, 4.61]
Non-US Unilateral Sanction	Coercion Only	0.03, [-0.04, 0.09]*	0.08, [-0.07, 0.23]*
Non-US Unilateral Sanction	Direct Only	0.03, [-0.04, 0.1]*	0.02, [-0.13, 0.18]
Non-US Unilateral Sanction	Indirect Effects	-0.15, [-1.94, 1.8]	1.34, [-3.26, 5.75]
Non-US Unilateral Threat	Coercion Only	0.02, [-0.07, 0.1]	0.07, [-0.17, 0.3]
Non-US Unilateral Threat	Direct Only	-0.01, [-0.09, 0.07]	0.01, [-0.2, 0.24]
Non-US Unilateral Threat	Indirect Effects	-0.84, [-3.42, 1.71]	-0.2, [-6.64, 6.2]
US Multilateral Sanction	Coercion Only	-0.01, [-0.05, 0.03]	-0.02, [-0.14, 0.09]
US Multilateral Sanction	Direct Only	0, [-0.07, 0.05]	-0.02, [-0.15, 0.11]
US Multilateral Sanction	Indirect Effects	1.1, [-1.35, 3.9]*	-0.14, [-5.55, 5.37]
US Multilateral Threat	Coercion Only	0.06, [-0.02, 0.13]*	-0.21, [-0.39, -0.02]**
US Multilateral Threat	Direct Only	0.02, [-0.06, 0.11]	-0.34, [-0.55, -0.13]**
US Multilateral Threat	Indirect Effects	-0.4, [-2.67, 1.95]	4.93, [-0.57, 10.51]*
US Unilateral Sanction	Coercion Only	0.01, [-0.03, 0.04]	0.04, [-0.05, 0.13]*
US Unilateral Sanction	Direct Only	0, [-0.04, 0.04]	0.02, [-0.08, 0.11]
US Unilateral Sanction	Indirect Effects	-0.42, [-1.21, 0.38]*	0.85, [-0.92, 2.63]*
US Unilateral Threat	Coercion Only	0.03, [0, 0.07]**	0.01, [-0.07, 0.1]
US Unilateral Threat	Direct Only	0.02, [-0.01, 0.06]*	0.02, [-0.07, 0.1]
US Unilateral Threat	Indirect Effects	0.89, [0.14, 1.64]**	0.04, [-1.62, 1.81]

other two models, the “Coercion Only” model explains the least (appropriate since it lacks any non-coercion variables or controls). Relevant to both Hypothesis 1 and 2, the “Direct Only” model scores better on the predictive criteria than the “Indirect Effects” model. I therefore draw inferences from the “Direct Only” models of RSCI FDI. Figure 5.3 presents the posterior distributions for U.S. economic coercion variables for both RSCI FDI types. These distributions clearly show that U.S. multilateral sanctions have little effect on either U.S. petroleum and mining or manufacturing FDI stocks. Hypothesis 1 receives support at the “Direct Only” model.

Table 5.6: Median values and 95 percent probability intervals (PIs) for the direct effect coefficients linking economic coercion to U.S. outward wholesale trade FDI stocks (IHS transformed and scaled). One asterisk (*) indicates the coefficient is positive or negative within a 50 percent interval around the median, while two asterisks (**) indicate the same for a 95 percent interval.

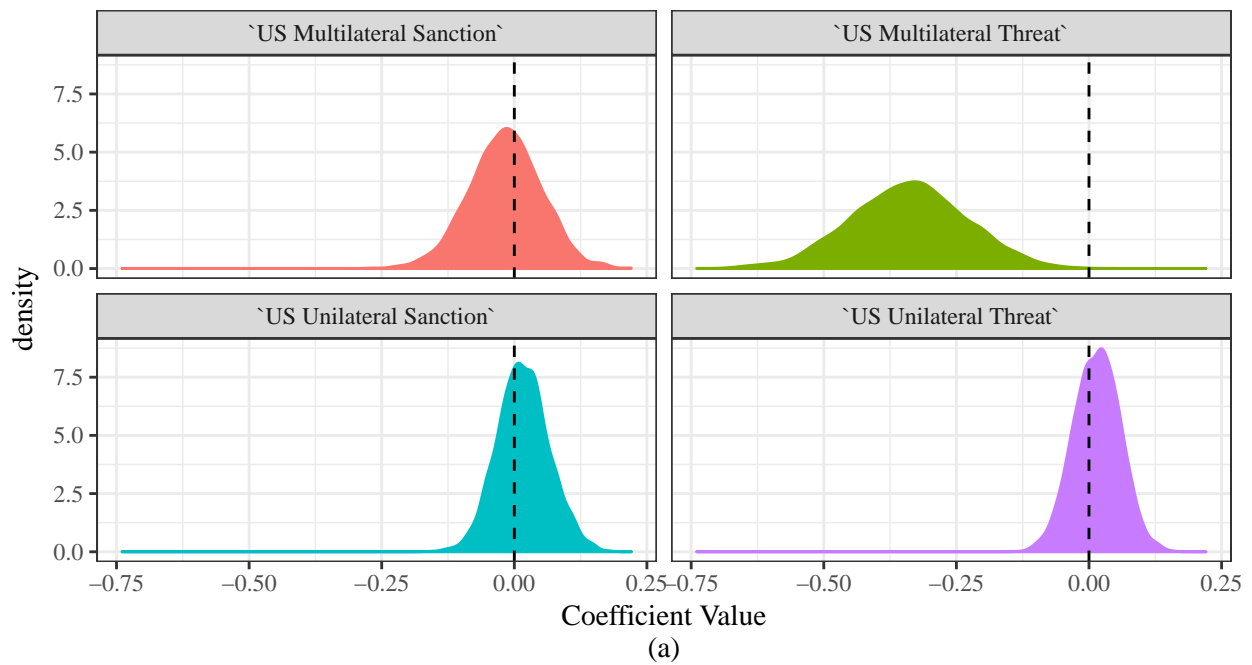
Name	Coercion Only	Direct Only	Indirect Effects
Non-US Multilateral Sanction	0.1, [0.01, 0.19]**	0.08, [-0.02, 0.17]*	0.98, [-0.78, 2.71]*
Non-US Multilateral Threat	-0.04, [-0.15, 0.08]	-0.06, [-0.18, 0.05]*	-1.51, [-4.1, 1.06]*
Non-US Unilateral Sanction	0.22, [0.11, 0.34]**	0.14, [0.02, 0.26]**	-2.52, [-5.68, 0.5]*
Non-US Unilateral Threat	0.13, [-0.03, 0.29]*	0.05, [-0.12, 0.22]	-0.02, [-4.62, 4.82]
US Multilateral Sanction	-0.04, [-0.12, 0.03]*	-0.05, [-0.14, 0.04]*	-6.18, [-10.13, -2.35]**
US Multilateral Threat	0.16, [0.03, 0.29]**	0.16, [0.01, 0.28]**	4.68, [0.12, 8.87]**
US Unilateral Sanction	0.02, [-0.04, 0.09]	-0.01, [-0.08, 0.06]	0.08, [-1.13, 1.37]
US Unilateral Threat	0.04, [-0.02, 0.11]*	0, [-0.07, 0.07]	0.16, [-1.34, 1.65]

the threat stage, but only for extractive RSCI FDI.

We can also calculate the support for Hypothesis 1 directly.²⁴ Table 5.7 displays the probabilities that Hypothesis 1 is true. Column one displays the hypothesis conditions established above for imposed sanctions and sanction threats. Expected U.S. FDI under severe – i.e. multilateral – U.S. economic sanctions (threats) must be lower than that under limited – unilateral – sanctions (threats) and lower than that under no coercion to support Hypothesis 1. Based on the model selection discussion above, I focus on the “Direct Only” model results in the 3rd column. The first row shows the probability that the expected U.S. petroleum+mining FDI stocks given multilateral U.S. sanctions is less than that under no economic coercion. Following that probability is the 95% PI for the estimated difference of the former minus the latter. There is a 0.60 probability that this first condition is true.

²⁴The algorithms that allow estimation of the Bayesian models return numeric approximations of the posterior distributions of all parameters. Evaluating the model returns a matrix where the variables are columns and the rows represent a random draw from the posterior distribution. Each column, then, represents an approximation of a variable’s posterior distribution. By summing across the appropriate columns, one can easily ascertain the posterior distribution for some specified combination of variables. For example, to get the posterior distribution of U.S. RSCI FDI for an average democratic state threatened with a U.S. unilateral sanction, one would add the columns row-by-row for the intercept, democracy, and U.S. unilateral sanction. To get the difference between that state an otherwise similar autocracy, one simply repeats the process for the autocratic state and then row-wise subtracts the latter (autocratic) posterior from the former (democratic). This yields one column – an approximation of the posterior distribution of the difference in RSCI for a democracy over an autocracy when threatened by the U.S. with a unilateral sanction.

Posterior Densities for U.S. Economic Coercion,
Petroleum and Mining FDI, Direct Effects Only Model



Posterior Densities for U.S. Economic Coercion,
Total Manufacturing FDI, Direct Effects Only Model

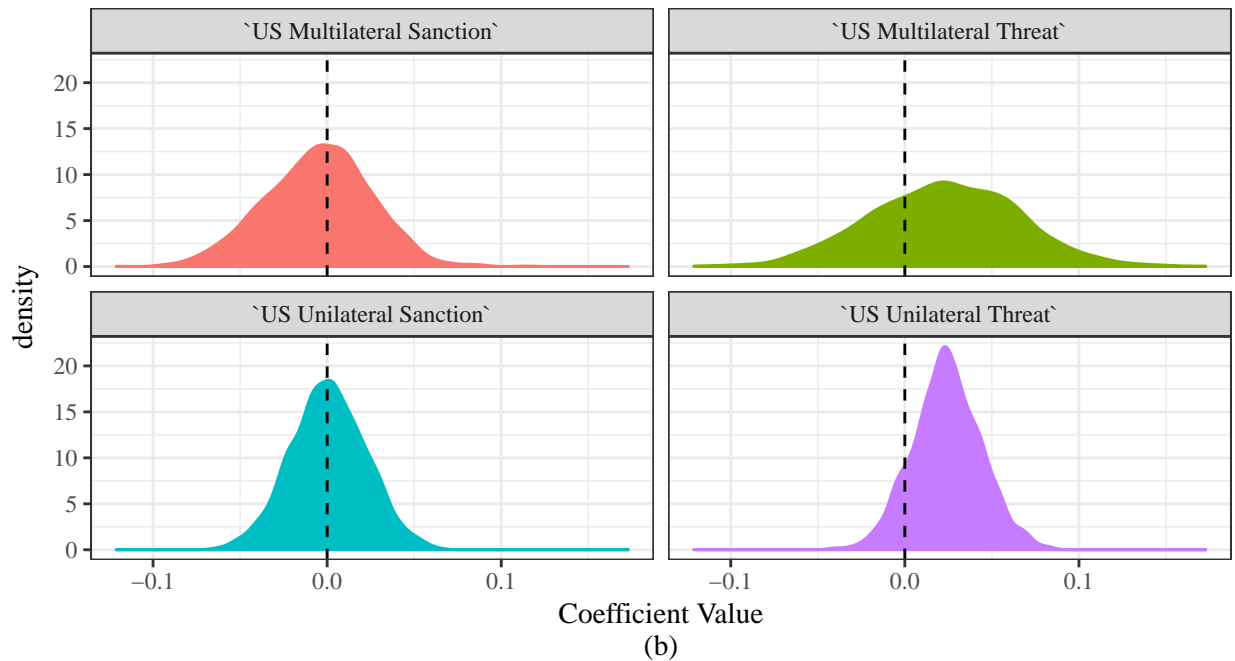


Figure 5.3: Posterior distributions for U.S. economic coercion coefficients (RSCI FDI). The dashed vertical line indicates zero. The only U.S. economic coercion that is strongly correlated with decreased petroleum and mining FDI is a U.S. multilateral threat.

There is a 0.66 probability that U.S. petroleum and mining FDI stocks are lower under U.S. multilateral sanctions than under U.S. unilateral sanctions. With 100% probability, expected U.S. petroleum and mining FDI is lower under U.S. multilateral threats than under no or limited threats. The final two rows show that there is little evidence that U.S. petroleum and mining FDI stocks under U.S. unilateral sanctions are less than they would be unsanctioned. In fact, there is a 0.63 probability that U.S. unilateral threats and sanctions are correlated with increased U.S. petroleum+mining FDI.

Despite those results, the “Direct Only” model examining total manufacturing FDI shown in Table 5.8 offers little to no support for Hypothesis 1. Most values are near 50 percent, and the 95%PIs hover squarely over zero. These differences may arise from variation in capital intensity within the manufacturing sector, though it is noteworthy that no economic coercion, U.S. or otherwise, is correlated with reduced total manufacturing FDI with more than 56 percent probability. This may reflect differences in the FDI that selected these sanctioned states, but the state-level random coefficients should have accounted for at least some of those effects.

Table 5.7: Probabilities that the propositions necessary to meet Hypothesis 1 for **petroleum + mining FDI** are true. The probability the hypothesis is true is followed by the 95 percent PI for difference between the two coefficients specified for each row. Based on LOOIC, the 'Direct Only' model is the primary model from which I infer. There is strong support (100 percent probability) that expected FDI levels for targets under U.S. multilateral coercion are lower than unsanctioned targets or those under unilateral coercion, but only at the threat stage. There is weak support (66 percent probability) for the same situation at the sanction stage.

Hypothesis	Coercion Only	Direct Only	Indirect Effects
Pr(FDI US Mult S < FDI None)	0.67: [-0.14, 0.09]	0.60: [-0.15, 0.11]	0.52: [-5.55, 5.37]
Pr(FDI US Mult S < FDI US Uni S)	0.82: [-0.22, 0.08]	0.66: [-0.21, 0.12]	0.63: [-6.47, 4.62]
Pr(FDI US Mult T < FDI None)	0.98: [-0.39, -0.02]	1.00: [-0.55, -0.13]	0.04: [-0.57, 10.51]
Pr(FDI US Mult T < FDI US Uni T)	0.98: [-0.42, -0.01]	1.00: [-0.58, -0.13]	0.05: [-0.90, 10.75]
Pr(FDI US Uni S < FDI None)	0.15: [-0.05, 0.13]	0.37: [-0.08, 0.11]	0.17: [-0.92, 2.63]
Pr(FDI US Uni T < FDI None)	0.39: [-0.07, 0.10]	0.37: [-0.07, 0.10]	0.48: [-1.62, 1.81]

Table 5.8: Probabilities that the propositions necessary to meet Hypothesis 1 for **total manufacturing FDI** are true. The probability the hypothesis is true is followed by the 95 percent PI for the difference between the two coefficients specified for each row. Based on LOOIC, the 'Direct Only' model is the primary model from which I infer. There is much weaker support for Hypothesis 1 at the threat stage.

Hypothesis	Coercion Only	Direct Only	Indirect Effects
$\Pr(\text{FDI} \mid \text{US Mult S} < \text{FDI} \mid \text{None})$	0.70: [-0.05, 0.03]	0.56: [-0.07, 0.05]	0.19: [-1.35, 3.90]
$\Pr(\text{FDI} \mid \text{US Mult S} < \text{FDI} \mid \text{US Uni S})$	0.76: [-0.08, 0.04]	0.56: [-0.08, 0.06]	0.12: [-1.07, 4.37]
$\Pr(\text{FDI} \mid \text{US Mult T} < \text{FDI} \mid \text{None})$	0.06: [-0.02, 0.13]	0.30: [-0.06, 0.11]	0.62: [-2.67, 1.95]
$\Pr(\text{FDI} \mid \text{US Mult T} < \text{FDI} \mid \text{US Uni T})$	0.27: [-0.06, 0.11]	0.51: [-0.09, 0.09]	0.84: [-3.69, 1.27]
$\Pr(\text{FDI} \mid \text{US Uni S} < \text{FDI} \mid \text{None})$	0.31: [-0.03, 0.04]	0.49: [-0.04, 0.04]	0.85: [-1.21, 0.38]
$\Pr(\text{FDI} \mid \text{US Uni T} < \text{FDI} \mid \text{None})$	0.05: [0.00, 0.07]	0.11: [-0.01, 0.06]	0.01: [0.14, 1.64]

5.5.2 Hypotheses 2 and 3: Indirect Effects on U.S. RSCI and MSnCI FDI

Hypotheses 2 and 3 make predictions about the signs and net effects of the coercion-economic interaction coefficients. If these coefficients are negative, then the correlations are consistent with the proposition that the presence of economic coercion alters the relationship that the economic U.S. FDI determinants have to MNEs. However, there is an additional burden for the interactions: if the model without interactions fits the data better than a model with interactions, then it is probable that the interaction effects are negligible.

Weighing against Hypothesis 2, both the “Direct Only” RSCI FDI models are superior to their respective “Indirect Effects” models. This strongly suggests that indirect effects are negligible, though LOOIC and elpd are prediction-based criteria. Ignoring for the moment the evidence provided by the model selection criteria, what does the data say about these indirect effects? Tables 5.9 and 5.10 present the 95% PIs for the interaction coefficients for the petroleum+mining and manufacturing models respectively. These PIs are grouped by coercion term along the rows and economic term along the columns. As seen in Table 5.9, nearly every interaction term contains a 95% PI covering zero. Table 5.10 displays more variation, but with no consistent patterns. Figure 5.4 graphically displays the data in Tables 5.9 and 5.10. The varied effects are clearly evident, but the net effect is unclear: when all the effects are taken into account, have sanctions negatively affected the criteria MNEs use to invest? We will return to this momentarily.

Table 5.9: The indirect effects of economic coercion on U.S. outward petroleum and mining FDI stocks. The 95 percent probability intervals (PIs) above describe the standardized coefficients for the interaction terms between each coercion type and basic economic variables.

	Lagged DV	GDP Growth	log(Distance)	log(GDP), (Z)	log(GDPpc), (Z)	log(GDPpc), sq. (Z)
Non-US Multilateral Sanction	[-0.32, 0.03]	[-0.06, 0.02]	[0.10, 0.72]	[-0.45, 0.01]	[0.15, 0.94]	[-0.57, 0.28]
Non-US Multilateral Threat	[-0.09, 0.34]	[-0.04, 0.01]	[-0.52, 0.31]	[-0.28, 0.21]	[-0.53, 0.13]	[-0.37, 0.43]
Non-US Unilateral Sanction	[-0.18, 0.23]	[-0.02, 0.03]	[-0.64, 0.34]	[0.00, 0.54]	[-0.67, -0.17]	[-0.32, 0.02]
Non-US Unilateral Threat	[-0.46, 0.42]	[-0.02, 0.06]	[-0.70, 0.73]	[-0.51, 0.50]	[-0.26, 0.72]	[-0.95, 0.84]
US Multilateral Sanction	[-0.20, 0.14]	[-0.03, 0.02]	[-0.58, 0.60]	[-0.27, 0.18]	[-0.25, 0.19]	[-0.12, 0.21]
US Multilateral Threat	[-0.51, 0.52]	[-0.01, 0.07]	[-1.23, 0.03]	[-0.61, 0.23]	[-0.10, 0.54]	[-0.12, 0.40]
US Unilateral Sanction	[-0.08, 0.14]	[-0.02, 0.02]	[-0.30, 0.11]	[-0.12, 0.14]	[-0.33, 0.02]	[-0.07, 0.21]
US Unilateral Threat	[-0.06, 0.16]	[-0.02, 0.02]	[-0.20, 0.19]	[-0.24, 0.00]	[-0.08, 0.18]	[-0.15, 0.08]

Table 5.10: The indirect effects of economic coercion on U.S. outward total manufacturing FDI stocks. The 95 percent PIs above describe the standardized coefficients for the interaction terms between each coercion type and basic economic variables.

	Lagged DV	GDP Growth	log(Distance)	log(GDP), (Z)	log(GDPpc), (Z)	log(GDPpc ²),(Z)
Non-US Multilateral Sanction	[-0.46, -0.19]	[0.00, 0.02]	[-0.09, 0.14]	[0.05, 0.29]	[0.06, 0.31]	[-0.14, 0.03]
Non-US Multilateral Threat	[-0.30, -0.03]	[-0.01, 0.01]	[-0.20, 0.11]	[-0.01, 0.26]	[-0.13, 0.14]	[-0.07, 0.13]
Non-US Unilateral Sanction	[-0.10, 0.20]	[-0.01, 0.02]	[-0.19, 0.21]	[-0.23, 0.12]	[-0.09, 0.11]	[-0.08, 0.06]
Non-US Unilateral Threat	[-0.21, 0.12]	[-0.02, 0.01]	[-0.17, 0.38]	[-0.16, 0.18]	[-0.08, 0.23]	[-0.18, 0.09]
US Multilateral Sanction	[0.03, 0.20]	[-0.01, 0.01]	[-0.42, 0.15]	[-0.20, 0.00]	[-0.10, 0.06]	[-0.07, 0.08]
US Multilateral Threat	[-0.11, 0.15]	[-0.03, 0.03]	[-0.21, 0.30]	[-0.14, 0.18]	[-0.12, 0.10]	[-0.12, 0.05]
US Unilateral Sanction	[0.01, 0.17]	[-0.01, 0.01]	[-0.04, 0.14]	[-0.18, -0.02]	[-0.04, 0.10]	[-0.07, 0.04]
US Unilateral Threat	[-0.28, -0.15]	[-0.01, 0.01]	[-0.18, -0.01]	[0.10, 0.23]	[0.01, 0.12]	[-0.12, -0.02]

	Lagged DV	GDP Growth	log(Distance)	log(GDP), (Z)	log(GDPpc), (Z)	log(GDPpc ²),(Z)
Non-US Multilateral Sanction	[-0.41, -0.04]	[-0.02, 0.03]	[-0.29, 0.12]	[-0.06, 0.29]	[-0.19, 0.22]	[-0.20, 0.11]
Non-US Multilateral Threat	[-0.10, 0.32]	[-0.01, 0.04]	[-0.15, 0.44]	[-0.27, 0.16]	[-0.05, 0.44]	[-0.27, 0.09]
Non-US Unilateral Sanction	[-0.31, 0.00]	[0.00, 0.04]	[-0.08, 0.60]	[-0.06, 0.37]	[-0.03, 0.29]	[-0.01, 0.23]
Non-US Unilateral Threat	[-0.57, -0.10]	[-0.05, 0.02]	[-0.55, 0.50]	[0.05, 0.56]	[-0.36, 0.22]	[-0.28, 0.32]
US Multilateral Sanction	[-0.30, -0.06]	[-0.02, 0.02]	[0.24, 1.08]	[-0.08, 0.23]	[-0.11, 0.17]	[-0.02, 0.17]
US Multilateral Threat	[-0.31, 0.11]	[-0.06, 0.05]	[-0.97, 0.00]	[-0.12, 0.42]	[-0.20, 0.16]	[-0.11, 0.20]
US Unilateral Sanction	[0.01, 0.18]	[-0.02, 0.01]	[-0.16, 0.12]	[-0.14, 0.08]	[-0.13, 0.10]	[-0.04, 0.16]
US Unilateral Threat	[0.00, 0.20]	[-0.02, 0.01]	[-0.19, 0.15]	[-0.16, 0.03]	[-0.11, 0.08]	[-0.06, 0.12]

Table 5.11: The indirect effects of economic coercion on U.S. outward wholesale trade FDI stocks. The 95 percent PIs above describe the standardized coefficients for the interaction terms between each coercion type and basic economic variables.

Table 5.12: The indirect effects of economic coercion on U.S. outward wholesale trade FDI stocks. The 95 percent PIs describe the standardized coefficients for the interaction terms between each coercion type and basic economic variables.

	Lagged DV	GDP Growth	log(Distance)	log(GDP), (Z)	log(GDPpc), (Z)	log(GDPpc ²),(Z)
Econ. Issue, US Sanction	[-0.16, 0.21]	[-0.02, 0.02]	[-0.17, 0.18]	[-0.22, 0.06]	[-0.25, 0.13]	[-0.10, 0.21]
Econ. Issue, US Threat	[-0.18, 0.26]	[-0.02, 0.02]	[-0.21, 0.27]	[-0.21, 0.07]	[-0.19, 0.09]	[-0.13, 0.13]
Hum. Rts. Issue, US Sanction	[-0.16, 0.35]	[-0.02, 0.03]	[-0.29, 0.20]	[-0.28, 0.27]	[-0.27, 0.15]	[-0.07, 0.19]
Hum. Rts. Issue, US Threat	[-1.62, 1.73]	[-0.06, 0.07]	[-0.70, 0.87]	[-0.97, 0.62]	[-1.20, 1.09]	[-1.21, 0.75]
Other Issue, US Sanction	[-0.05, 0.13]	[-0.01, 0.02]	[-0.21, 0.10]	[-0.19, 0.04]	[-0.13, 0.10]	[-0.03, 0.15]
Other Issue, US Threat	[-0.11, 0.13]	[-0.02, 0.01]	[-0.15, 0.22]	[-0.14, 0.09]	[-0.11, 0.09]	[-0.14, 0.03]
Sec. Issue, US Sanction	[-0.03, 0.20]	[-0.02, 0.01]	[-0.51, 0.27]	[-0.19, 0.05]	[-0.10, 0.17]	[-0.15, 0.09]
Sec. Issue, US Threat	[-0.27, 0.26]	[-0.02, 0.03]	[-0.29, 0.33]	[-0.14, 0.34]	[-0.15, 0.18]	[-0.19, 0.07]

Table 5.11 displays the 95% PIs for the interaction effects linking economic coercion to U.S. outward wholesale trade FDI stocks. There are no consistently negative interaction effects across the rows. There is little obvious support for Hypothesis 3. But the question raised above remains. There may still be evidence of *net* positive or negative interaction effects.

I perform direct tests of Hypotheses 2 and 3 similar to that of Hypothesis 1 above. For each economic coercion variable, I calculated the probability that the sum of the interaction coefficients between that coercion variable and the economic variables was less than zero. Table 5.13 displays these quantities. The results are clearer: for petroleum and mining FDI, non-U.S. unilateral sanctions, U.S. multilateral threats, and U.S. unilateral sanctions have net indirect effects with greater than 85 percent chances of being less than zero. For total manufacturing FDI, only U.S. unilateral threats have such a status. For wholesale trade, non-U.S. multilateral sanctions and U.S. multilateral threats create negative indirect effects with greater than 85 percent probability. On the other hand, for wholesale trade FDI, a number of coercion variables have strongly positive indirect effects: non-U.S. unilateral sanctions and multilateral threats appear to make targets more attractive for that investment.

Table 5.13: Probabilities that the sum of all coercion indirect effects are negative when economic variables are set to a value of one standard deviation above the mean. Each type of economic coercion is interacted with the standard gravity variables: the lagged DV, economic growth, target economic size, target per capita GDP, and distance.

Pr(All Interactions < 0)	Petroleum+Mining	Total Manufacturing	Wholesale Trade
Non-US Mult. Sanc.	0.03: [-0.02, 0.86]	0.43: [-0.13, 0.15]	0.96: [-0.49, 0.02]
Non-US Mult. Thrt.	0.78: [-0.70, 0.34]	0.68: [-0.23, 0.14]	0.04: [-0.04, 0.64]
Non-US Uni. Sanc.	0.91: [-1.03, 0.20]	0.48: [-0.25, 0.28]	0.01: [0.06, 0.97]
Non-US Uni. Thrt.	0.35: [-0.84, 1.22]	0.31: [-0.26, 0.43]	0.62: [-0.77, 0.55]
US Mult. Sanc.	0.58: [-0.72, 0.63]	0.79: [-0.44, 0.16]	0.00: [0.23, 1.10]
US Mult. Thrt.	0.91: [-1.06, 0.18]	0.38: [-0.22, 0.28]	0.96: [-0.89, 0.05]
US Uni. Sanc.	0.86: [-0.43, 0.13]	0.15: [-0.06, 0.16]	0.16: [-0.10, 0.28]
US Uni. Thrt.	0.66: [-0.33, 0.20]	0.99: [-0.26, -0.03]	0.41: [-0.19, 0.24]

In sum, the “Indirect Effects” models provide mixed evidence for indirect effects but also provide less explanatory power, based on model-comparison criteria. Hypothesis 2, which

Indirect Effects of U.S. Economic Coercion on U.S. Outward RSCI FDI Stocks

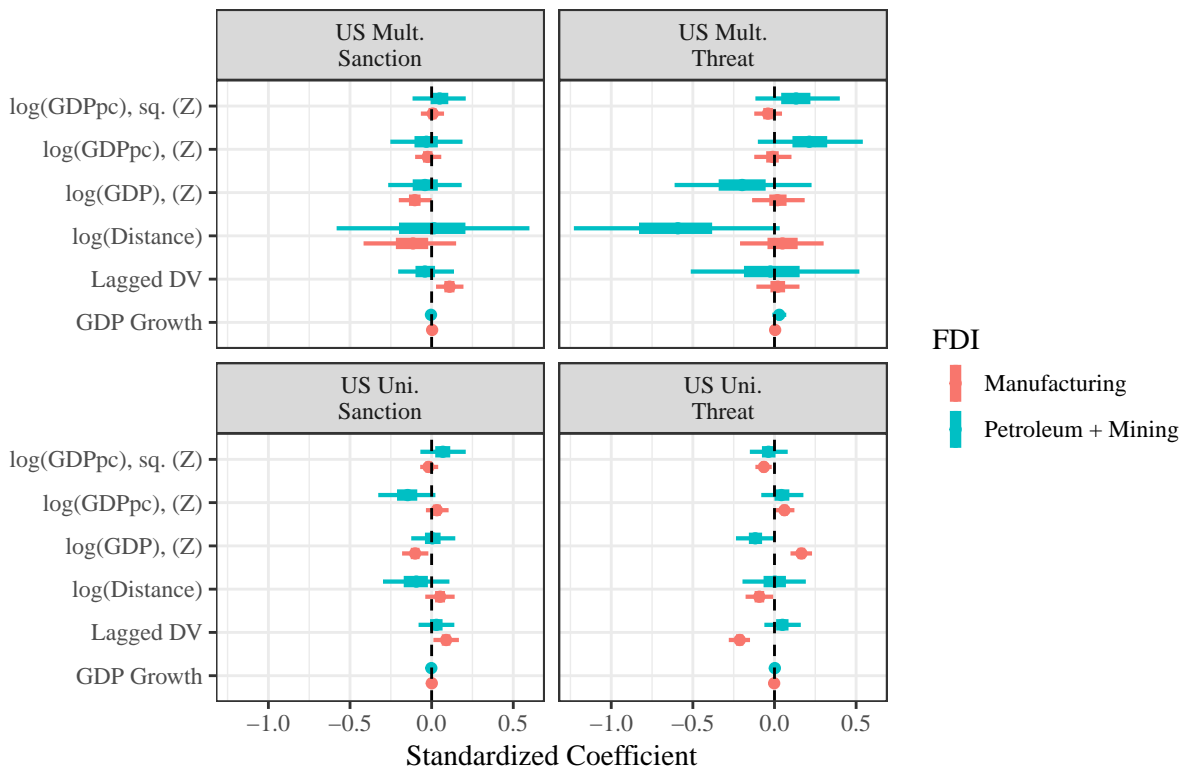


Figure 5.4: The indirect effects effects of U.S. economic coercion on U.S. outward RSCI FDI stocks. Each panel shows a different economic indicator and its interaction with the indicators of economic coercion.

holds that RSCI FDI should be nearly immune to sanctions, receives support because the “Direct Effects” model better explains the data than the “Indirect Effects” model, suggesting the indirect effects offer little predictive power and are equivalent to zero. Hypothesis 3 receives little support, although further research should examine non-U.S. multilateral sanctions and U.S. multilateral threats. Further research should also examine the power of U.S. multilateral threats in deterring U.S. investment, and the conditions under which non-U.S. sanctions can deter U.S. firms.

5.5.3 Hypotheses 4 and 5: Reputation Costs

Finally, Hypotheses 4 and 5 make claims about how reputation costs can affect U.S. FDI. Table 5.14 summarizes the posterior distributions for the coefficients associated with threats and imposed sanctions imposed because of (1) human rights issues, (2) economic issues, (3) security issues, and (4) all other issues. Most 95% PI contain zero. This suggests that the issue generating sanctions may not be a useful analytical cleavage to examine economic coercion effects on MNE behavior.

Table 5.14: Direct effects of different sanction issues on all U.S. outward FDI stocks. Values provided are the median values from the posterior distributions, followed by the 95 percent PIs.

Coercion	Coercion Only	Direct Only	Indirect Effects
Econ. Issue, US Sanction	0.11, [0.02, 0.19]	0.01, [-0.10, 0.12]	0.10, [-1.49, 1.65]
Econ. Issue, US Threat	0.11, [0.00, 0.21]	0.08, [-0.03, 0.20]	-0.14, [-2.47, 1.99]
Hum. Rts. Issue, US Sanction	-0.01, [-0.10, 0.08]	0.22, [0.06, 0.38]	0.32, [-1.75, 2.36]
Hum. Rts. Issue, US Threat	0.03, [-0.18, 0.24]	0.03, [-0.18, 0.26]	-0.50, [-7.11, 6.10]
Other Issue, US Sanction	-0.01, [-0.08, 0.06]	0.00, [-0.09, 0.09]	0.47, [-0.91, 1.85]
Other Issue, US Threat	0.02, [-0.05, 0.09]	-0.01, [-0.08, 0.07]	-0.20, [-1.82, 1.40]
Sec. Issue, US Sanction	-0.03, [-0.10, 0.04]	-0.04, [-0.14, 0.05]	1.14, [-2.44, 4.69]
Sec. Issue, US Threat	-0.02, [-0.12, 0.08]	-0.01, [-0.13, 0.11]	-0.27, [-3.12, 2.55]

However, Hypothesis 4 specifically examines the difference between the reputation costs of human rights coercion and those of coercion that arose from economic issues; Hypothesis

5 does so for security-issue coercion and economic-issue coercion. We can examine the differences between each issue area coefficient: what is the probability that the differences between threats and sanctions of different issues areas is less than zero? Very high or very low probabilities provide support for meaningful disparities. Tables 5.15 and 5.16 display the differences between threat and sanction coefficients, respectively. Each table entry displays the probability that the row coefficient minus the column coefficient is less than zero. While the primary focus is on the difference between economic coercion motivated by human rights issues and that motivated by economic issues, the other differences are also interesting. When controlling for other factors, there is a 98 percent probability that U.S. sanctions based on economic issues dissuade MNEs more than human rights sanctions. The difference at the threat level is weak, since there is only a 63% probability that human rights reputation costs are higher than economics-based reputation costs during the threat stage. At the sanction stage, the hypothesis appears false and the model provides evidence that the reputation cost relationship is reversed. As was shown in Chapter 4, until 1986 U.S. economic coercion of Libya avoided direct prohibiting U.S. MNEs from working in Libya. Perhaps economic issues breach the taboo that business is off-limits. Perhaps human rights issues are considered orthogonal to FDI, and therefore FDI does not decrease – although Meyer and Thein (2014) provide complicating evidence in this regard.

As a final check on the indirect model, Table 5.12 presents the 95% PIs for the indirect effects of the interaction between sanction issues and economic variables. Every 95% PI contains zero. Furthermore, the intervals are relatively tight compared to the priors (Normal(0, 2.5²) distributions), which suggests relative confidence. There is little evidence that any substantial indirect effects exist.

In sum, Hypothesis 4 receives little support and Hypothesis 5 receives limited support, mostly once sanctions are imposed. Not only does U.S. economic coercion appear to have no effect on altering MNE behavior along an issue-based cleavage, but there is mixed evidence that there

Table 5.15: Probabilities that the differences between threat coercion issue coefficients in the 'Direct Effects' model are below zero. Each entry refers to the posterior distribution of the difference between the row coefficient minus the column coefficient.

Pr(Row - Column < 0)	Economics (T)	Other (T)	Rights (T)	Security (T)
Economics (T)		0.11	0.37	0.19
Other (T)	0.89		0.62	0.49
Rights (T)	0.63	0.38		0.39
Security (T)	0.81	0.51	0.61	

Table 5.16: Probabilities that the differences between sanction coercion issue coefficients in the 'Direct Effects' model are below zero. Each entry refers to the posterior distribution of the difference between the row coefficient minus the column coefficient.

Pr(Row - Column < 0)	Economics (S)	Other (S)	Rights (S)	Security (S)
Economics (S)		0.46	0.98	0.25
Other (S)	0.54		0.99	0.25
Rights (S)	0.02	0.01		0.01
Security (S)	0.75	0.75	0.99	

are differences between issues. This is puzzling, given that previous research has argued that human rights regimes are positively correlated with FDI (Blanton and Blanton 2007). While an attempt was made to account for security and political factors in these models, selection effects may still be present. For example, the human rights abuses that might precede a civil war could deter coercion-sensitive investment before the sanctions arise. Yet this answer is unsatisfactory, since any state-specific effect would be at least partially controlled by the random intercepts in the model. Scholars are beginning to examine how MNEs affect host state political processes (Jensen et al. 2012), and future research would need to incorporate these factors to examine possible industry-specific sensitivities to reputation costs.

5.6 Conclusion

The evidence for the four hypotheses is mixed, even weak. On the one hand, there is evidence that U.S. multilateral threats decrease FDI for U.S. petroleum and mining MNEs (Hypothesis

1). Yet those results do not hold for U.S. manufacturing firms, which I have argued is also an RSCI industry. This inconsistency may be explained by greater heterogeneity within U.S. manufacturing than within the petroleum/mining sectors, and therefore less uniform capital intensity (to the extent that this informs time-horizons and investing decisions). The BEA further disaggregates manufacturing, and exploration within that category may prove worthwhile. While there is some evidence for net negative indirect effects for RSCI FDI (Hypothesis 2), the models with indirect effects have less predictive power than models where all the indirect effects are implicitly equal to zero. That is to say, were one to predict the effects of economic coercion, one would do better were one to assume no indirect effects. While negative indirect effects may exist for wholesale trade – under non-U.S. multilateral sanctions and U.S. multilateral threats – so do positive indirect effects, and under both U.S. and non-U.S. coercion. These results clearly bear further research.

The evidence for reputation costs is stronger, albeit in the opposite direction from that hypothesized for Hypothesis 4. Human rights sanctions are weaker than all other sanctions driven by other types of economic coercion. It may be that human rights-driven coercion may be insufficient to breach the business-politics separation approach that governments can take on foreign investment. It appears that MNEs face the pressures of “high”-politics coercion more so than “low”-politics coercion. A deeper look at the differences between coercion issue areas is warranted.

All the conclusions should be tempered by appreciation of potential methodological issues. While unilaterality and multilaterality are one analytical cut to measure severity, others exist. There may be data missingness issues: if BEA data is not missing at random, the results may be biased. Furthermore, while care was taken to account for unit heterogeneity (e.g. random effects), MNEs may still invest based on preexisting sanction risk and therefore inoculate themselves from coercion’s potential negative effects.

This chapter has perhaps raised more questions than it answered. The results confirm the

premise – economic coercion affects FDI sectors differently. Yet while petroleum+mining RSCI FDI fits the hypotheses, manufacturing does not. Meanwhile, the broad reputation costs that might be incurred by staying in a target faced with human rights-driven economic coercion appear to be relatively ignorable, famous cases like the South Africa apartheid sanctions notwithstanding. Furthermore, differences between stages of economic coercion are relatively undertheorized, and this chapter provides evidence that MNEs likely view these stages differently.²⁵ Those dynamics are worth exploring.

Yet while U.S. FDI in an industry may not decrease, a state's share of World FDI may. The next chapter takes a broader view: do economic sanctions reliably dissuade MNEs from investing in a target state relative to other states? It examines whether economic sanctions create *underinvestment* in sanctioned states.

²⁵My results accord with those of Biglaiser and Lektzian (2011), though they do not explicitly address or test sanction threats.

Chapter 6

Underinvestment: The Real Cost of Economic Sanctions on FDI

6.1 Introduction

One question guaranteed to divide international relations (IR) scholars and practitioners is “Do sanctions work?” Scholars have debated whether sanction successes comprise one-third of all impositions (Hufbauer, Schott, and Elliott 1990), merely one-twentieth (Pape 1997), or a higher share that must be judged by the options available to sanctioning policymaker (Baldwin 1985; Baldwin 2000). This debate was the loam for a growing body of work addressing the effects and consequences of economic coercion. One fruitful branch examines how international economic sanctions affect multinational enterprises (MNEs) and foreign direct investment (FDI). The evidence suggests economic sanctions – at least those imposed by the United States – are ineffective at coercing either U.S. or non-U.S. MNEs. Disinvestment is minimal and temporary, and soon replaced, either by domestic firms (Biglaiser and Lektzian 2011), by foreign firms (Lektzian and Biglaiser 2013), or through skillful maneuver-

ing of sender “sanction-busters” (Barry and Kleinberg 2015). The results from the previous chapter suggest intra-industry variation, but few forms of coercion led to disinvestment. As Lektzian and Biglaiser (2013) write, these results “should cause concern to U.S. policymakers about how effective the use of U.S. economic sanctions for achieving foreign policy goals.”

This chapter revisits the debates on economic coercion’s efficacy and consequences with a modest goal. I introduce a concept and indicator, *underinvestment*, that helps clarify what sanctions do and presents a necessary hurdle that economic coercion must clear to be considered effective. Economic coercion creates underinvestment when the threat or imposition of economic sanctions lowers the target state’s competitiveness as a destination for FDI. Underinvestment therefore captures key costs beyond lost investment: it captures the state’s future losses and its loss relative to all other states. International competition and relative gains are fundamentals of IR. While relative gains and competition may structurally restrain policymakers (Waltz 1979), relative status may also be conscious goals for policymakers. Underinvestment therefore broadens the conception of sanction effectiveness by analyzing coercion within the framework of international competition. If relative gains are a fundamental pursuit of policymakers, then economic coercion must reduce a target’s relative standing to be considered effective.

In Section 2, I elaborate on the concept of underinvestment and return to the hypotheses developed in Chapter 3. I also provide evidence that states value relative FDI competitiveness. In Section 3, I test these hypotheses using linear hierarchical models, and discuss the results. In Section 4, I conclude with thoughts for further research.

6.2 Economic Coercion and Underinvestment

Underinvestment should complement and supplement – but not replace – previous concepts and indicators of FDI behavior and sanction efficacy.¹ Underinvestment results when (1) current investors leave a target state and/or (2) investors who otherwise would have invested are dissuaded from investing or defer their investment. The first is captured by measures of disinvestment, but the second is not. Underinvestment is evident when a state does not receive its “fair share” of World FDI flows and is therefore useful both as a consequence of economic coercion and as a goal pursued by relevant policymakers. While underinvestment was introduced and defined in Chapter 3, I elucidate the concept here.

6.2.1 Defining Underinvestment

When economic coercion occurs, the intent is not only to coerce and convince existing commercial relationships to end, but also to prevent and dissuade future economic intercourse. When we speak about about the causal effect of economic coercion, we make an implicit counter-factual comparison to a world where economic sanctions were not imposed but the same events preceding economic coercion did occur. Previous studies have not addressed the whole of this comparison. They examined disinvestment, but disinvestment by definition and measurement only includes the removal of existing investments and the cancellation of observed pending investments. However, beyond aborted investment, economic sanctions also may deter and dissuade both sender and third-party MNEs from investing in the target state. These latter activities may not be directly observable and may change over time. Furthermore, planned investment may be redirected or relocated rather than abandoned; for example, a garment factory planned for Myanmar may be constructed instead in Vietnam or Bangladesh to the latter’s benefit. Net FDI inflows into a particular country can capture

¹For the purposes of this paper, all uses of the word underinvestment refer to that caused by economic coercion.

some of these opportunity costs in terms of decreasing inflows, but it misses this redirection of investment and potential benefits elsewhere.

As a concept, underinvestment refers to the total counterfactual effect of economic coercion. It captures the missed investment opportunities and development that would have accrued to a sanctioned state and to its decreased competitiveness as an economic destination compared to its peers. This will be most evident in the country's *share of World FDI*, which captures its relative attractiveness to global investors. Net World FDI inflows measures all (net) investment decisions by all investors in a given year. If the state experiences underinvestment due to economic sanctions, then its position relative to all other destinations will decrease and this quantity will shrink. If the state becomes a relatively better destination for investment, this quantity will rise, even though its level of FDI could decrease. I define underinvestment as the difference in a state's share of World FDI in a given year under economic coercion compared to its share of World FDI were it not under coercion, or:

$$\text{Underinvestment} = E\left[\frac{FDI_{i,t}}{FDI_{World,t}} \mid \text{Coercion}\right] - E\left[\frac{FDI_{i,t}}{FDI_{World,t}} \mid \text{No Coercion}\right]$$

This operationalization complements and supplements other FDI indicators. Net FDI inflows either in absolute terms, as a percentage of a state's economy, or per capita all address different aspects of a complex phenomena. Net FDI inflows as a percentage of a host economy opens two pathways through which economic sanctions can have an effect: the numerator and the denominator (Li 2009; Li and Resnick 2003). Underinvestment removes the GDP pathway, and the denominator for underinvestment – World FDI – is exogenous to any one particular flow. Furthermore, underinvestment implicitly controls for the increase in the global FDI supply. In time-series analyses using net FDI inflows, it would be necessary to control for net world inflows (Li and Resnick 2003) or for secular temporal trends, as in the

previous chapter.

6.2.2 Relative Competitiveness Matters

IR scholars have long acknowledged that relative competitiveness in money and might are very important to states and to understanding international dynamics. While IR scholars may dispute the form of the relationship between international commerce and power, they do not dispute that one exists. Trade may have net welfare benefits for both states, but interdependence quickly leads to questions of sensitivity and vulnerability (Keohane and Nye 1977; Keohane 1984; Rosecrance and Thompson 2003). Rationalist models like neorealism and neoliberalism debated whether states focused on relative or absolute gains (J. M. Grieco 1988b; J. M. Grieco 1988a; Grieco, Powell, and Snidal 1993; Powell 1991; Snidal 1991).

Previous eras' policymakers were concerned with relative economic status, albeit often one based primarily on domestic industries. Within recent history, Mercantilism prioritized state interests, broadly conceived, over absolute economic gains (Gilpin 1975). Whether expressly conceived in power or welfare, mercantilist thinkers emphasized relative standing among states. Alexander Hamilton famously sought to protect America's domestic manufactures and grow its share of world exports. Friedrich List (1909) advocated similarly. Similarities to this approach could be seen in the import-substitution industrialization (ISI) policies pursued by developing states after World War II (Maxfield and Nolt 1990; Haggard and Maxfield 1996). But inward foreign investment was not emphasized, and competition over investment is a relatively new phenomena.

In the modern era, states compete for foreign investment as well as for shares of world markets. The contrast of export-led industrialization (ELI) policies with ISI policies is illustrative. ELI states still measured their success by shares of world markets but also courted foreign investment. International business and civil society metrics reveal the widespread

acceptance of the premises that states should court FDI: The World Economic Forum issues a Global Competitiveness Report, and consulting firm ATKearney releases a Foreign Direct Investment Confidence Index. Clearly, practicing policymakers and businesses value a state's relative investment position. India's Prime Minister Modi recently justified India's economic success and future prospects by citing India's share of global FDI ("My Dream Is of A Transformed India, Modi Says at IMF Meet" 2016). Now, policymakers and pundits justify policies based on their effect on investment competitiveness. Arguments against "Brexit" often involved investment competitiveness; according to one British executive:

I don't think we would see a huge movement of jobs immediately, but what would worry me greatly is that foreign direct investment doesn't arrive (Cancian 2016).²

6.2.3 Underinvestment and Economic Coercion

While the sanctions literature has not overlooked relative relationships, it has most often focused on asymmetric bilateral trade relationships that – were that trade to cease – would create political costs for one state's ruling regime. These relationships are expressed in terms of national economies. Do the sanction sender's exports comprise a large share of the target's imports? As this share grows, we expect the target to more readily accede to the sender's demands. Do the target's imports comprise a large share of the sender's exports? Then the sender is less likely to initiate economic coercion. Similar logics are present for FDI (Lektzian and Biglaiser 2014). These dynamics treat asymmetries as structural incentives – and they are. But they may be goals for states seeking to exert economic power and, conversely, situations to avoid for states fearing economic coercion (Hirschman 1980).

Drezner (Drezner 1999) provides an excellent example of how relative status between two

²*The Economist* (*The Economist* 2016) provides a distilled example of a discussion of Brexit and the U.K.'s ability to attract FDI.

states affects both sender and target behavior. Senders may impose sanctions when they do not expect the target to change its policy; rather, when two states expect future conflicts, they each emphasize relative gains in their utility functions and a standoff becomes more likely. Yet these relationships capture part of the picture because these relationships are all bilateral. Underinvestment would indicate that a target is less competitive not just compared to the sender but also to any regional rivals. Such calculations would also affect the sender. Drezner's model is concise and effective, and he necessarily ignores third-party dynamics. But his logic can be extended to support this argument. For example, the U.S. sanctions on Iran affect Iran's regional rivalries with Israel and Saudi Arabia, and Iran's weakness relative to those third parties was surely part of both the American and Iranian utility functions.

In sum, underinvestment advances the study of economic coercion and FDI in five ways. First, underinvestment captures a concern to policymakers: a target's relative standing in the world and to its peers. Second, underinvestment is integral to evaluating arguments about economic coercion effectiveness. Bluntly: if economic coercion has no discernible effect on a state's relative attractiveness as an investment destination, then economic coercion is ineffective at coercing MNEs and therefore less effective at coercing states. Third, underinvestment implicitly addresses the redirection of investment from the target to other states. Fourth, it controls for changes in the supply of global FDI. While U.S. outflows have historically accounted for the largest share of World FDI, it is increasingly unlikely that any one state can significantly alter this value. As such, global FDI supply can be treated as orthogonal to other variables and covariates. Lastly, while existing work has shown that sender and third-party MNEs can circumvent economic coercion, they have not measured the net effects this circumvention has on a target state. Underinvestment captures these effects by estimating that dissuaded investment.

The preceding discussion has built upon what was established in Chapter 2. In that chapter, I presented two hypotheses:

Hypothesis 6: Economic coercion-generated indirect effects will lead to underinvestment in the target.

Hypothesis 7: Severe economic sanctions will create underinvestment in the target.

The remainder of the paper tests these hypotheses.

6.3 Empirical Analysis

6.3.1 Data and Methods

To analyze the effects of economic coercion on a state’s FDI competitiveness, I compile time-series, cross-sectional (TSCS) data of annual state-level data from 1982 to 2005.³ Previous studies have argued there are systematic differences between the developed and developing states that justify examining them in different models (e.g. Li and Resnick 2003; Barry and Kleinberg 2015), so I include only non-OECD states, Mexico, and Turkey.⁴ U.S. sanctions toward OECD states are cases where conflict expectations are minimal and there would be an emphasis on absolute gains. Non-OECD states are therefore the most relevant cases. Failing to find evidence of sanction-induced underinvestment would indict sanctions as ineffective tools of statecraft.

³The time period was chosen for practical and theoretical reasons. First, in 1982 the Reagan administration attempted to coerce European affiliates into abandoning a Soviet-European gas pipeline. This attempt failed, and – crucially for this analysis – European states passed blocking legislation forbidding affiliates from complying with U.S. sanctions. This represents a break from previous time periods. Second, the TIES data set (discussed below) only contains data until 2005.

⁴As Blonigen (2005) writes, “[...] the factors that determine FDI into developed countries is simply much different than into less-developed countries, and that these differences are still not captured adequately in the empirical specifications that we currently estimate”.

Dependent Variable: Underinvestment

Underinvestment is defined as the difference in a target's expected share of World FDI between a coerced state and an uncoerced state. This is operationalized as the net FDI inflows for country i in year t divided by total World net FDI inflows in year t , where both quantities are in common currency – here, current USD. In addition to providing the data for the constituent parts, UNCTADstat also calculates this ratio (UNCTADstat 2015). The mean value is 0.25 percent of World FDI inflows and the standard deviation is 0.95; the values range from -5.90 percent to 19.10 percent.⁵ The DV is scaled for easier model computation; the substantive results are unaffected.

Independent Variables: Economic Coercion

I use Morgan et al.'s (2014) Threat and Imposition of Economic Sanctions (TIES) database. It covers economic coercion episodes between 1945 and 2005. Previous studies on economic coercion and FDI rely on data compiled by Hufbauer et al. (2007), which did not differentiate between the threat and imposition stages of economic coercion episodes; I distinguish the threat and imposition stages for each episode. I also differentiate between U.S. and non-U.S. economic coercion because the U.S. is the foremost sender of economic sanctions. As shown last chapter, one measure of sanction severity is to use multilateral sanctions to indicate severe sanctions and unilateral sanctions to indicate limited sanctions. These combinations – U.S./non-U.S., threat/sanction, and unilateral/multilateral – create 8 dichotomous indicators summarized in Table 2 below.

⁵While it seems impossible to have negative shares, leaving out negative values (or adding positive values) could unduly bias the results. Negative values are scaled in comparison to all net positive FDI flows.

Table 6.1: Summary of the independent variables, the sanction severity indicators: unilateral coercion versus multilateral coercion. Episodes are divided by stage into threats and imposed sanctions; and by sender, the United States (or coalition including the U.S.) or sender(s) that are not the U.S.. The second column shows the number of observations (2617 in total). Source for economic coercion data is Morgan et al. (2014). The source for World FDI data is UNCTADStat.

Coercion	Obs	n/All	Mean	Share
				World FDI
All (Coerced and Not Coerced)	2617	1.00	0.25	
Non-US Multilateral Sanction	184	0.07	1.01	
Non-US Multilateral Threat	99	0.04	1.17	
Non-US Unilateral Sanction	99	0.04	2.05	
Non-US Unilateral Threat	41	0.02	0.76	
US Multilateral Sanction	191	0.07	0.15	
US Multilateral Threat	64	0.02	0.11	
US Unilateral Sanction	368	0.14	0.74	
US Unilateral Threat	283	0.11	0.65	

Controls

The controls by and large match those from the previous chapter. The gravity variables that affect bilateral flows still operate at a systemic level. I include measures of market size (GDP), economic development (GDP per capita), and economic growth (GDP growth, annual percent). This data is available from the World Bank. Because this is a systemic analysis, I exclude dyadic distance. Governmental institutions are categorized as autocratic, democratic, or anocratic based on each state's Polity II regime scores. Polity II scores range between -10 and 10. I follow Allen's (2008) and Mansfield and Snyder's (2002) codings: scores between -10 and -6 are autocracies, scores between -6 and 6 are anocracies, and scores above 6 are democracies. I create two indicator variables for *democracy* and *autocracy*, *anocracy* being the base case. To control for capital account controls, I use the Chinn-Ito capital account openness index (Chinn and Ito 2008).

Following previous work, I control for domestic unrest and militarized interstate disputes using the Uppsala Conflict Data Program (UCDP) data. I also control for the orientation of

the target ruling coalition by controlling for natural resource rents, military spending, and whether the target participated in bilateral investment treaties (BITs) with any other state. BIT data was collected by the author.⁶ Along with the Polity II scores and the World Bank economic data mentioned above, the conflict, rent, and spending data is collected in the Quality of Government (QoG) data set (Teorell et al. 2016). Table 2, below, summarizes the controls.

Table 6.2: Summary of control variables. Log(GDP), log(GDP per capita), GDP growth, natural resource rents, and military expenditures (% GDP) are scaled when they are included in the models (i.e., had their means subtracted and were divided by their standard deviations).

Name	Mean	Range	Sum	Obs
Autocracy	0.3	[0.00 to 1.00]	871.0	2617
Capital Open	0.4	[0.00 to 1.00]	920.6	2617
Civil War	0.2	[0.00 to 1.00]	491.0	2617
Democracy	0.4	[0.00 to 1.00]	925.0	2617
GDP Growth	3.8	[-51.03 to 106.28]	9841.5	2602
log(GDP)	23.1	[18.46 to 28.45]	60510.4	2617
log(GDPpc)	7.2	[3.91 to 11.31]	18921.5	2617
MID	0.0	[0.00 to 1.00]	73.0	2617
Mil. Spending (per GDP)	0.1	[-0.95 to 13.43]	114.4	1653
Resource Rents, (Z)	0.1	[-0.73 to 5.51]	291.8	2604
US BIT In Force	0.1	[0.00 to 1.00]	350.0	2617
US BIT Signed	0.1	[0.00 to 1.00]	165.0	2617

6.3.2 Modeling Underinvestment

I model these relationships using Bayesian hierarchical linear models. These models are efficient and capable models for TSCS data (Beck and Katz 2007; Beck and Katz 2011; Shor et al. 2007; Steenbergen and Jones 2002). They allow analysts to compromise between “no pooling” (i.e. fixed effect) models and complete pooling models by incorporating different levels of analysis while still allowing population level analysis. The two-level structure for

⁶The raw data is available at <http://investmentpolicyhub.unctad.org/IIA>. The code used to collect the data and the resulting cleaned data file are available online at joshmalnight.com.

these models is years nested within states, i.e. country years treated as draws from a common country distribution. This establishes correlations between a country's observations and obviates the need for panel-corrected standard errors (Shor et al. 2007).

The mean function for the model is:

$$\frac{FDI_{i,t}}{FDI_{World,t}} = (\beta_0 + b_{0i}) + X_{i,t}\beta_{Coercion} + W_{i,t}\beta_{Controls} + Z_{i,t}\beta_{Coercion \times Controls} + \epsilon_{i,t}$$

where $\epsilon \sim N(0, \sigma^2)$. For Bayesian models, all parameters must have specified prior distributions that represent our prior knowledge of those values.⁷ I use weakly informative regularizing priors that lessen the likelihood of mistaking random noise for significant results but do not overwhelm the evidence provided by the data (Gelman et al. 2008). Those priors are:

$\sigma^2 \sim HalfCauchy(0, 1)$	Variance prior
$\beta_0 \sim N(0, 5)$	Intercept prior
$\beta_{Coercion} \sim N(0, 2.5^2)$	Coefficient priors
$\beta_{Controls} \sim N(0, 2.5^2)$	Coefficient priors
$\beta_{Coercion \times Controls} \sim N(0, 2.5^2)$	Coefficient priors
$b_{0i} \sim N(0, \sigma_b^2)$	Random intercept prior
$\sigma_b^2 \sim HalfCauchy(0, 1)$	Variance prior

⁷Briefly, Bayesian models follow Bayes' Law, which states that the probability of a hypothesis given the data (the posterior) is proportional to the probability of the data given the hypothesis (the likelihood) times the probability of the hypothesis (the prior), or $Pr(H|D) \propto Pr(D|H)Pr(H)$. Frequentist regression focuses only on the likelihood, $Pr(D|H)$.

The interaction coefficients ($\beta_{Coercion \times Controls}$) capture the indirect effects of economic sanctions. Negative or positive interaction coefficients provide evidence that economic coercion alters the relationship between those economic variables and FDI. I modify the above “Indirect Effects” model to create two additional models: a baseline “Coercion” model, where $\beta_{Controls}$ and $\beta_{Coercion \times Controls}$ are set equal to zero; and a “Direct Only” model that sets the interaction terms $\beta_{Coercion \times Controls}$ to zero.

Interpreting Bayesian regression models is different from interpreting frequentist regression models. The key difference is that Bayesian models estimate a posterior distribution for parameters given the data, rather than estimating point estimates and confidence intervals for those point estimates. Rather than a point estimate for a parameter, I give the median of its probability distribution. Rather than a 95% confidence interval, I provide 50% and 95% probability intervals (PIs). These should not be interpreted as confidence intervals. Rather, a 95% PI provides the values between which 95% of the posterior distribution rests. We say that given the data, the value of the parameter lies within that range with 95% probability.

6.3.3 Results

Hypothesis 6 predicts that the indirect effects of economic coercion will create underinvestment. Figure 6.1 displays 50% and 95% probability intervals (PIs) for the indirect effect coefficients from the “Indirect Effects” model. Each panel presents the interactions between a different economic coercion variable and the three economic variables, shown on the y-axes of each panel. Their effects differ considerably both across and within panels. For example, the top left panel presents the interaction coefficients between non-U.S. multilateral sanctions and the three economic gravity variables (GDP, GDP per capita, and GDP per capita squared – all logged and scaled). Based on the data, the 3 interaction coefficients appear relatively centered around zero, and the tight PI bounds suggest relative certainty of their

posterior distributions (much more so compared to the $N(0, 2.5^2)$ prior distributions). We can be confident that these effects are relatively small and negligible. Yet compare this to the panel immediately to the right (top middle). This panel summarizes the interactions between non-U.S. multilateral threats and the three economic variables. These results vary: there is a quadratic relationship between this panel's coercion and per capita GDP and a positive GDP interaction coefficient. All of these coefficients have 95% PIs excluding zero. So what is the net effect across economic variables?

We can directly evaluate the hypotheses for each coercion coefficient. First, for each coercion variable I compute the posterior distribution for the sum of the economic interaction coefficients (in effect, summing the three variables in each panel). Second, I compute the probabilities that these 8 posterior distributions (one per panel) are less than zero. If any probabilities are near 0.50, then we see little evidence that those interaction effects are present.

Table 6.3: Probabilities that the sum of all coercion indirect effects are negative when economic variables are set to a value of one standard deviation above the mean. Each type of economic coercion is interacted with the standard economic variables: the lagged DV, economic growth, target economic size, and target per capita GDP.

Hypotheses	Pr(H True): 95% PI
Pr(Sum Int'ns w/US Mult. Sanc. < 0)	0.95: [-0.27, 0.02]
Pr(Sum Int'ns w/Non-US Uni. Sanc. < 0)	0.62: [-0.16, 0.12]
Pr(Sum Int'ns w/Non-US Uni. Thrt. < 0)	0.52: [-0.19, 0.18]
Pr(Sum Int'ns w/US Uni. Thrt. < 0)	0.28: [-0.06, 0.10]
Pr(Sum Int'ns w/US Mult. Thrt. < 0)	0.11: [-0.04, 0.21]
Pr(Sum Int'ns w/US Uni. Sanc. < 0)	0.06: [-0.02, 0.15]
Pr(Sum Int'ns w/Non-US Mult. Sanc. < 0)	0.02: [0.01, 0.23]
Pr(Sum Int'ns w/Non-US Mult. Thrt. < 0)	0.00: [0.11, 0.36]

Table 6.3 presents those results. There are four interaction effects that have 90 percent probability intervals that exclude zero. Non-U.S. unilateral sanctions and U.S. multilateral sanctions have net negative indirect effects with 0.99 and 0.91 probabilities, respectively. That is, when those two forms of economic coercion are imposed, the effects of GDP, GDP

Interaction Coefficients: Inconsistent Indirect Effects

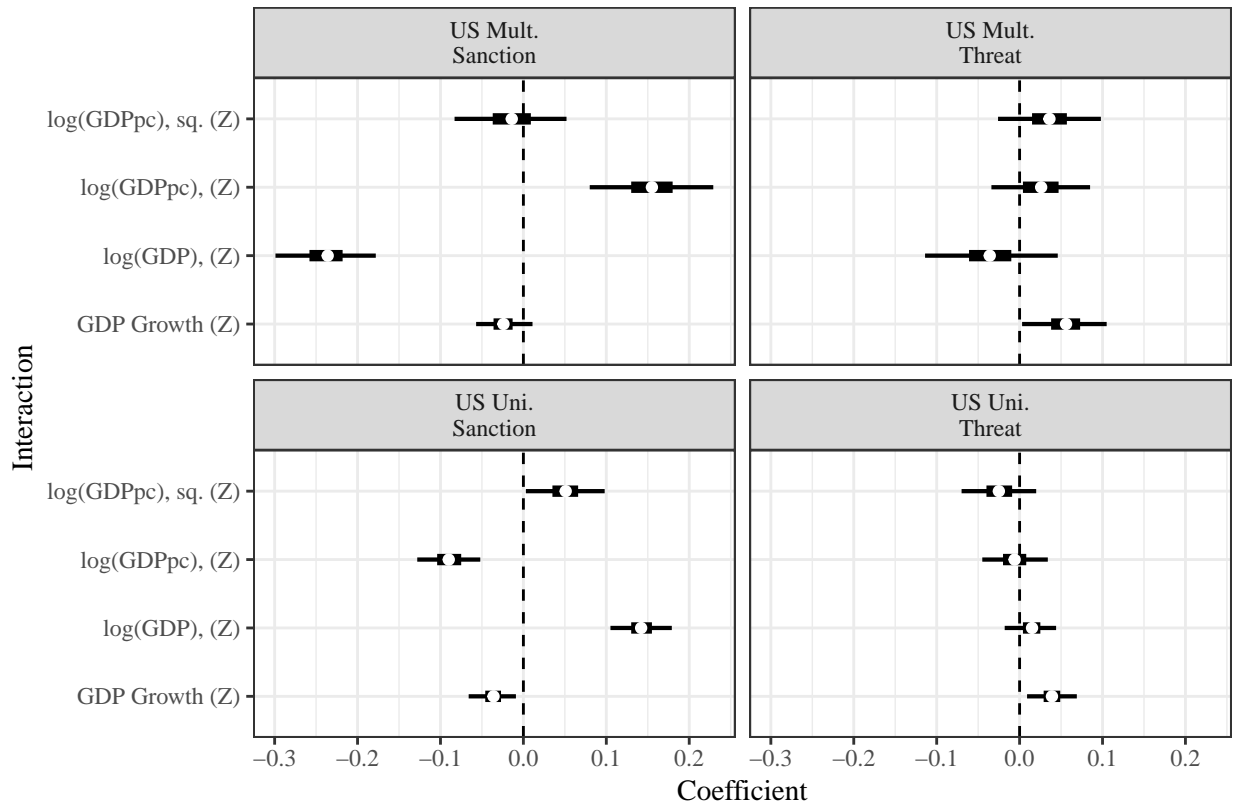


Figure 6.1: Interaction coefficients that capture potential indirect effects that would lead to underinvestment. The white circles indicate medians of the posterior distributions. Large bands indicate 50% probability intervals (PIs) for the parameters, while the longer thin bands indicate the parameters' 95% PIs.

per capita, and GDP per capita² are lower than they would be for an uncoerced state. Interestingly, given the data, non-U.S. multilateral threats and U.S. unilateral sanctions have positive indirect effects with 1.00 probability. Evidence from the “Indirect Effects” model therefore supports Hypothesis 6 for non-U.S. unilateral sanctions and for U.S. multilateral sanctions.

Further evidence can be found by comparing the “Indirect Effects” model to the “Direct Only” model. The “Direct Only” model stipulates the indirect coefficients are zero. If it fits the data appreciably worse (better) than the “Indirect Effects” model, then Hypothesis 6 is supported (undermined). I use leave-one-out information criteria (LOOIC) to determine the model that better fits the data. LOOIC is to Bayesian models what Akaike Information Criteria (AIC) is to frequentist models: an approximation of a model’s ability to predict any one observation using the remaining observations (Gelman, Hwang, and Vehtari 2014). The results suggest that while more weight should be put on the “Indirect Effects” model, we cannot throw out the other model altogether.⁸ There is evidence that the indirect effects may be zero, though it is more likely than not that the “Indirect Effects” model better explains the data. In sum, there is mixed support for Hypothesis 6, but only for particular forms of economic coercion (non-U.S. unilateral sanctions and U.S. multilateral sanctions).

Hypothesis 7 claims that severe economic sanctions will lead to underinvestment. Therefore, non-U.S. and U.S. multilateral sanctions should be correlated with decreased shares of World FDI. Figure 2 displays the economic coercion coefficients for the 3 models. The coefficients for the “Base” and “Direct Only” models are easy enough to interpret: they estimate the difference in World FDI shares between a coerced and uncoerced state. U.S. multilateral sanctions are clearly negative for these models and clearly lower than U.S. unilateral sanctions. The “Direct Only” model finds evidence that severe U.S. sanctions are correlated with

⁸The LOOIC scores for the “Direct Only” and “Indirect Effect” models are -1196.4 and -1510.3, respectively. However, these estimates have wide standard errors: 360.5 and 305.9. The difference in the expected log predictive densities of the two models is 156.9 (se = 94.6), supporting the “Indirect Effects” model.

underinvestment. However, aside from non-U.S. unilateral threats, most non-U.S. coefficients are positive.

We may interpret the “Indirect Effects” coefficients as the effects of economic coercion for average levels of $\log(\text{GDP})$ and $\log(\text{GDPpc})$, *i.e.* when those scaled variables are equal to zero. With the exceptions of U.S. unilateral and multilateral threats and non-U.S. multilateral sanctions, there is little agreement on coefficient values – indeed, even signs – across models. This disconnect reveals important information about economic coercion. We can interpret the economic coercion coefficients for the “Direct Effects” model as the average effect across all distributions of the interaction effects. But the “Indirect Effects” model coefficients represent the effects of economic coercion at average levels of GDP, GDP growth, and GDP per capita. But the effect of coercion changes as those values change.

Simply put: economic coercion does not affect the economic variables very much, but the economic variables greatly affect economic coercion. The indirect effects hypotheses specified how coercion affects the slope of the economic variables, *i.e.* comparing $\beta_{\log(\text{GDP})}$ to $(\beta_{\log(\text{GDP})} + \beta_{\text{interaction}} \times C) \times \log(\text{GDP})$, which is the interaction term itself. However, the marginal effect of economic coercion in these models can be rewritten as $(\beta_C + \beta_{C \times \text{GDP}} \text{GDP} + \beta_{C \times \text{GDPpc}} \text{GDPpc} + \beta_{C \times \text{GDPgrowth}} \text{GDPgrowth}) \times C$. Coercion is more or less effective at different levels of these variables. I examine those marginal effects for economic sanctions in Figure 6.3.

Each panel of Figure 6.3 displays the marginal values for an interaction term at 5 different levels of the economic variables. The dashed lines denote 50% probability intervals around the median. Because the economic variables are standardized, the x-axis is measured in standard deviations from the mean. The top left panel shows the marginal effects of non-U.S. multilateral sanctions and standardized logged GDP are very probably zero at any value of standardized logged GDP. Similarly, the top right panel shows a marginal effect centered on zero. Positive slopes indicate that the marginal effects on share of FDI increase

The Effects of Economic Coercion on Non-OECD+MT Underinvestment

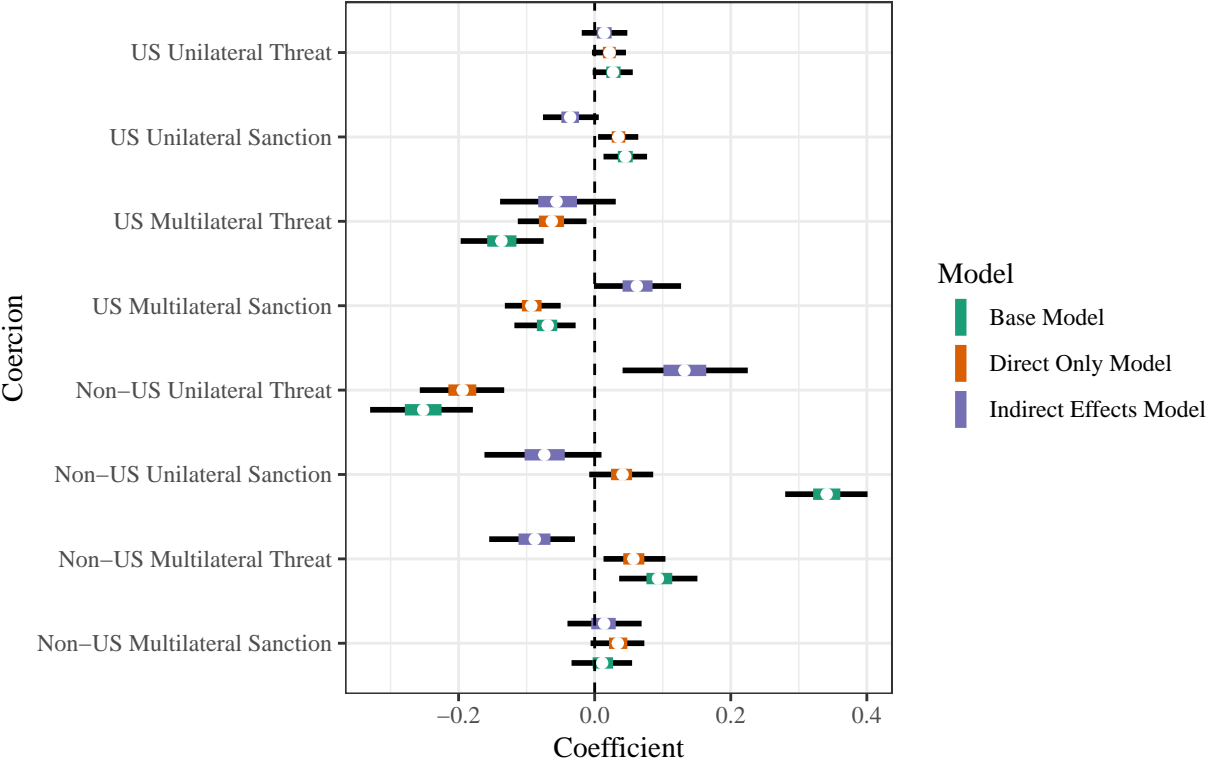


Figure 6.2: Model results for Hypothesis 7. Severe U.S. sanctions are correlated with more underinvestment than limited U.S. sanctions.

Marginal Effects Economic Coercion on World FDI Share by Interaction Terms

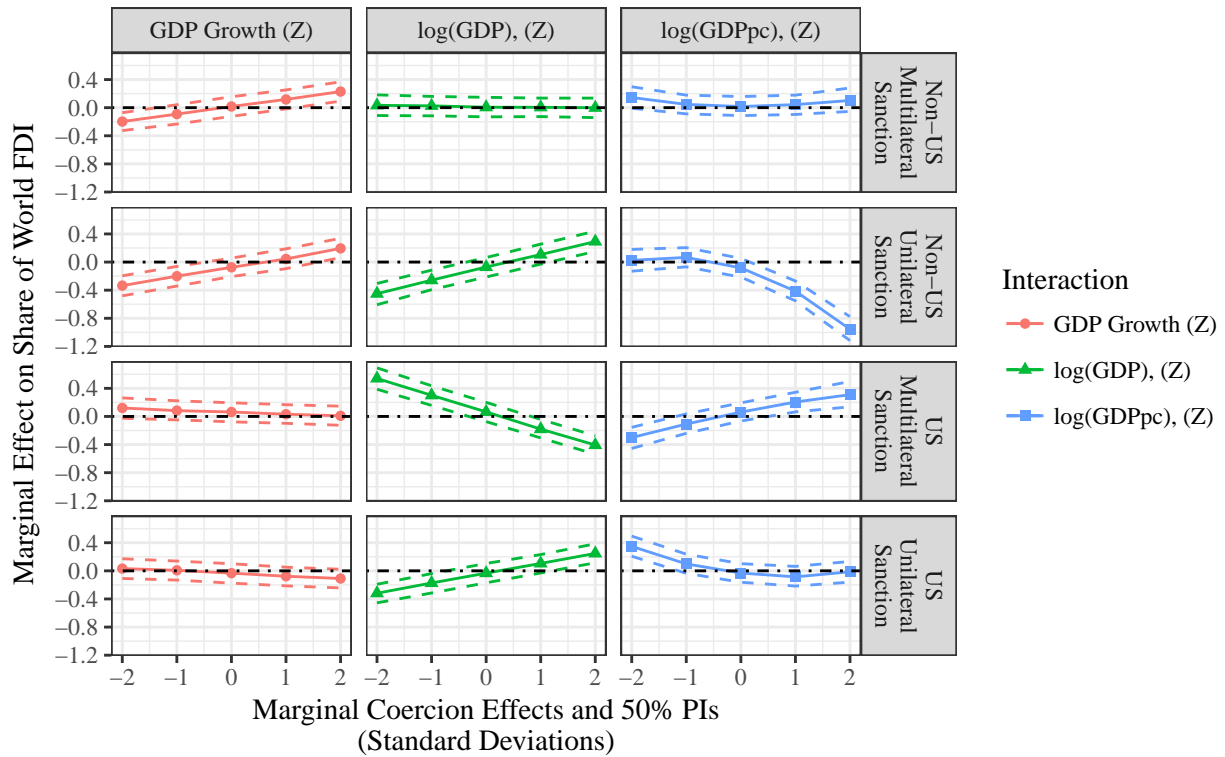


Figure 6.3: The marginal effects of economic coercion for combinations of sanctions variables and economic variables. Solid lines indicate the median values of each particular marginal effect at -2, -1, 0, 1, and 2 standard deviations from the mean of that economic variable. Dashed lines indicate 50% PIs around those medians.

as the economic variable increases – *i.e.*, the coercion has less of an effect. There are two strong negative slopes: (1) the marginal effect of non-U.S. unilateral sanctions and scaled logged GDP per capita; and the marginal effect of U.S. multilateral sanctions and scaled logged GDP. These correlations provide evidence that sanctions may bite harder at higher development levels and in larger markets.

Table 6.4 addresses the hypotheses directly and measures the probability that underinvestment is higher – *i.e.*, a states’s share of world FDI is lower – for severe U.S. economic coercion than for limited coercion or no coercion at all. With 0.99 or greater probability for each relationship, there is strong support in the Base and “Direct Only” models for Hypothesis 7. There is no strong preference for the “Direct Only” or the “Indirect Effects” models over one another, so this evidence is compelling. While the “Indirect Effects” model does not support the hypothesis, the evidence is specific to average levels of GDP, GDP per capita, and GDP growth. As shown in Figure 6.3, economic coercion appears to have different effects at different levels of income and development.

Table 6.4: Probabilities that severe coercion leads to greater underinvestment than limited or no coercion. There is strong support in the Base and Direct Effect models for all types of coercion. The Indirect Effects column is evaluated at average GDP, GDPpc, and GDP growth.

Hypothesis	Base	Direct Only	Indirect Effects
Pr(Underinv’t US Mult S > Underinv’t None)	1.00: [-0.12, -0.03]	1.00: [-0.13, -0.05]	0.03: [0.00, 0.13]
Pr(Underinv’t US Mult S > Underinv’t US Uni S)	1.00: [-0.17, -0.06]	1.00: [-0.18, -0.08]	0.00: [0.03, 0.17]
Pr(Underinv’t US Mult T > Underinv’t None)	1.00: [-0.20, -0.08]	0.99: [-0.11, -0.01]	0.90: [-0.14, 0.03]
Pr(Underinv’t US Mult T > Underinv’t US Uni T)	1.00: [-0.23, -0.09]	1.00: [-0.14, -0.02]	0.92: [-0.16, 0.03]

6.4 Conclusion

This chapter has specified and examined the concept of underinvestment, the loss of existing and potential FDI due to economic coercion. Underinvestment is most evident in comparison to other states, and I operationalize it by examining a state's share of World net FDI inflows. If economic coercion can be considered to "work" at all, it must make states less competitive in some way.

There is compelling evidence that U.S. multilateral coercion – both sanctions and threats – may increase underinvestment. Hypothesis 7 therefore is supported. There is also evidence that economic coercion performs differently within different economies; for example, Figure 6.3 provides evidence that U.S. multilateral sanctions create underinvestment in undeveloped states but may raise it in highly developed states. These relationships are assumed in the literature, and certainly lurk as background assumptions, but to my knowledge this is the first explicit statistical examination of these dynamics. Certainly, further research is warranted.

Hypothesis 6 appears to hold for non-U.S. unilateral sanctions and U.S. multilateral sanctions. Most research focuses on U.S. economic coercion (but see Drezner 1999), and understandably so. However, future research should unpack the non-U.S. category with care. I should reiterate that the indirect effects examined for Hypothesis 6 are very similar to – but nonetheless different from – the marginal effects examined for Hypothesis 7. Suffice to say that the indirect effects for Hypothesis 6 ask whether coercion alters how investors view FDI determinants, while the marginal effects for Hypothesis 7 examine economic coercion under different contexts.

The support for the Hypotheses also buttresses those who argue that sanctions do have deleterious effects on the target. Yet the core argument in this chapter is not that sanctions and sanction threats will *successfully coerce*, although to the extent that they reduce a target's relative standing, that likelihood will increase. Rather, it is that economic coercion

must be able to do so to be considered a useful tool of statecraft. The evidence suggests that this is the case.

Chapter 7

Conclusion

7.1 Introduction

This dissertation has examined how multinational enterprises (MNEs) in the target state respond to economic coercion. Though tentative, the results provide insight into the effectiveness of economic statecraft, the behavior of MNEs, the distribution of global FDI, and the power of the state vis a vis MNEs. Neither the state nor the MNEs seem likely to wane as dominant global actors.¹ Their actions and choices are not ephemeral but can affect millions of people worldwide.

Despite perennial disagreement about the effectiveness of economic coercion in nearly every public sphere, it remains a ready tool of statecraft. One would be hard-pressed to open the international section of a newspaper without finding an article discussing the U.S. sanctions on Iran, Russia, or Venezuela. A common lament is that economic coercion does not succeed – i.e. alter the target regime’s policies – because it are not sufficiently punish the target

¹While nationalism waxes in the West, states have not yet turned against inward investment. U.S. President Trump, for example, has claimed credit for Japanese conglomerate SoftBank’s \$50 billion investment in the United States (Swanson 2016).

regime. If economic coercion cannot wrangle the MNEs that dominate global commerce these critics may have a point.

For their part, MNEs are arguably the dominant non-state international actors. Investing abroad is no longer the purview of MNEs in developed states; FDI comprises an increasing share of both developed and developing economies and further binds their economies. Not only does FDI account for a greater share of global GDP than international trade, but an increasing share of trade occurs within MNEs themselves. In the United States, intra-firm trade accounted for 48% of imports and 30% of exports in 2009 (Lanz and Miroudot 2011). The accumulated risk management decisions of MNEs shapes tremendous amounts of investment abroad, and this project examines MNEs' capacities to navigate the turbulent seas of dyadic risks generated by international politics.

Finally, economic coercion is the attempt by states to leverage international commerce to influence foreign states and therefore lies at the intersection of international conflict and interdependence. Globalization and the rise of the MNE altered the bedrock of international relations scholarship and international politics. It is facile to say the state always gets its way or that MNEs secretly run the world; this dissertation examines the conditions under which states can use commerce to accomplish their aims and when they cannot.

In this study, I examine this interaction in two steps. First, I categorize the paths by which economic coercion can affect MNEs. Economic coercion can alter MNE behavior through the direct legal restrictions set forth in the sanction, through reputation costs, and through indirect effects. Second, I predict MNE responses using economic logics identified in the FDI literature. To invest abroad profitably, MNEs seek either markets or resources in a host state and require either significant physical capital or not.

I develop three tests to examine how the different costs of economic coercion are refracted through the economic logics of international investment to alter MNE behavior. First, I test

how sanction severity – greater legal restrictions and potential reputation costs – alter U.S. FDI patterns across different industries. Second, I examine how variation in reputation costs affect U.S. FDI. Third, I examine how coercion-induced indirect effects in the target state affect different MNE industries. Two final tests examine how economic coercion severity and indirect effects alter the behavior of all FDI, using a new measure of MNE behavior that captures dissuaded and rerouted investment along with disinvestment.

7.2 Direct Legal Restrictions and Economic Coercion Severity

The first of the three sanction causal pathways is the direct legal restriction, instantiated by the sanction instrument itself. It specifies the penalties and the penalized, the exceptions and the enforcers. Direct legal restrictions do not completely determine the other two causal pathways but the three are certainly correlated. For MNEs, the severity of an economic sanction is driven by the number and extent of legal restrictions.² Since any retroactive measure of sanction severity would include altered FDI behavior, prospective measures of severity are preferable. A simple yet valid measure of coercion severity for MNEs is whether economic coercion is unilateral or multilateral.

The results suggest that sanction severity increases disinvestment under specific conditions. First, the Libyan case provides evidence that petroleum MNEs will face few consequences for remaining in sanctioned states. Cross-case analysis finds that U.S. petroleum and mining FDI stocks are only negatively correlated with multilateral threats; the correlations with imposed sanctions are zero. Threats may allow MNEs to adjust themselves accordingly to any sanction restrictions; this is implicit in the argument of Biglaiser and Lektzian (2011). Al-

²Sanction effects may differ from senders' intents. Similarly, severity in one arena (e.g. declines in public health in Iraq) may not be symmetric in another (e.g. Saddam's personal wealth).

ternatively, current investments might be exempt from sanctions. The Libyan case provides little data on other industries, but the cross-case analyses suggest manufacturing MNEs in target states do not respond like oil MNEs. The statistical models find little evidence that economic coercion is negatively correlated with U.S. outward manufacturing FDI positions.

The fact that U.S. sanctions do not necessarily reduce FDI stocks accords with previous research (Biglaiser and Lektzian 2011). Existing contracts are often exempt from sanctions legislation as was the case in Libya until 1986 (and even those strictures were being removed by 1989). Compounding this difficulty, those activities that are prohibited can be circumvented if the good is sufficiently fungible. Yet a puzzle surrounding manufacturing FDI remains. This may be due to deeper heterogeneity in the manufacturing sector than was accorded here, or to insufficient control for selection effects.

However, the results from Chapter 6 suggest that economic coercion does prevent FDI that otherwise would have invested from doing so. In the Libyan case, the scale of deferred investment was only obvious once the economic sanctions were lifted: post-2004 investment in Libya is strikingly larger than it was the year before. These results hold cross-nationally for all FDI, putting previous research in a new light. MNEs may sanction-bust, replace one another, or reinvest, but new investment does not arrive at the rate expected were the target not the subject of economic coercion. These effects may compound every year the sanction is in place. O’Sullivan (O’Sullivan 2003) notes that applying economic coercion is a stick but removing a sanction can be a carrot. These results provide support that argument.

7.3 Reputation Costs Matter at the Extremes

Reputation costs capture an integral part of economic statecraft and MNE decision-making. Reputation costs capture “unofficial” economic coercion where senders leverage economic

relationships but do so outside the legal scope of the sanction itself. An MNE might be so reliant on the sender in another arena and therefore would comply with the sanction's spirit even if not compelled by law.

Reputation costs were evident by their absence in Libya during the period of U.S. unilateral coercion. U.S. MNEs minimally complied with the sanctions *de jure*, and undercutting them *de facto*. Yet the U.N. multilateral sanctions of Libya revealed how narrow and broad reputation costs can drive economic sanctions. Considering how long these costs needed to accrue and what finally precipitated multilateral sanctions, reputation costs may only matter at the extreme.

The cross-case analysis suggests reputation costs do not on average drive disinvestment. No issue area was sufficiently correlated with lower levels of U.S. FDI. Yet the data reveals some differences between issue areas. With high probability, underinvestment was greater under sanctions initiated for security reasons than for any other issue area. Underinvestment from sanctions imposed for any other reason was greater than underinvestment resulting from sanctions initiated for human rights reasons. I contended that this indicates that narrow reputation costs are greater than broad reputation costs – *i.e.*, that MNEs fear their reputations in the eyes of elites more than domestic publics.

Scholars have found positive correlations between improved human rights and levels of FDI (Blanton and Blanton 2007). My results imply that MNEs in states sanctioned for human rights abuses may be those most resistant to coercion, particularly broad reputation costs. This is evidence that MNEs may anticipate potential moral opprobrium and economic coercion.

7.4 Indirect Effects Reveal Unexplored Contingencies

Economic coercion's indirect effects – the ripples economic coercion creates in a target economy – a varied and difficult to predict but can potentially be the most important sanction pathway since they affect all MNEs regardless of home state. However, the results indicate these indirect effects are quite contingent: the conditions under which economic coercion can alter MNEs' investment calculus vary depending on the characteristics of the target state.

Perhaps the most important determinant of indirect effects is the response of the target ruling coalition. The Libyan case demonstrates how the Qadhafi regime walked a surprisingly fine line as U.S. sanctions multiplied. Its response to the oil MNEs upon which it was dependent was relatively acquiescent: while the regime drove hard bargains with the oil firms preceding economic coercion, over the course of the sanctions the regime worked with the firms to maintain investment. On the other hand, Qadhafi's support for terrorism led to multilateral sanctions. It is also instructive that very little non-prohibited FDI found its way into Libya over the course of economic sanctions.³

Cross-national evidence generally supports the resilience of resource-seeking, capital-intensive FDI to indirect costs in terms of disinvestment. Wholesale trade – MSnCI – FDI shows extreme divergence in terms of indirect effects and disinvestment: some economic coercion leads to negative indirect effects with high probability, while others lead to positive indirect effects with high probability. Clearly, there is considerable heterogeneity in these relationships.

Economic coercion does not create underinvestment uniformly across states. On average, severe sanctions lead to greater underinvestment than limited sanctions. However, these effects shift dramatically across different economic conditions. For example, U.S. multilateral

³Certainly, Qadhafi's strategy of political survival compounded Libya's foreign investment problem. Yet as I argued, Qadhafi pursued economic reforms in the early 1990s. While those reforms in the early 1990s were generally ineffective, it is more improbable that sanctions would have *no* effect than that they had *some* effect.

sanctions are correlated with greater underinvestment in large, relatively poor economies, but there is little evidence that non-U.S. multilateral sanctions have indirect effects at all. This suggests important heterogeneity at both the target level and the coercion levels.

7.5 Public Policy Ramifications

The results have the following ramifications for public policy:

1. Threats of economic coercion can be effective. Theoretically, RSCI FDI should be the most resistant to economic coercion. But the results indicate that oil FDI, at least, avoid investing in states under threat of multilateral sanctions. Considering how oil can buttress undesirable regimes, U.S. policymakers can perhaps hope that their jet-setting efforts to corral a coalition for sanctions is not necessarily for naught.
2. In general, economic coercion does not lead FDI to exit dramatically from a target state. As evidenced by the Libyan case, a frustrating number of existing investments may remain in place. Any policymaker who is not already aware of the potential domestic risks of sanctions that don't appear to be very effective should take heed and plan accordingly.
3. Severe economic coercion compounds over time, particularly if foreign investment flows to the target's peers and rivals. As far as a goal of economic sanctions is to deny strategic resources, severe sustained economic coercion appears to obstruct resources that would arrive through foreign investment. Furthermore, these denied resources eventually become sender bargaining chips. As O'Sullivan (2003) notes, economic sanctions may be applied as sticks but their removal can eventually become a carrot.
4. MNEs are not sufficiently globalized to disregard the state. Sanction skeptics have many valid disagreements with sanction efficacy, but the fact that sanction-busting exists is insufficient to damn economic coercion as a foreign policy tool. As argued

above, economic coercion works over the long-term and does alter MNE behavior, albeit over a longer time frame than policymakers may prefer.

7.6 Caveats and Future Research

My dissertation certainly does not settle the question of whether sanctions work, and it speaks at best obliquely to the ethical dilemmas of imposing economic sanctions. It does suggest that economic coercion can alter MNE behavior, albeit under specific conditions. Further research is needed to establish whether these links make targets more acquiescent and how reduced sanction-induced underinvestment can affect a target polity.

This dissertation explicitly addressed potential FDI selection effects and attempted to correct for them in the statistical models. Yet as discussed above, selection effects may still be present. These caveats do not necessarily invalidate any of my results, but suggest that future research should focus on:

1. Small- to medium-N analysis of more regular cases using comparative techniques such as fuzzy-set QCA (Ragin 2008) and Bayesian estimation with informative priors, particularly from area experts (Gill and Walker 2005).
2. Estimating economic coercion propensities and, if appropriate, pursuing matched comparisons or including the propensity scores in the regression equations (Kaplan and Chen 2012; Morgan and Winship 2014).

Furthermore, economic coercion episodes are very heterogeneous. In fact, the evidence suggests that the effect of some economic coercion on certain MNE industries may be net positive. For example, in Chapter 5 the relationship between between U.S. unilateral threats and U.S. outward manufacturing FDI stocks is more positive than negative. Manufacturing

FDI may follow other logics.

1. The measure of severity I use here is not the only such measure. Another could focus on the extent of commerce or the number of restrictions. It is difficult a priori to judge a sanction's intended severity, considering that import sanctions against State A may be trivial but similar import sanctions against State B could be significant.
2. The sanction effects examined here are average population coefficients. Bayesian random effects models in the style of Western (1998) could identify both the population effect and differentiate between those positive and negative cases.
3. Episodes where FDI stocks increased after economic coercion should be grouped and compared to verify the results and trace the process by which MNEs could profit from sanctions.

Finally, areas within the theoretical framework could be theorized further, for example MNE responses to sanction threats versus imposed sanctions.⁴

7.7 Conclusion

This dissertation has set forth a framework to explain how MNEs in a target state respond to economic coercion. It developed 7 hypotheses from this framework and tested them using qualitative and quantitative methods. While the framework generally accords with the period that Libya was under economic coercion, not all of those results generalize across cases. Though puzzles remain, this dissertation has found important empirical results. For one, it has confirmed that FDI does not uniformly respond to economic coercion. Second, it has confirmed previous research that FDI already in a target will likely not exit. Third, it

⁴But see (Malnight 2016).

has established that targets may still lose out, as their share of World FDI decreases under economic coercion, implying that new investment is deterred.

I have tried to point readers to extensions of this research, or to paths this project was unable to trek. There are certainly many more extensions and unexplored avenues within this research question. The question is timely and important. As a researcher, I hope this project has made some small dent in the research question. As a scholar, I hope others continue to explore the question.

Chapter 8

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