Costs and Commitment:
The Leverage of International Institutions in Conflicts between States

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Costs and Commitment:

The Leverage of International Institutions in Conflicts between States

Thesis directed by Professor Jaroslav Tir

How can international institutions reduce the occurrence of militarized conflict between states? This dissertation demonstrates that the costs that intergovernmental organizations (IGOs) can impose on member states for using force play a crucial role in answering this question. Scholars have suggested that IGOs are a useful tool to mitigate conflicts between states and to reduce the instances of war. However, empirical findings so far have been ambivalent, and scholars disagree about the causal mechanisms behind such a role of IGOs. My dissertation addresses this problem in three ways. First, it develops a theoretical model to identify a specific causal mechanism through which IGOs affect the trajectory of disputes between countries. The argument builds on the ability of IGOs to change the costs and benefits that states face after a demand has been made or a dispute has ensued. Qualitative evidence informs this argument. Second, new information on the structural and demonstrated leverage of IGOs provides the data necessary for a quantitative test of the argument. Third, an empirical test investigates the role of IGOs for states' use of force and the occurrence of war in those critical cases where states have already expressed a severe conflict of interest. These quantitative analyses use three types of cases: the development of inter-state relations after states have made a claim against another state; the evolution of interstate crises; and the evolution of interstate rivalries. The costs that IGOs can impose on member states for using force are found to play a crucial role in how IGOs may reduce militarized conflict between states. It has implications for future international relations research in the domains of international conflict and international political economy, as well as for international conflict management.

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Chapter 1

Introduction

This dissertation examines the impact of international institutions on the development of political conflicts between countries. Why do political disputes between states sometimes turn violent whereas states acquiesce and negotiate at other times? And what role do international institutions play in shaping these outcomes? I demonstrate that international (governmental) organizations (IGOs)[1] with high economic leverage over their member states substantially lower the risk that political disputes escalate to long and deadly wars. This effect is noteworthy because the primary mandates of these institutions are not conflict resolution or global security, but economic development and prosperity. Research in international relations has long argued that IGOs are an effective tool for states to establish cooperation. But this research has highlighted a number of competing causal mechanisms, resulting in a variety of perspectives that make similar predictions but ultimately have different implications for the magnitude, timing, and effectiveness of IGOs' ability to resolve interstate disputes, and for international relations in general. This variety of theoretical accounts of the role of institutions results in stagnation of our understanding of how institutions can contribute to conflict resolution. Wagner (2010, 36) summarizes this bluntly: "we do not know what contribution international institutions short of a world government might make to the resolution of interstate conflicts." Simultaneously, most research on IGOs has asked whether IGOs prevent the onset of disputes between states—or how IGOs may mediate conflicts.

[1] Throughout the dissertation, I use the terms **IGOs**, **IOs**, **international institutions**, **institutions**, **international organizations** interchangeably.

The former focuses on the role of IGOs in preventing disagreements. This limits our understanding of what IGOs can contribute when actual disagreements exist. The latter requires that states choose to allow IGOs to mediate or resolve conflicts. For instance, neighboring states and regional organizations have been hoping that Guatemala and Belize would take a long-standing dispute over territory to the International Court of Justice for settlement. But in 2013, the Guatemalan government decided to postpone a referendum seeking voters' approval of bringing the case to the ICJ.[2] This illustrates the difficulty of timely support from IGOs for conflict resolution: it requires disputants' approval and (later) compliance. In contrast, my dissertation demonstrates that IGOs with high economic leverage can exercise an indirect influence on how states behave in disputes. This effect is present even if one accounts for other potential types of influence of IGOs.

International institutions have grown in number (Pevehouse, Nordstrom, and Warnke 2004, 106); individual institutions have on average taken on more tasks and expanded in member states and, even more so, staff (Vaubel, Dreher, and Soylu 2007, 279). This growth of IGOs makes it all the more important to understand whether and how IGOs influence the evolution of interstate conflicts. My dissertation shows that IGOs can act as commitment devices for states by changing the utility of using force in conflicts. This specific mechanism of IGO influence can be traced empirically, is distinct from other mechanisms, and is a crucial driver of a pacifying impact of IGOs in those cases where the risk of violent interstate conflict is high. I develop a theoretical argument that identifies the role of IGOs as commitment devices during interstate disputes. This argument and the assumptions behind it are supported by qualitative evidence from two IGOs that are exemplary for institutional influence on the utility of using force: the International Monetary Fund and the World Bank. Quantitative tests at several stages of interstate conflict use new data on the leverage of IGOs and their issue coverage and investigate whether the proposed mechanism can explain when claims of one state against another turn into wars or get resolved; how interstate crises develop; and

[2] See source **W.21** (Appendix C).

when interstate disputes turn into enduring rivalries.

1.1 Research Question

Political science research suggests that IGOs reduce the occurrence of militarized conflict between states. Almost all of this scholarship subscribes to one or several of four perspectives. IGOs may foster shared identities or align states' preferences to prevent conflict (Haas 1964; Adler and Barnett 1998; Pevehouse and Russett 2006; Bearce and Bondanella 2007). IGOs may also promote trust between leaders and encourage peaceful bargaining between leaders (Bearce and Omori 2005; Haftel 2007). Second, IGOs may force or incentivize states to reveal valuable information, thus eliminating private information as a main cause of conflict (Fearon 1995; Haftel 2007; Shannon, Morey, and Boehmke 2010; Kinne 2013). Third, IGOs may open avenues for multilateral talks about conflict resolution (Shannon 2009). Fourth, IGOs may be an opportunity for conflict parties to address commitment problems (Shannon, Morey, and Boehmke 2010).

For a full assessment of the role of IGOs in interstate disputes, scholars have yet to conclusively address two questions: which causal mechanism explains the association between IGOs and interstate peace? And are joint memberships in IGOs themselves a product of two states' low baseline propensity to get involved in disputes in the first place? Understanding the role of IGOs is crucial not only for academic interest, but also instrumental for being able to predict the trajectories of disputes between states, informing the costs and prospects of different courses of action in interstate crises, and learning lessons about designing international institutions.

The first question is summed up in Wagner's previously quoted skepticism, or, in a milder manner, in the conclusion of another major study of IGOs and interstate conflict. After finding joint memberships in democratic IGOs to be associated with a lower probability of conflict onset, Pevehouse and Russett (2006, 995) conclude that "these [...] results of course cannot tell us exactly how democratic IGOs work to prevent conflict among their members,

nor can they sort out the effect of the different causal processes we suggested as operating." Lacking the ability to discriminate between different causal mechanisms is problematic for this research program because it prevents us from making inferences about (a) what type of conflicts IGOs may resolve (e.g., conflicts that arise from private information versus those that are due to commitment problems) and (b) necessary or sufficient conditions for IGOs to prevent conflict.

The second question is equally consequential for the IGO-peace research program. All but a few studies have examined whether joint memberships in IGOs reduce the probability of conflict onset. An obvious issue that researchers addressed subsequently was whether joint memberships in IGOs are themselves a product of two states' low baseline propensity to get involved in disputes in the first place. Indeed, at least one published study suggests that peaceful pairs of states are more likely to collaborate in those institutions previously found to be associated with the absence of conflict (Boehmer and Nordstrom 2008). So far, this second question has not been decisively answered. With an eye toward making inferences from the past, it is therefore not clear whether the potential of IGOs to prevent militarized disputes between countries is truly independent of states' previous amicable relations. This is exacerbated by the fact that almost all extant work examines the relationship between IGOs and conflict onset. Such inquiries have to rely on a pre-defined group of what is commonly referred to as "politically relevant dyads" in order to establish the population of pairs of states that have both the opportunity and willingness to go to war (Most and Starr 1989). As Xiang (2010) has shown, however, the use of pre-defined politically relevant dyads amounts to biasing results. And even using politically relevant dyads routinely yields biased results when the sample is still dominated by a large number of cases with a prior near-zero probability of the event of interest (conflict onset) actually occurring (King and Zeng 2001). In the context of potentially endogenous relationships, such as that between IGOs and conflict onset, this is problematic because researchers cannot credibly establish the independent role of IGOs in resolving disputes between states. The few studies that do look

beyond conflict onset (such as Mitchell and Hensel 2007; Shannon 2009; Shannon, Morey, and Boehmke 2010; Hansen, Mitchell, and Nemeth 2008) have yet to consistently identify a clear causal mechanism through which IGOs may help resolve disputes. Identifying this mechanism is essential to adjudicating whether the proliferation of IGOs in various fields is (a) causally associated with the decline in militarized conflict between states (Goldstein 2011) and (b) has the potential to contribute to dispute resolution in the future.

My dissertation addresses these questions in several ways. First, I build a distinct theoretical argument, substantiated by qualitative evidence, showing that IGOs may resolve the commitment problem that states in disputes often face. I then test this theoretical mechanism in several "hard cases" in the domain of high politics, using original data on particular IGOs that are less likely to exhibit the characteristics linked to the endogeneity of IGOs' impact on interstate peace. I examine the role of IGOs in all cases where pairs of states demonstrably faced conflicts of interest. This addresses the inferential problem of studying samples containing large numbers of cases with prior near-zero probability of conflict onset. Third, in my quantitative analyses, I show that reverse causality—that states subject to the hypothesized influence of IGOs face a lower baseline risk of conflict to begin with—is unlikely.

1.2 Theoretical Framework

States frequently make demands toward other states. Sometimes, these demands result in military conflict. Military conflicts often turn into protracted and recurring disputes between states. By far, most occurrences of military conflict happen between pairs of states that engage in repeated fighting (Diehl and Goertz 2000). This raises a key question: why are some pairs of states able to resolve disputes and competing claims peacefully, while others repeatedly go to war?

Bargaining framework. I approach this question within the bargaining framework based on Fearon (1995). In any given case of a dispute, resolving the dispute through war

is costly for all states involved. But there are three reasons for why states in a dispute would end up going to war. First, the issue at stake may be indivisible in the disputants' perception. This particular problem is rare, however, since almost all disputes allow for a division or side payments to mitigate apparent indivisibility problems. Second, the states may err in their calculations about the other state's behavior due to a lack of information about that state's capabilities and resolve; this lack of information is partly caused by states' incentives to misrepresent such information. Finally, opponents may be wary of commitment problems on the other side. If an opponent cannot credibly commit to adhering to a peaceful solution to the dispute, the other state will rather go to war over the issue than face the risk of being exploited at a later point in time, when conditions are less favorable.

The commitment problem. To investigate the utility of IGOs, I focus on the third problem, commitment. Disputes between states arise from conflicts of interest. This can be a claim one state makes towards another, where one state wants to obtain land or resources from another state, or influence that state's policy in a particular way. Conflicts of interest frequently lead to disputes, ranging from the exchange of non-fatal hostilities to war. When states stop fighting, conflicts are often not settled permanently, but recur often. In this context, states arguably face commitment problems as a major hurdle to peacefully resolving their disagreements. These commitment problems have different sources. The distribution of power between the disputants can change in the future, making fighting more attractive for the side that gains power; this makes it difficult for that side to commit to a bargain that was made when the distribution of power was less favorable to that side. Other exogenous changes can make it more likely for a side to obtain a better deal in the future as well; for instance, third parties forcing a compromise can lose interest in the dispute, and their constraining effect on one or both sides disappears. In addition, governments may also face domestic incentives, such as economic crises or political competition, to renegotiate a previous deal. Such renegotiations can involve the use of force if it is expedient for political reasons. Particular types of IGOs can mitigate exactly these commitment problems and thus

contribute to interstate conflict resolution. IGOs do this by establishing costs and benefits for states. IGOs yield benefits during the absence of military conflict, but withhold these benefits and (often) impose additional costs during conflictual behavior. Because these costs and benefits are both long-lasting and observable, they act as a commitment device for states involved in conflicts.

The cost of conflict for institutions. This argument is built on the condition that military conflict involving members of an IGO is costly for the IGO and its other members. Institutional cooperation between states is generally hampered when one or more member states are engaged in militarized conflict. Evidence for this assumption comes, for instance, from preferential trade agreements (PTAs; see Mansfield and Pevehouse 2003, 236). But losses from conflict are not limited to PTAs or other trade institutions. For instance, multilateral development banks will lose some of their investments and loans when recipient states spend considerable resources on war; military action often causes substantial damage in recipient countries. Similarly, organizations that coordinate the production of exportable goods, such as oil or coffee, suffer from undesirable heightened uncertainty when members are at war.

Some IGOs by default are likely to transform these losses into costs for member states engaging in military conflicts. When a member state chooses to go to war over an issue with another state, that member state can expect some form of negative ramification from the institution. This ramification may come in the suspension of benefits, direct costs (such as sanctions), or exclusion. This is not a heroic assumption. For instance, Gibler and Tir (2010) have shown that states engaged in (territorial) disputes are more likely to sustain autocratic regimes and suppress democratization efforts. In the same dynamic, we can expect that states at war will have few incentives to focus on, and thus display, cooperative behavior toward other members of an institution. As an example, a country at war should be less likely to liberalize trade, implement projects on development loans, and provide stable resource output to a collective arrangement such as OPEC. Such unstable and unreliable behavior at

wartime is a fundamental problem for an IGO's mission.

As a consequence, member states can expect costs with different time horizons. Immediately, states at war may experience a suspension of benefits that the institution is distributing, such as loans, projects, and information. In the medium term, states may be excluded from active institutional cooperation. In the longer run, warring states may gain the reputation of unstable partners that tarnish the institution, which may then preclude them from extensions of current institutional arrangements. Altogether, one can realistically expect that going to war over a dispute will create costs—either as direct costs or indirectly through the withdrawal of benefits.

IGO-imposed costs and the commitment problem. IGOs that generate costs for states engaging in wars can help resolve the commitment problem that typically leads to militarized conflicts. The key causal mechanism here is that particular institutional arrangements (which I discuss below) increase the cost of using force in a particular dispute. When the cost of using force increases, disputants' incentive structure changes such that settling a dispute by using force becomes a less viable option. It is essential here that institutional arrangements, that is, states' participation in IGOs, are fully public information, available to each disputant before and during conflict bargaining. This makes the institutionalized cost of using force public knowledge as well.

When using force yields a better payoff for either state in a conflict bargaining setup, one would expect at least one of the states to use force and go to war over the dispute. However, when the institutionalized cost of using force exceeds the benefit from using force for both states, the commitment problem is much more likely to be resolved. IGO participation publicly changes the payoffs of using force for each disputant. Therefore, each disputant is aware that the other state has less to gain from using force. Because this is known, disputants should have to worry less about the other state using force at any point in the present or future. Thus, the higher cost for using force, established by states' participation in IGOs, allows for peaceful bargains to be the equilibrium solution in interstate disputes. This logic

results in the following broad proposition: **States should be able to settle disputes peacefully when international institutions establish sufficient costs for the use of force.**

This cost-based logic also speaks to the question of whether the opportunity costs of fighting have any impact on whether states arrive at a peaceful bargain or end up fighting. Morrow (1999) showed that the cost of war should have little effect on the occurrence of war—unless the cost of war gives both states a wider set of credible signals. The costs emanating from IGOs with high leverage fulfill this function. Therefore, the logic of IGOs' influence on interstate disputes through leverage also illuminates the difficult-to-grasp role of opportunity costs of fighting for the evolution of interstate conflicts.

An episode from recent relations between two European countries (and by extension, Canada) illustrates how this logic works. In the 1990s, the **Turbot War** was a conflict between Canada and the United Kingdom on one side and Spain on the other. Canada had accused Spanish fishing crews of fishing turbot fish in areas where, in Canada's view, catching that fish beyond a small quota was illegal (Schaefer 1995). British fishers sided with Canada and pressured the British government to act with Canada and against Spain. Considering the times in the 1990s, a dispute between these countries faced a minimal base probability of any side using force, especially given the multidimensional linkages between the UK and Spain within the European Union. Yet, to better understand **why** we conceive of this dispute as no threat to peace it is crucial to grasp what aspect of the linkages between the UK (or Canada) and Spain may be responsible for averting more serious conflict. In a debate in the British House of Lords in 1995, a number of Lords asked the government representative, Parliamentary Secretary, Ministry of Agriculture, Fisheries and Food, Earl Howe, why the British government was not acting more aggressively toward Spain and potentially patrol the seas in order to prevent Spanish fishing crews from catching more turbot. Howe responded that more decisive action against Spain would be harmful for British interest, saying specifically:

> "A vote against the deal in 1994 would have been a silly tactic, satisfying perhaps emotionally in the short term, but disadvantageous in the long term if our aim is, as it is, to maximise the UK take."[3]

In the next paragraph of his response, Howe rejects the suggestion that British ships should attack Spanish fishing boats for the same reason. The pointer to the "long term" and the aim to "maximize the UK take" can be seen as a reference to the benefits from the cooperative arrangements with Spain within the EU. This episode suggests that the distribution of benefits within the EU and its fishing quotas was a leading factor in guiding the British government's decision to not escalate this "war." Surprisingly, none of Howe's remarks touch on the notions of a shared identity, norms of cooperation, or potential information about the Spain's plans on this particular dispute. Yet, scholars have also emphasized these other mechanisms through which international institutions can push states toward avoiding militarized conflict; information transmission, norm creation, and identity formation are among the foremost cited mechanisms for the pacifying influence of IGOs on interstate relations.

1.3 Empirics: New Data and Tests

I examine the general proposition that IOs with the ability to generate costs and withhold benefits help states resolve disputes in three scenarios. Each of these scenarios establishes a conflict of interest between states and presents substantial commitment problems for disputants. Each therefore makes for a critical test for the broad proposition of this project. Importantly, these scenarios can be seen consecutively in the steps-to-war model (Senese and Vasquez 2008); identifying how commitment problems in these steps can be solved therefore has implications for understanding how war can be prevented.

Claims and crises. The first test (chapter 5) is a quantitative evaluation of IGO's role in claims that states express toward each other and in interstate crises. My interest in this

[3] Cited in the official records of the British House of Lords, from a sitting on March 30, 1995. Source: **W.1** (Appendix C).

scenario is whether IOs can steer the conflict bargaining process toward peaceful resolution. What explains why some claims over territory, resources, or policies can be resolved, while others escalate with states using force and going to war? When a challenger has made a claim, it has expressed dissatisfaction with the status quo. The target can acquiesce or bargain over the issue. For both challenger and target, a bargaining solution rather than the costly use of force would be preferable. But neither challenger nor target can be sure that the other side might not try to exploit the other side in the future, trying to either pursue their claim when conditions are favorable, or forcing a return to the pre-bargaining status quo. In this scenario, the costs for using force generated by IGOs address this commitment problem.

Rivalries. Disputes between states sometimes lead to long-lasting disputatious relationships, so-called enduring rivalries, and sometimes remain isolated incidents. Explanations for these varying trajectories have been explored in the rivalry research program in international relations (Colaresi 2004; Diehl and Goertz 2000; Goertz and Diehl 1993; 1995; Lemke and Reed 2001**b**; Mitchell and Prins 2004; Stinnett and Diehl 2001; Tir and Diehl 2002). This body of work suggests that disputes and crises within enduring rivalries are much more likely to escalate to wars. Knowing why initial disputes turn into enduring rivalries is thus critical to understanding the occurrence of interstate conflict in general. The initial dispute again can be characterized as a commitment problem. When this commitment problem over an issue persists over a longer time, we should observe repeated conflict between states—enduring rivalries occur. IGOs may, however, resolve this commitment problem during the initial dispute, in which case disputes should remain isolated. My quantitative test in chapter 6 evaluates the validity of this argument.

New data on IGOs. In each of these tests, I use a newly compiled dataset on the leverage of international institutions. The institutional costs laid out in my argument emanate from multilateral, formal IGOs. But only a small subset of these organizations possesses the capabilities to impose costs on member states. Conflicts hinder the mandate

of one subset of organizations, while others may be mostly unaffected by member states' involvement in military disputes. In chapter 4 I identify and describe the institutions to which these criteria apply. I first used an existing comprehensive list of IGOs with the structure to impose decisions upon member states. Second, I selected from this list all institutions whose activities yield tangible benefits for member states. This step separates those institutions identified in my theoretical argument from security-related or purely coordinating institutions. Following the theoretical argument, the overall important characteristic of international institutions with regard to the development of conflicts is their leverage over member states. Institutions with little leverage cannot affect the cost of conflict and thus fail to resolve states' commitment problems. Such institutions may perform other functions: they may transmit information or be forums for socialization. For the specific cost-based mechanism of institutional influence, the leverage of institutions is central. The operationalization of this concept of leverage enters my analyses in chapters 5 and 6. The complete dataset can be easily merged with existing datasets on IGOs and contains some qualitative information on IGOs' use of leverage as well.

1.4 Implications

This dissertation has two major implications for social science research. First, it highlights a causal mechanism for the influence of IGOs on state behavior that has implications for areas other than international conflict. The mechanism itself has substantial implications, given the increasing number of IGOs in which states participate. This also makes knowing more about how and when IGOs establish costs for certain state behavior especially important. The growth of institutions involved in global governance and operating inside countries over the last decades is substantial. Many of these institutions and their mandates are affected by member or client governments' domestic and international practices. For instance, the World Bank has recently put more public emphasis on the role of conflict in various forms for the Bank's mandate of reducing development (The World

Bank 2011). Understanding the ability of IGOs to use their role and leverage to advance their mission in member or client countries is therefore an important component of better grasping the implications of global governance today. In another project, I investigate the importance of states' IGO portfolios in disputes beyond political and military issues, namely in trade disputes (Karreth N.d.). I find that contrary to earlier research, states' pursuit of a multitude of institutional arrangements in the area of trade does not only increase states' leverage in the global trade regime; it also constrains them. Findings like this contribute to a better assessment of the implications of the spread of international institutions for political outcomes across different issue areas and between and within states.

Second, the dissertation yields a new dataset with information that has not previously been available to researchers, but has been repeatedly identified as important and desirable (see, e.g., Bearce and Omori 2005). Such information about the span of issue areas in which IGOs can impose costs and withhold benefits is important for a variety of social science questions ranging from conflict within and between states to human rights and economic stability. For instance, I have previously investigated the role of IGOs in preventing the escalation of domestic political conflicts to civil wars (Karreth and Tir 2013); a follow-up inquiry into this question requires more information about whether the breadth of issues covered by IGOs may increase the influence of IGOs on domestic conflict resolution processes. Information about actual IGO behavior also has not been quantified, yet it is pivotal for establishing more credible quantitative evidence for the influence of IGOs on state behavior. Other efforts to collect such data have been restricted to the behavior of IGOs specifically tasked with conflict resolution (Mitchell and Hensel 2007; Chiba and Fang Forthcoming). Both studies document the importance of obtaining such data; my project supplies some of this information for a broader set of institutions.

Chapter 2

Open Questions about International Institutions and Interstate Conflict

When and why can international organizations help states resolve disputes? Research in international relations has long argued that international governmental organizations (IGOs) are an effective tool for states to establish cooperation. But this research has highlighted a number of competing causal mechanisms, resulting in a variety of perspectives making different predictions about the magnitude, timing, and effectiveness of IGOs' ability to resolve interstate disputes. In this chapter, I summarize what research has so far contributed to understanding the role of IGOs for conflict management in order to highlight the limitations of this extant research in establishing a clear understanding of the causal mechanism behind the relationship between IGOs and peaceful relations between states.

2.1 Definitions

Institution. Throughout this dissertation, **institution** refers to international institutions unless otherwise noted. International institutions are formal organizations that comprise at least three member states and are based on an official foundational document. International institutions also hold meetings and have at least a basic level of infrastructure, such as a secretariat or central office. This description mirrors the definition of international governmental organizations in Pevehouse, Nordstrom, and Warnke (2004) and almost all of the work on IGOs cited in this dissertation. Echoing common practice in the literature, I use the terms **IGOs**, **international institutions**, **institutions**, **international organiza-**

tions, and **IO** interchangeably.

International (militarized) conflict. This dissertation examines the development of disputes between states. These disputes can result in militarized conflict between states. Unless otherwise noted, **conflict** refers to militarized confrontations between states.

2.2 Origins: International Organization and Peace

Likely the most influential intellectual foundation of the role of international institutions for interstate peace is Immanuel Kant's **Perpetual Peace**. Kant was influential in this regard because he highlighted the importance and even the possibility of using international law and international governing bodies to regulate the interactions of liberal republics. Kant's hint at the role of international institutions beyond being powerful enforcers of rules is important here. Kant calls for a "league of peace", a permanent institution, to "[preserve] and [secure] the freedom of the state for itself and of other allied states at the same time. [...] Gradually, through different unions of this kind, the federation would extend further and further" (Kant 1795 [1903], 134-135). The core of Kant's vision is an international organization as a supreme body akin to a "civil government" that maintains order and peace within a state. This international organization would perform the same function between states.

Kant's argument responds directly to the anarchic nature of the international system in one particular sense of the term: the absence of government. This meaning of anarchy is central to the neorealist challenge to liberal (institutionalist) thought, as Helen Milner pointed out in reference to Waltz' understanding of anarchy (Milner 1991, 72). In turn, using the absence of government and institutions in the Kantian sense to define anarchy requires a definition of government in the first place. Government can be the authority tasked with the legitimate use of force. Legitimacy is, however, a multidimensional concept itself. As Milner writes then, "[o]ther notions of government stress the existence of institutions and laws that maintain order" (Milner 1991, 73). In this case, "[g]overnments legislate, adjudicate, resolve

Prisoner's Dilemmas, and provide public goods." This is the role that many scholars have ascribed to international organizations. If one is interested in the ability of IGOs to govern in a way that reduces or eliminates violent conflict between states, the pressing question becomes how IGOs obtain the ability to perform these tasks.

Early research on the role of IGOs in world politics did not address this question. For instance, Singer and Wallace (1970) explored the relationship between the degree of "international organization", that is, the number of IGOs in the international system, and the occurrence of war. Singer and Wallace (1970) found no relationship between this broad conceptualization of international organization and war, but did report that more IGOs were founded after wars had ended. More than 20 years later, Russett, Oneal, and colleagues were the first to systematically expand this investigation to dyadic relationships (Russett, Oneal, and Davis 1998; Russett and Oneal 2001). They considered the role of IGOs as a culmination of six causal mechanisms: coercing norm-breakers, mediation, providing information, problem solving, socialization, and shaping shared identity (Russett, Oneal, and Davis 1998, 444-449). The finding that there is an association between joint memberships in IGOs and the absence of conflict between states naturally does not allow to ascertain which of these six mechanisms may perform the Kantian role of international organization as government. The preliminary answer from this work to the question when IGOs help resolve disputes is simply: when there are many of them.

2.3 Different Mechanisms

Throughout the history of international relations as a field, scholars have explored the causal mechanisms summarized by Russett, Oneal, and Davis (1998). This body of work, spanning several decades, can be grouped in four perspectives. IGOs may foster shared identities and align states' preferences to prevent conflict (Haas 1964; Adler and Barnett 1998; Pevehouse and Russett 2006; Bearce and Bondanella 2007; Kinne 2013). IGOs may also promote trust between leaders and encourage peaceful bargaining between leaders

(Bearce and Omori 2005; Haftel 2007). Second, IGOs may force or incentivize states to reveal valuable information, thus eliminating private information as a main cause of conflict (Fearon 1995; Haftel 2007; Shannon, Morey, and Boehmke 2010; Kinne 2013). Third, IGOs may open avenues for multilateral talks about conflict resolution (Shannon 2009; Crescenzi et al. 2011). Fourth, IGOs may be an opportunity for conflict parties to address commitment problems (Shannon, Morey, and Boehmke 2010).

A more detailed inquiry into the features of IGOs and the related mechanisms that may reduce the probability of interstate conflict must incorporate the evolution of institutionalist research in social science in general. In the 1980s, the "new institutionalism" materialized in three variants (Hall and Taylor 1996): sociological, historical, and rational choice institutionalism. In economic work, institutionalist research has been built on the foundation that institutions can fulfill several functions to allow cooperation between individuals. While these functions are, to an extent, all linked, they have subsequently been reflected in different pieces of institutionalist theory in IR. These four mechanisms may all work jointly in favor of a pacifying influence of IGOs on interstate relations; but they are based on distinct causal pathways and address different problems: socialization; information provision; dispute resolution, mediation, and enforcement; and helping make commitments credible.

2.3.1 Socialization

IGOs' role in socializing states toward more peaceful relations is grounded in a "soft" constructivist account of international institutions in the literature on security communities. This idea had received continued attention from constructivists, but many empirical tests were inconclusive. This is not meant to discount the importance of ideational and constructivist research on the role of IGOs for interstate conflict. In fact, much of that work had a significance influence on IR theory in general; for instance work on security communities (Adler and Barnett 1998). The key constructivist argument about socialization posits that

institutions help shape a shared identity between states. Thus, they do not immediately eliminate the potential causes for conflicts of interest, but they change the framing of these conflicts. Second, in the longer run, institutions may generate shared rather than conflictual interests.

Bearce and Bondanella (2007) tested this argument and found that states' collaboration in some institutions (highly institutionalized IGOs) can be linked to a gradual approximation of interests expressed as votes in the UN General Assembly. From a different angle, Haftel (2007) and Bearce and Omori (2005) showed that the institutional feature that is most robustly associated with peace between members of preferential trade agreements is the frequency with which these PTAs provide for meetings between state leaders and high officials. These studies use specific information about institutional features and the typical time lag associated with socialization and identity-crafting to approximate the theoretical argument. However, as the next few sections show, the institutional features that allow for socialization frequently overlap with other features that are associated with other causal mechanisms as well.

2.3.2 Information and monitoring

Institutionalist research in economics has identified information problems as one obstacle to growth-generating economic activities. Similarly, today's primary approach to the study of international conflict, the bargaining framework (Fearon 1995), identifies private information and incentives to misrepresent it as one of the three (or two) **rationalist explanations for war**. If private information causes interstate conflict, institutionalist theory would suggest that institutions can mitigate this cause of conflict.

Two particular issue areas are probably the most significant in this respect. States can maintain private information about their capabilities as well as about their intentions. Some types of institutions may be most likely to address the first type of information problem. Some military alliances require states to reveal some information about their military equip-

ment, training, and other factors relevant to warfare. Leeds (2003) has conducted research on alliances, coding whether they require members to reveal otherwise private information to other alliance members. This is one example of work that disaggregates one type of institutions in order to get a better understanding of this particular mechanism that may drive the IGO-peace relationship. Other examples include provisions in post-conflict peace agreements (Werner 1999); collective or regional security arrangements; or river treaties (e.g., Tir and Stinnett 2011).

In addition, states may strategically use international institutions in conflict bargaining in order to reveal information about their preferences or resolve. Thompson (2006), Chapman (2009), and Chapman and Wolford (2010) focus on the United Nations Security Council as a key institution that can perform this function. In this logic, the presence of institutions allows states to engage in (potentially) more efficient bargaining and to avoid fighting due to information problems. Kinne (2013) suggests that states' position in the IGO network reveals information about their type and thus allows more efficient signaling in interstate disputes. As I show in chapter 3, however, the role of IGOs with regard to information problems still presumes states' **choice** of using the IGO, rather than establishing an independent effect of IGOs.

2.3.3 Dispute resolution and enforcement

With an eye toward a more active role of IGOs, scholars have also explored the role of IGOs as dispute resolution bodies and mechanisms. Here, IGOs may reduce conflict by (a) identifying disputes early and (b) offering default resolution mechanism that make the process of dispute resolution cheaper, compared to ad-hoc dispute resolution or the militarization of disputes. Work on dispute resolution has advanced considerably in several issue areas, particular international trade. A number of studies has explored this mechanism with regard to interstate disputes as well. Studying disputes over different issues (such as territorial or maritime disputes), Mitchell and Hensel (2007) suggest that IGOs with proper dispute

resolution mechanisms can help prevent conflict even when the probability of conflict may be high ex-ante. Similar results exist for disputes over rivers (Hensel, Mitchell, and Sowers 2006). Hansen, Mitchell, and Nemeth (2008) similarly found that more democratic and more institutionalized IGOs are associated with interstate disputes ending in agreements.

Another factor supporting IGOs' role in dispute resolution is their enforcement capability. That is, they make noncompliance with the institution's mandate or ruling costly. If the steps toward interstate conflict between members can be framed as noncompliance, enforcement is a crucial mechanism to explain any IGO impact on interstate dispute. Again, work by Boehmer, Gartzke, and Nordstrom (2004) was relevant in evaluating this mechanism. BGN found that institutions with enforcement capability were associated with a lower risk of interstate conflict. In turn, though, the crucial question in particular with respect to enforcement is whether states' granting enforcement capabilities to an IGO must be explained by a latent factor that is also causally prior to the (observed) lower probability of conflict between members of that IGO. Bargaining over joining IGOs with a specific **security**-related mandate could, however, be seen as a screening mechanism for disputatious potential members (Donno, Russett, and Metzger N.d.). In that case, the association between such IGOs and dispute resolution is again only limited for the independent role of IGOs in helping states overcome disputes.

2.3.4 Commitment

In Fearon's bargaining model, the second major "rationalist explanation for war" is the time-inconsistency, or commitment, problem. Given that states' power will fluctuate, states cannot credibly commit to not seeking a revision of the status quo in the future when the distribution of power raises the odds of successful revisionism. IGOs can potentially address this problem by imposing additional costs on revising the status quo, and providing benefits for maintaining commitments. For instance, work on issue linkage (e.g., Poast 2012) can be interpreted as supporting this idea. To test this particular mechanism, scholars have

identified institutional features that may proxy the role of institutions as a commitment device. The logic here is that only those institutions allow for commitment that are (a) to a degree structurally independent from states' preferences and (b) able to enforce institutional sanctions on states. Boehmer, Gartzke, and Nordstrom (2004) find some indirect support for this argument under certain conditions but do not see it as the main driver of IGO influence. Shannon, Morey, and Boehmke (2010) suggest that the commitment function of IGOs increases the durability of peace after war. Similar to work on socialization and information, however, the structures that are generally seen as promoting commitment (such as general institutionalization) are observationally equivalent to those "covering" these respective causal mechanisms.

Yet, work on IGOs as commitment devices has proven fruitful in other issue areas as well, e.g. international trade and protectionism (Baccini and Kim 2012), foreign investment (Büthe and Milner 2008), and human rights (Simmons and Danner 2010). These studies spent more efforts on identifiying specifically the features of IGOs that make help potential and existing members make commitments. Thus, more productive research in this direction can benefit from a more fine-grained look at the institutional characteristics that are likely to enhance states' commitments and prevent dispute escalation due to commitment problems. This dissertation focuses on this exact role of IGOs. I first examine the conflict process and the various steps at which IGOs may exercise a pacifying influence via resolving commitment problems. Then, I provide ample evidence for the active engagement of IGOs in this vein. For that discussion, it is important to note that the IGOs I identify as addressing commitment problems are quite distinct from traditionally more security-related IGOs; their commitment-enhancing influence works through economic channels. Studying this causal pathway thus offers a productive way to address several of the inferential challenges summarized below.

2.4 IGOs and the Conflict Process

The previous section illustrated theoretical advancements in exploring the mechanisms of IGO participation that reduce the probability of interstate conflict, as well as promising empirical evaluations of these mechanisms. I now turn to a second type of progress: diversifying the outcomes of interest that are used to evaluate a pacifying impact of IGOs. While there are a number of important outcomes that merit discussion in the broader scheme of international institutions, conflict, and cooperation, I restrict this discussion to four outcomes that are most directly related to interstate conflict.

2.4.1 Motivation for diversification

There are three main reasons that may motivate looking beyond conflict onset as an outcome of interest in evaluating the pacific impact of IGOs. First, explaining and predicting conflict onset is plagued by problems in terms of theory (e.g., multicausality), observability (e.g., Most and Starr 1989), and statistics (e.g., King and Zeng 2001). Second, conflict onset may suffer most substantially from the charge of endogeneity when it comes to establishing a causal impact of IGOs. Third, conflict onset is only one particular outcome of interest when one is interested in determining the causes of interstate dispute. In other words, a number of important processes take place before and after conflicts begin. Each of these processes contributes to the overall rate of conflict we observe in the international system. Hence, diversifying outcome variables in this research area is particularly important.

2.4.2 Disputes and bargaining

Because the bargaining approach has become so central to the study of conflict (see, e.g., Wagner 2000; 2010; Lake 2010), it lends itself as a framework to study the impact of institutions as well (e.g., Bearce, Floros, and McKibben 2009). Fearon (1995) argued that states are more likely to bargain over outcomes when the shadow of the future is

longer. Based on early institutionalist research (Axelrod 1984; Axelrod and Keohane 1985), Bearce et al. suggest that shared membership in IGOs proxies a longer shadow of the future. Consequently, they find that when states make or encounter territorial claims, they are more likely to engage in bargaining when they have substantial IGO links. Mitchell and Hensel (2007), who initially collected the Issue Correlates of War data that makes such tests possible, similarly find that international institutions make cooperative bargaining more successful. This type of research on bargaining productively addresses the endogeneity problem in that it moves back toward an earlier stage of interstate disputes.

2.4.3 Conflict escalation and duration

The institutional mechanisms laid out above, particularly in the previous section, have additional implications. If one assumes that IGOs remain "relevant" or active during conflict, they should also have an impact on the way that conflicts are conducted. One way to study this aspect is to examine the duration of conflicts in combination with their onset. For instance, Shannon, Morey, and Boehmke (2010) make a distinction between two institutional mechanisms explained above, information and commitment. They argue that each mechanism may have different impacts on conflict onset and duration. For instance, IGOs may not be able to force states to reveal private information, and thus they may not prevent conflict due to informational asymmetries. But IGOs may function as commitment devices that can be useful once the process of fighting has eliminated informational asymmetries (Wagner 2000; Powell 2004; Filson and Werner 2002). In that case, one should expect shorter conflicts between states that both engage in IGOs that may function as commitment devices. Shannon et al. do not test all implications of this argument, but provide an productive perspective on how the IGO-peace relationship can be approached. Another example is the distinction between low-level conflict and conflict escalation, used in Fausett and Volgy (2010). Fausett et al. find that IGOs may provide an opportunity for increased interaction that produces low-level disputes, but that states are then less likely to escalate

these disputes.

This focus on the complete life cycle of conflicts, particularly in the study of the role of IGOs, can be productive because it helps isolate different types of effects of IGOs on different problems attached with different conflict phases. In the empirical part of this dissertation, I follow this practice and investigate the relationship between IGOs and the evolution of disputes.

2.4.4 Conflicts and rivalry

Even when militarized disputes end and are settled, states face a variety of challenges to maintaining settlements. We know that many conflicts are manifestations of enduring rivalries (e.g., Colaresi 2004; Colaresi, Rasler, and Thompson 2007; Diehl and Goertz 2000; Goertz and Diehl 1993; 1995; Lemke and Reed 2001**b**; Mitchell and Prins 2004; Stinnett and Diehl 2001; Thompson 2001; Tir and Diehl 2002), that is, many conflicts occur within the same pairs of states. This makes explaining the occurrence of rivalries similarly important as explaining conflict onset in the first place. Although not IGOs in the strict sense, particular features of peace agreements may have an impact on the duration of post-conflict interstate peace (Fortna 2004; Werner and Yuen 2005), and therefore indirectly on rivalries. This is especially valid if such provisions are supplanted by IGO involvement, e.g. through monitoring and the provision of impartial information. Prins and Daxecker (2008) suggest that IGOs also help end rivalries—but this does not specifically explain how states can engage with IGOs during a rivalry.

For that reason, the third empirical test in this dissertation explores the impact of IGOs on the stability of relations between countries that were engaged in militarized conflict but have stopped fighting: can IGOs contribute to keeping militarized disputes isolated incidents, and prevent them from slipping into enduring rivalries? Considering the centrality of post-conflict reconstruction in the mandates of some IGOs, such as the International Bank for **Reconstruction** and Development, this test evaluates a core element of the international

order after the Second World War.

2.5 Inferential Challenges

For a valid assessment of the role of IGOs in interstate disputes, scholars have yet to conclusively address two questions: which causal mechanism explains the association between IGOs and interstate peace? And are joint memberships in IGOs themselves a product of two states' low baseline propensity to get involved in disputes in the first place? Understanding the role of IGOs is crucial not only for academic interest, but also instrumental for being able to predict the trajectories of disputes between states, informing the costs and prospects of different courses of action in interstate crises, and learning lessons about designing international institutions.

The first question is summed up in the conclusion of another major study of IGOs and interstate conflict. After finding joint memberships in democratic IGOs to be associated with a lower probability of conflict onset, Pevehouse and Russett (2006, 995) conclude that "these [...] results of course cannot tell us exactly how democratic IGOs work to prevent conflict among their members, nor can they sort out the effect of the different causal processes we suggested as operating." Lacking the ability to discriminate between different causal mechanisms is problematic for this research program because it prevents us from making inferences about (a) what type of conflicts IGOs may resolve (e.g., conflicts that arise from private information versus those that are due to commitment problems) and (b) necessary or sufficient conditions for IGOs to prevent conflict.

The second question is equally consequential for the IGO-peace research program. All but a few studies have examined whether joint memberships in IGOs reduce the probability of conflict onset. An obvious issue that researchers addressed subsequently was whether joint memberships in IGOs are themselves a product of two states' low baseline propensity to get involved in disputes in the first place. Indeed, at least one published study suggests that peaceful pairs of states are more likely to collaborate in those institutions previously found

to be associated with the absence of conflict (Boehmer and Nordstrom 2008). So far, this second question has not been decisively answered. With an eye toward making inferences from the past, it is therefore not clear whether the potential of IGOs to prevent militarized disputes between countries is truly independent of states' previous amicable relations. This is exacerbated by the fact that almost all extant work examines the relationship between IGOs and conflict onset. Such inquiries have to rely on a pre-defined group of what is commonly referred to as "politically relevant dyads" in order to establish the population of pairs of states that have both the opportunity and willingness to go to war (Most and Starr 1989). As Xiang (2010) has shown, however, the use of pre-defined politically relevant dyads amounts to biasing results. And even using politically relevant dyads routinely yields biased results when the sample is still dominated by a large number of cases with a prior near-zero probability of the event of interest (conflict onset) actually occurring (King and Zeng 2001). In the context of potentially endogenous relationships, such as that between IGOs and conflict onset, this is problematic because researchers cannot credibly establish the independent role of IGOs in resolving disputes between states. The few studies that do look beyond conflict onset (such as Mitchell and Hensel 2007; Shannon 2009; Shannon, Morey, and Boehmke 2010; Hansen, Mitchell, and Nemeth 2008) have yet to identify a clear causal mechanism through which IGOs may help resolve disputes. Identifying this mechanism is essential to adjudicating whether the proliferation of IGOs in various fields is (a) causally associated with the decline in militarized conflict between states (Goldstein 2011) and (b) has the potential to contribute to dispute resolution in the future.

2.5.1 Conflict onset, opportunity and willingness

Many studies I discuss in this chapter share one feature: they explore whether international institutions (or specific features) are associated with the risk of conflict onset. This type of inquiry only allows limited inferences for logical and methodological reasons that have one common cause. Only few pairs of states are at a noteworthy probability of ever

facing conflicts of interest that might lead to disputes or wars. Most and Starr (1989) express this as the combination of opportunity and willingness. By examining only conflict onset, studies choose to mostly ignore this combination of necessary factors. Methodologically, the results of statistical analyses of an overwhelmingly large number of non-events (dyad-years without conflict onset) and a small number of events (wars or militarized interstate disputes) are not immediately meaningful when one is searching for factors explaining the events of interest (King and Zeng 2001). Bearce and Omori (2005) and others have made use of statistical corrections for this problem. However, the substantial meaning of these findings is restricted to the observable relation between participation in international institutions and conflict **onset**.

In contrast, my dissertation aims specifically at exploring the effect of international institutions on conflict processes: (how) can institutions change the evolution of a dispute once that dispute has begun? This is a separate question that has received less attention, but is at least equally important to answer because these are the cases where a potential influence of IGOs really matters. One particular reason for the importance of this question—and one benefit of my study—is the second major issue with research on institutions and conflict: the inherent threat to inference arising from self-selection of state dyads into institutions and the resulting endogeneity of institutional effects.

2.5.2 Self-selection and reverse causality of institutional effects

Popular realist (and methodological) critiques of institutionalist research on conflict suggest that states only join institutions in order to gain rewards for behavior they would pursue anyway (Mearsheimer 1994; Downs, Rocke, and Barsoom 1996; von Stein 2005). This critique directly targets such studies that find associations between joint institutional participation and the risk of conflict onset because it is entirely possible that pairs of states only jointly enter international institutions when they see no or a negligible risk of conflicts of interests that could evolve into disputes. In contrast, my interest in the effect of institutions

on dispute development avoids this problem by examining only the relevant subset of cases where states have demonstrated a viable conflict of interest. In addition, I empirically address the degree to which endogeneity might bias my findings.

2.5.3 Focus on institutional mechanisms

The research that **has** examined cases where conflict is present (see, e.g., Shannon 2009; Shannon, Morey, and Boehmke 2010) has focused on security-related institutions, but has not offered much guidance how empirical features of such institutions might be linked to theoretical conflict resolution processes. Tir and Stinnett (2012), for instance, point to treaty institutionalization as mitigating potential water conflicts, but so far have not presented evidence about particular institutional features (beyond cumulative institutionalization) that could be linked up to institutional theory. But this refined focus is necessary to adjudicate whether institutions affect dispute bargaining by solving information or commitment problems, and—subsequently—to clarify when international institutions might steer disputes toward peaceful resolution and when they are ineffective at doing so.

Consequently, some authors suggested for future work that researchers "might develop more refined measures to test the specific bargaining obstacles that IOs are most effective in removing" (Shannon, Morey, and Boehmke 2010, 1135). I offer a theoretical and empirical approach for moving in this direction. First, I focus on the influence of exogenous costs (imposed by institutions) on the dispute bargaining process, and specify a theoretical model, illustrating how institutions resolve the commitment problem in dispute bargaining. Second, I examine several possibilities of empirical institutional structures that capture the cost-benefit mechanism; here, I move beyond previous models that assumed linear relationships captured in either a count of institutions or subsets of institutions that capture several theoretical mechanisms at once.

2.6 Conclusion

This chapter summarizes the state of the knowledge in political science research on the question whether and how international institutions may contribute to the peaceful resolution of disputes between countries. Scholars have identified a number of different mechanisms that link IGOs to dispute resolution, but it has so far been difficult to ascertain which mechanism is comparatively more effective in performing this role. Because the number of IGOs is growing, just as the variation in tasks they perform and design features they embody, it is crucial to understand how these developments will likely impact interstate disputes and international relations in general. To that end, the next chapter begins by discussing the impact of interstate militarized conflicts on the mandate of IGOs in order to establish their interest in conflict in general. I then show how IGOs can change the costs and benefits of different conflict strategies for states in disputes. The chapter concludes by spelling out the general implications of that logic for interstate disputes.

Chapter 3

Theory: How Institutions Change Costs and Benefits in International Disputes

This dissertation asks how international institutions can contribute to the peaceful resolution of political disputes between states. In this chapter, I develop a theory showing that particular international institutions have an indirect and latent, but effective influence on states' decisions to use force in such disputes. Herein, I focus on institutions that are **not** explicitly tasked with a security-related mandate. Theorizing and testing the influence of these institutions allows to isolate a cost-benefit based mechanism of institutional influence. On the other hand, IGOs with an implicit or explicity security mandate, such as regional security organizations, regional or global forums for conflict prevention, or alliances may affect the management of interstate disputes through other channels that I address toward the end of this chapter. The previous chapter, taking stock of research on international institutions and interstate conflict, established why the role of such IGOs that affect costs and benefits—but may not have a security-related mandate—requires a better understanding.

The theory begins with two states that face a visible conflict of interest. This can be a claim one state makes to another, where one state wants to obtain land or resources from another state, or influence that state's policy in a particular way. Conflicts of interest frequently lead to disputes between states; these disputes can range from the exchange of diplomatic notes and withdrawal of diplomatic personnel to non-fatal hostilities and, eventually, war. When states go to war and the fighting ends, conflicts are often not terminated perpetually, but frequently recur. In each of these scenarios, states face commitment prob-

lems as a major hurdle to peacefully resolving their disagreement. These interactions are classically defined as a prisoner's dilemma (see, e.g., Jervis 1978), where the lack of centralized enforcement in the international system forces states in disputes to use force in order to avoid being exploited in the future.

Under certain conditions, international institutions can mitigate exactly these commitment problems, and thus contribute to interstate conflict resolution. In generic terms, particular institutions do this by fixing costs and benefits for states. In the context of interstate conflict, institutions provide benefits during the absence of military conflict and (often) impose additional costs for conflictual behavior. Because these costs and benefits are observable, they act as a commitment device for states involved in conflicts. In this chapter, I elaborate on (a) the origin of these costs and benefits through institutions and (b) specify the exact pathways through which I expect them to affect conflicts. These processes, in the broader picture, illustrate the impact that the growth of international institutions, institutionalized economic interdependence, and global governance have had on interstate conflict processes. In combination with the empirical chapters that follow, the argument isolates one important cause behind the decline in interstate conflict over the last few decades (Gaddis 1986; Goldstein 2011; Themnér and Wallensteen 2013).

Throughout this theory, I use information on two institutions that are exemplary for the type of influence that is the focus of the theory: the World Bank (hereafter "the Bank") and the International Monetary Fund (IMF). Exemplary case evidence serves here to supplement theory building with more specific information about the processes underlying the theoretical arguments, as informed by George and Bennett (2005) and others. Later in the chapter, I elaborate on why the Bank and the IMF are representative of a specific subset of institutions that possess a unique position in international relations to change the costs and benefits of states' choices in interstate disputes. In the subsequent chapter 4 I describe this whole set of institutions in more detail. Examining the World Bank and IMF's approach to militarized conflict here serves to elucidate the causal mechanism behind my theoretical argument.

3.1 Institutions, Costs, and Benefits

Institutions in a general sense, beyond international relations, "structure incentives in human exchange" (North 1990, 3). The aim of these incentive structures is usually to overcome collaboration problems and increase the welfare of institutions' members in the long term. There are several channels for institutions to achieve this goal, but an important one is grounded in a cost-benefit logic. A classic example of institutions enabling cooperation illustrates this logic. The **Law Merchant** (Milgrom, North, and Weingast 1990) was a system to centralize information about the reputation of medieval traders. Traders who cheated thus incurred reputational costs for cheating. On the other hand, compliant traders received the benefit of participating in distant markets thanks to the Law Merchant system's centralized information about traders' reputation—information that the system made easily accessible for even geographically distant potential trading partners. Similarly, the WTO as well as regional trade organizations are commonly thought of as trade-facilitating because they created centralized institutions that negotiate rules and adjudicate over compliance with these rules; non-compliance results in costs such as sanctioned retaliation or temporary exclusion.

In these examples, the institution is able to impose costs and withhold benefits because of its central role in administering trade between merchants or states. To explain the impact of international institutions on interstate militarized conflict, I focus on international institutions that yield tangible benefits and have the capacity to withhold these benefits and impose costs on states. The logic here is similar—based on costs and benefits—but also different in that I assert an institutional effect beyond the institution's original mandate.

3.1.1 The cost of conflict for international institutions

The main argument in this dissertation is built on the assumption that military conflict involving members of an institution is costly for the institution. This section provides

some evidence to substantiate this assumption. Institutional cooperation between states is generally hampered when one or more member states are engaged in militarized conflict. For example, for the case of preferential trade agreements, Mansfield and Pevehouse (2003, 236) suggest that

> "[i]nterstate conflict can scuttle these expected gains [from entering a PTA] by undermining commitments to sustain commercial liberalization, inhibiting investment on the part of firms that are reluctant to operate in unstable regions, and damaging the bargaining power of members in negotiations with third parties."

These losses from conflict are not limited to PTAs or commercial (trade) institutions (Bearce 2003**b**), as previous research has suggested. Many types of international institutions should experience some damage when members are at war (e.g., Smith 2013). In turn, the missions of the institutions—such as delivering benefits to member states—can be negatively affected. Multilateral development banks lose some of their investments and loans when recipient states spend considerable resources on war and when military action causes damage in recipient countries. Similarly, organizations that coordinate the production of exportable goods, such as oil or coffee, suffer from heightened uncertainty if one or several members are at war. Equally important, interstate conflict and political violence in general frequently divert resources from cooperative purposes to the conflict, for instance through increased funding for security expenditures.

In line with this dynamic, and exemplary for other institutions, the World Bank and IMF have long recognized the cost of conflict and political violence. This section therefore focuses on these two institutions' treatment of conflict and political violence in order to theorize about the cost of conflict for a broader set of international institutions. Establishing this point requires a closer look at both institutions' general missions, operational procedures, and lending practice. Both the Bank and IMF have no direct conflict resolution mandate at all. At the Bretton Woods conference in 1944, the Allied Forces founded the International Bank for Reconstruction and Development and the IMF as vehicles for two general purposes.

First, the IBRD was to coordinate the reconstruction of the countries directly affected by the Second World War. Second, the IMF's mission was to function as an international infrastructure to avoid the type of economic crisis that had, based on common understanding among the Allies, fundamentally contributed to the dynamics cumulating in the Second World War.

As such, neither the World Bank nor the IMF have **conflict resolution** mandates: neither institution is tasked with resolving conflicts between member states or between member and non-member states. In fact, each institution is required to maintain political neutrality. This pillar of the institutions' mandates is well reflected in staff's current behavior. Bank and IMF staff frequently emphasize that they take no official position on political conflicts among member states, or between member and non-member states.[1] While this assessment is correct in terms of the legal mandate of the Bank and IMF, it is crucial to emphasize that the Bank and IMF (and other institutions as well) have recognized the important effects of interstate conflict on their core missions, economic development and macroeconomic stability.

Prominent evidence for this assumption comes in the publication of the 2011 World Development Report (The World Bank 2011). Each year since 1978, the Bank has published one such report that focuses on one particular topic. The Bank's president chooses this topic three years before the year in which the report is published.[2] In this case, the Bank's president at the time, Robert Zoellick, gave a speech in 2008 outlining the general negative effects of conflict on economic development, noting in particular the issues of unstable institutions, public health problems, and regional instability. The fact that the whole 2011 WDR focused on conflict underlines the importance of conflict and organized violence and their detrimental effect on the Bank's key mission, economic development. The report is

[1] An example can be seen in a report the Bank's role in combating corruption: "[...] its staff must be concerned only with the economic causes and effects and should refrain from intervening in the countrys political affairs." Source: **W.2** (Appendix C).

[2] See source **W.3** (Appendix C) for more background information on the World Development report.

unequivocal about the impact of conflict on development:

- "insecurity not only remains, it has become a primary development challenge of our time." (p. 1)
- "The death, destruction, and delayed development due to conflict are bad for the conflict-affected countries, and their impacts spill over both regionally and globally." (p. 5)
- "[...] organized violence [...] disrupts governance and compromises development [...]" (p. 53)
- "Poverty reduction in countries affected by major violence is on average nearly a percentage point slower per year than in countries not affected by violence." (p. 60)
- "The disruptive effect of violence on development and the widening gap between countries affected by violence and those not affected are deeply troubling." (p. 60)
- "Violence is the main constraint to meeting the MDGs." (p. 62)
- And finally, in the year following the report's release, the Bank established a separate unit aimed at dealing directly with the cost of conflict: the **Center on Conflict, Security and Development**[3] as well as an evolving knowledge platform designed to provide the Bank's staff with access to conflict-specific resources.[4]

One of the key themes of the report is that violence in the 21st century takes on many forms that were previously ignored by development practitioners: organized crime, local violence, drug-related crimes, or local intergroup conflict. At the same time, though, the WDR notes the disruptive role of "traditional" (interstate and intrastate) conflict for development. In that type of conflict, the Bank's role as part of the development community has been more

[3] See source **W.4** (Appendix C) for more information
[4] See source **W.5** (Appendix C) for this platform.

or less clearly defined as "promoting the prosperity and capability of the nation-state (but stepping out during active conflict)" (The World Bank 2011, 2). This role of the Bank in "traditional" conflict at least indirectly suggests that interstate conflicts have detrimental consequences for the Bank's mandate, as projects cannot be successfully implemented if they are interrupted due to conflict, or if the main funding agency has to withdraw during episodes of political violence.

The International Monetary Fund mirrors the Bank's relationship with conflict. IMF staff are quick in emphasizing that the Fund's mandate is a purely a-political one and that the Fund is exclusively concerned with economic and monetary affairs. However, this does not preclude a serious concern among all levels of IMF staff about the negative effect of conflict on economic and financial stability, the core mandates of the IMF. In October 2009, the then-managing director, Dominique Strauss-Kahn, delivered a speech on "Economic Stability, Economic Cooperation, and Peace—the role of the IMF."[5] In this speech, Strauss-Kahn emphasizes the economic losses from military conflict and its detrimental effects on the Fund's efforts. He even goes so far to state that "we can attain a virtuous circle of peace and prosperity, and avoid a vicious circle of conflict and stagnation. On first glance, this might seem incidental to the role of the IMF. But it is not. It underpins our mandate." This statement is important because it qualifies the strictly apolitical role of institutions such as the IMF and the World Bank: interstate conflict and instability seriously undermine the purpose for which these institutions were created in the first place.

In the past, the IMF has indeed taken steps to address political disputes in order to avoid economic and financial instability in a variety of cases:

- At the 1991 Annual Meetings of the Fund, several high-ranking IMF staff members emphasized the challenge of Fund operations in client states engaged in political disputes and, specifically, dedicating substantial resources to military spending and

[5] See source **W.6** (Appendix C) for the full text of the speech.

the armed forces.[6]

- A 2002 research paper addresses the "Fiscal Consequences of Armed Conflict and Terrorism in Low- and Middle-Income Countries" and emphasizes its detrimental effects on the IMF's key goal of macroeconomic stability.[7]

- In the aftermath of Vietnam's occupation of Cambodia, IMF assessments at a level as high as the Executive Board note and push for military demobilization "as aggressively as political condition will allow."[8]

- A 2005 IMF Article IV consultation with Ethiopia notes concern about the disputed border with Eritrea with regard to the political background for macroeconomic stability.[9] Article IV consultations are regular discussions between the IMF and client countries that are required by Article IV of the IMF Articles of Agreement.

- Reports on earlier consultations had stated: "Meanwhile, the Development Assistance Group (DAG) in Ethiopia has underscored that the Government of Ethiopia should avoid escalating defense expenditures while the border dispute remains unresolved";[10] "the border conflict with Eritrea increasingly hampered the government's efforts to consolidate stabilization gains;" "Ethiopia's economic situation deteriorated sharply as a result of [...] the impact of the border conflict."[11]

- The current tensions between China and Japan over the Senkaku/Diaoyu Islands led current IMF Director Christine Lagarde to state that "Both China and Japan are key economic drivers that do not want to be distracted by territorial division" and that "the shaky global economy could not afford to have the two nations embroiled

[6] See excerpts from these speeches in an archived document in source **W.7** (Appendix C).
[7] See source **W.8** (Appendix C).
[8] See source **W.9** (Appendix C).
[9] See source **W.10** (Appendix C).
[10] See source **W.11** (Appendix C).
[11] See source **W.12** (Appendix C).

> in a territorial dispute after Chinese banks withdrew from the fund's annual meeting in Tokyo."[12]

All these examples help sustain the assumption that a particular subset of international organizations is particularly averse to conflict between member states because it negatively affects these institutions' missions. The World Bank and IMF stand exemplary for a host of other institutions that also facilitate economic development, such as regional development banks, or other forms of economic exchange, cooperation, resource usage or production.

3.1.2 Institutions and the cost of conflict for member states

The previous section suggests that member states' involvement in militarized conflict has negative effects on these institutions' mandate. Do these effects translate into any potential actions or procedures of institutions when they anticipate their mandate to be compromised? This section details why a particular subset of international institutions automatically generates costs for member states involved in military conflicts. These costs are important to establish the importance of international institutions in the conflict bargaining context.

Some institutions routinely translate these negative effects into costs for member states engaging in military conflict. In other words, when a member state chooses to go to war over an issue with another state, that member state can expect some form of negative ramification from the institution. This ramification may come in the suspension of benefits, direct costs (such as sanctions), or exclusion.

The origin of costs. Assuming such costs is less heroic than it may seem. Consider two states engaged in a disputatious claim. Going to war over this claim will have a rather dramatic effect on a state's dedication of domestic resources. For instance, Gibler and Tir (2010) have shown that states engaged in territorial disputes are more likely to sustain autocratic regimes and suppress democratization efforts. In the same dynamic, we can expect

[12] See source **W.13** (Appendix C).

that states at war will face few incentives to focus on, and thus display, cooperative behavior toward other members of an institution. For instance, a country at war should be less likely to liberalize trade, implement projects on development loans, and provide stable resource output to a collective arrangement such as OPEC. Such unstable and unreliable behavior is a fundamental problem for an institution's mission, as the previous section laid out by way of referencing examples from the World Bank and IMF.

Types of costs. As a consequence, member states can expect costs with different time horizons. Immediately, states at war may experience a suspension of benefits that the institution is distributing, such as loans, projects, or information. As the World Development Report stated, institutions such as the Bank typically "[step] out during active conflict" (The World Bank 2011, 2). In the medium term, states at war may be excluded from active institutional cooperation, such as the further liberalization of trade barriers in trade organizations. In the longer run, warring states may gain the reputation of unstable partners that tarnish the institution, which may then preclude them from extensions of current institutional arrangements. Altogether, it should not be controversial to expect that going to war will create costs—either as directs costs or indirect through the withdrawal of benefits—for the respective state.

Clear rules for imposing costs. While institutions with the appropriate leverage **can** impose costs on member states that engage in conflict, it is not clear that they **must** or **will** automatically do so. In general terms, this renders the role of international institutions in interstate conflict quite situation-specific. If it is the case that institutions only impose costs in selected cases, their influence over the evolution of disputes should vary. This type of influence is familiar mostly from security institutions that primarily impose legal, reputational, or audience costs on states that use force against the institution's approval. For instance, Chapman and Wolford (2010) develop a formal model finding variation in the influence of a hypothetical international organization: "while the organization sometimes forces moderation and deters overly aggressive demands, it can often encourage more aggressive de-

mands than states would otherwise make" (Chapman and Wolford 2010, 228). Consequently, states may seek the support of an IGO to advance their own leverage in a dispute: "[IO] support can significantly alter their bargaining positions by lowering the costs of the outside option of war." Similarly, Chiba and Fang (Forthcoming) focus on **opposition** from IGOs to a state's claim against another in a territorial dispute. They emphasize the "direction of IOs' advice in order to understand the conflict reducing effect of IOs" (14) and therefore examine the statements and signals that (mostly security-related) IGOs have made during territorial disputes. Both of these studies exemplify a key function of (collective) security institutions such as the United Nations, regional organizations, or international courts. They mostly take an active involvement in conflicts and attempt to facilitate bargaining solutions. However, this active involvement requires initiative by the institution; more importantly, the costs imposed by these institutions vary with the context of the conflict.

This variation means that it is unclear ex ante for the states involved in a dispute whether pursuing a dispute and risking its escalation will draw any costs from international institutions. In the context of international courts, for instance, this means that states may spend resources to sway the court's ruling on a dispute. For IGOs in general that can, but need not be consulted, states can strategically choose whether to involve them in a dispute or not (Chapman and Wolford 2010; Fang 2010). The effect of IGO-imposed costs on the evolution of conflicts is then conditional.

The effects of economic costs imposed by the type of IGOs discussed in the previous section differ markedly from this description. Unlike security institutions that may actively get involved in conflicts, the institutions in the focus of this dissertation have no direct conflict-related mandate. On the other hand, they have quasi-automatic rules and processes in place that impose costs on member states engaged in conflict. As mentioned above, the World Bank typically "[stepped] out during active conflict" (The World Bank 2011, 2). More specifically, many of these institutions are unable to carry out their mandate in states during conflicts or in areas that are prone to conflict, such as disputed border areas. For example,

the World Bank is explicitly prohibited from engaging in projects that are disputed between two or more countries. The Bank's "Operational Policy (OP)/Bank Procedure (BP) 7.60: Projects in Disputed Areas" states that "the Bank will only finance projects in disputed areas when either there is no objection from the other claimant to the disputed area, or when the special circumstances of the case support Bank financing, notwithstanding the objection."[13] This particular operational policy is part of a number of safeguards that, while not directly related to interstate conflict, specify rules of engagement for Bank projects. Another example, the OP on Projects on International Waterways specifies that "the Bank attaches great importance to the riparians making appropriate agreements or arrangements for the entire waterway, or parts thereof, and stands ready to assist in this regard. [...] In the absence of such agreements or arrangements, the Bank requires, as a general rule, that the prospective borrower notifies the other riparians of the project."[14]

To understand the significance of these safeguards, it is imperative to briefly review the processes through which development banks such as the World Bank engage with countries. Client governments typically apply for loans for specific projects. The Bank and its staff often serve in an advisory role in the design of such loan applications, using much of the research and know-how the Bank has accumulated. The Bank's Board of Directors approves loan applications; but before the approval, bank staff—such as regional and country directors and their teams—typically work on improving and revising the loan application and the projects in it in order to fit the Bank's criteria for loan approvals. In this step, Bank staff carefully examine proposed projects for conflicts with Bank safeguards and general potential that the projects may either contribute to or substantially be hampered by conflict-related instability.[15] This combination of institutional safeguards and pre-approval processes means that the Bank is structurally predisposed against disbursing funds in situations that are or would be negatively affected by conflict.

[13] This policy is summarized at source **W.14** (Appendix C).
[14] This policy is summarized at source **W.15** (Appendix C).
[15] Bank staff members, practitioners as well as researchers, describe this practice in similar terms .

The IMF's mission is different—the IMF focuses on short-term loans and macroeconomic stability—but its mandate is equally apolitical. Yet, the IMF also has standards for operation that make it improbable for the IMF to operate in and support a government engaged in severe conflict. For instance, the IMF evacuated its staff from Mali after the coup there in 2012. While a coup is not equivalent to interstate conflict, this example illustrates the general fact that the IMF is unable to conduct operations in an environment of political violence.As another example, the IMF previously cut off aid to Pakistan after the country pursued nuclear tests—in a situation where IMF loans were critical to Pakistan's economy.[16]

Similar to the World Bank's procedures, these examples show that the structure and mission of institutions such as the Bank and Fund, and other similar international institutions, generate a fairly clear implication for member states that face the prospects of engaging in military conflict. This is all the more valid given that institutions such as the Bank and IMF and other similar institutions (which I discuss in more detail later) have established rules and procedures and a substantial apparatus to conduct their business. Unlike conflict resolution fora or fully consensus-based organizations, the negative consequences of being involved in military disputes with regard to the institutions' involvement are comparatively clear for member states of these institutions. Member states generally have a good understanding ex ante of the consequences (from the aforementioned institutions) of engaging in substantial hostilities with another state.

Cost-generating institutions versus collective security. Before proceeding to the discussion of the impact of these costs on the conflict bargaining scenario, it is illustrative to compare the aforementioned institutions to security-specific and conflict-management institutions. A number of studies have examined the latter's impact on conflict processes (Hansen, Mitchell, and Nemeth 2008; Mitchell and Hensel 2007; Shannon 2009; Shannon, Morey, and Boehmke 2010). Security institutions have developed a number of features to prevent conflict, mostly related to information dissemination and mediation (e.g., Boehmer,

[16] See source **W.16** (Appendix C).

Gartzke, and Nordstrom 2004). They are therefore well equipped to resolve information asymmetries (Dorussen and Ward 2008), and may contribute to establishing legal hurdles to the use of force that prevent at least democracies from conflict escalation (Chiba and Fang Forthcoming).

The causal mechanism behind the conflict-management impacts of such institutions is clearly distinct from the cost-benefit argument I explore in this study. The effects of the institutions under consideration here are restricted to imposing real costs and withholding anticipated benefits from states. This makes them distinct from institutions with a pure security mandate, which, for instance in the words of Chiba and Fang (Forthcoming), "lack enforcement power" and cannot impose direct, clear costs immediately. The second important difference is the relative clarity with which cost-generating institutions impose costs on the use of force. Collective security organizations may deliberate whether sanctions should be applied to a state breaching norms or codified rules of conflict resolution. But this process may take time. In contrast, there is little doubt, hesitation, or latitude for cost-generating institutions to suspend or cease their engagement in conflict-affected countries. This automatic cost of the use of force is central to the role these institutions can play in interstate disputes.[17]

Post-conflict assistance. Institutions such as the World Bank, IMF, or regional development banks rarely completely and definitively abandon a member country because of military conflict. Such cases do exist, though. For instance, the World Bank has been comparatively inactive in engaging in Eritrea, partly due to the country's role in the border conflict with Ethiopia and the ensuing instability in the former.[18] In other cases, however,

[17] The argument in this dissertation also isolates the "opportunity costs of war" argument, presented for example in Bearce (2003**a**) and Bearce and Omori (2005). Bearce emphasized the difficulty of measuring opportunity costs in large-N studies and used planned and actual depth of economic integration in regional economic agreements to proxy the opportunity cost of war arising from the respective institution. Two potential issues with this proxy are the overlap of regional economic institutions, meaning the presence of outside options, and the different value that states may assign to economic integration. By focusing exclusively on the leverage of institutions—whether their mission is regional integration or not—I can more closely address the opportunity cost mechanism.

[18] See the World Bank's country page for Eritrea at source **W.17** (Appendix C) for more information. A

the Bank and similar institutions devote substantial attention to post-conflict recovery assistance. After all, the World Bank was founded as the International Bank for Reconstruction and Development, aimed at funding rebuilding efforts in Europe after World War II. This need not suggest, though, that states can go to war anticipating additional benefits they can receive after the cessation of hostilities. Chapter 6 of this dissertation will explore this dynamic in more depth, focusing on the role of cost-generating institutions after conflicts have occurred.

3.2 Cost-generating Institutions and Commitment

The previous section established a relationship between states' participation in institutions that provide tangible benefits, and costly consequences of military conflict for these states. The presence of such costly consequences is the foundation for the argument that participation in cost-benefit institutions will have an impact on states' behavior in conflict bargaining, and subsequently result in observable differences in the trajectories of these bargaining scenarios.

3.2.1 Commitment problems in dispute bargaining

Commitment problems are a key issue that looms over dispute bargaining between states. Following Fearon (1995), when states bargain over issues, they should be able to avoid costly war **unless** they are bargaining over indivisible issues, face incentives to withhold private information, or are unable to commit to war-avoiding bargains. Few, if any, issues are truly indivisible; information and commitment problems are therefore generally considered the main obstacles to peaceful conflict resolution. My argument focuses on the role of IGOs in solving commitment problems, based on an extension of Fearon's understanding of commitment problems.

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senior World Bank staff member indicated in a personal conversation that operations in Eritrea have been difficult for a while, partially referencing the country's conflict with Ethiopia.

Theoretical model

Commitment problems prevent a (peaceful) bargain because either state sees a benefit to deviating from the bargain in the foreseeable future. Deviation means using military force to obtain a better outcome than the negotiated status quo. These commitment problems have different sources. The distribution of power between the disputants can change in the future, making fighting more attractive for the side that gains power; this makes it difficult for that side to commit to a bargain that was made when the distribution of power was less favorable to that side. Other exogenous changes can make it more likely for a side to obtain a better deal in the future as well; for instance, third parties forcing a compromise can lose interest in the dispute, and their constraining effect on one or both sides disappears. In addition, governments may also face domestic incentives, such as economic crises or political competition, to renegotiate a previous deal. Such renegotiations can involve the use of force if it is expedient for political reasons. In each of these scenarios, the other state—facing a disadvantage in the future—has all incentives to use force itself and achieve a better outcome now before it is too late and the opponent's capabilities are superior. The prisoner's dilemma illustrates this dynamic well and is the foundation for the following argument.

International institutions that set up costs for conflict resolve exactly this commitment problem, and therefore lead to peaceful bargaining outcomes. The key causal mechanism here is that particular institutional arrangements (which I discuss later) increase the cost of using force in a particular dispute. When the cost of using force increases, disputants' incentive structure changes such that settling a dispute by using force becomes a less viable option. This concept is similar to a standard approach to the role of international institutions in interstate disputes such as in Chapman and Wolford (2010). The distinguishing feature of my theoretical model is its focus on real and tangible costs generated by international institutions on a regular basis, rather than (a) the more diffuse costs such as reputational damage or loss of legitimacy or (b) costs dependent on the institutions' positioning in a particular dispute, as Chapman and Wolford (2010) explored.

Table 3.1: Summary of parameters in the theoretical model.

Parameter	Meaning
S_A	Payoff from negotiating over status quo
F_A	Payoff from using force
C_A	Cost of using force (increasing in $IGOs_{AB}$)
$IGOs_{AB}$	Institutional arrangements (i.e., joint IGO memberships of A and B)
$F_A - C_A$	Final payoff from using force, contingent on $IGOs_{AB}$

Institutional arrangements—states' participation in different types of international institutions—are fully public information; states' participation in institutions is known as a fact ex ante. This makes the institutionalized cost of the use of force public knowledge as well, with both disputants having access to this information. In a stylized example of a dispute between states A and B under a commitment problem, my argument uses the following parameters.

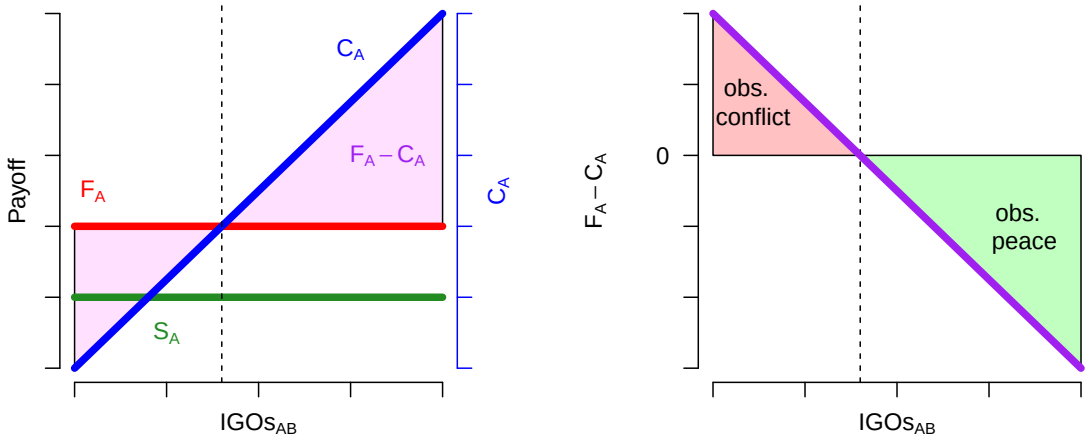
Let S_A be the payoff to disputant A from the status quo; F_A the payoff to that same disputant from using force in a dispute. Because A and B face a commitment problem, the perceived payoff from using force now (F_A) is higher than the payoff of a peaceful resolution that will mostly resemble the status quo (S_A). This assumption exactly covers the nature of the commitment problem. Using force is a (tragically) superior outcome for A because A has to fear that B will attack it in the future once the tables have turned in B's favor. Hence, A can obtain a better result by using force now rather than negotiating.

My argument suggests, however, that F_A is not the only parameter determining the final payoff from using force; it is contingent on C_A. C_A is the cost of using force coming from that state's institutional links to B, $IGOs_{AB}$. Because more institutional commitments bring more costs (and more benefits that can be withheld), C_A increases with the number of relevant IGOs to which A is a member together with B: $IGOs_{AB}$. Figure 3.1(a) illustrates this. First, note how S_A yields a lower payoff than F_A if C_A is not considered. Taking C_A into account, State A's payoff from using force is $F_A - C_A$, shaded purple in Figure 3.1(a).

State B's payoff from using force is $F_B - C_B$ (not displayed). The outcome of the dispute is $O \in \{B\text{argain}, U\text{se of force}\}$. Whether B or U are observed is a realization of the latent probability p, where $0 < p < 1$. When $p < 0.5$, we observe a peaceful resolution of the dispute; when $p > 0.5$, we observe conflict. p exceeds 0.5 when either $F_A - C_A > S_A$ or $F_B - C_B > S_B$. Otherwise, we observe cooperative dispute resolution. Figure 3.1(b) graphs this argument. The purple line is simply $F_A - C_A$ from panel (a). When using force yields a higher payoff than negotiation, even taking into account the cost incurred from institutions, we should observe at least one of the states to use force and go to war over the dispute. Conversely, when the institutional cost of using force becomes so high that it exceeds the original payoff from using force, war is unlikely.

This model leaves two immediate questions: why should one expect that C_A is steadily increasing in $IGOs_{AB}$? Second, how does this address the commitment problem?

Steady increase in the cost of using force. In a previous section, I showed that relevant international institutions impose costs and withhold benefits from states that go to war. A linear increase of C_A suggests that more institutions can simply withhold more benefits and potentially impose more costs. It is also possible and probably more realistic that the increase is stepwise, or yields diminishing returns, where a logarithmic function would be more appropriate. The distinction between, for instance, linear and logarithmic increases is also substantively interesting. Some international institutions may play leading roles in that their cessation, suspension or resumption of engagement will trigger other institutions to follow. A staff member of the IMF described the IMF's role in serious governance crises in that manner, where the IMF is often the first international actor to return to a country after a conflict situation and other IGOs take this re-engagement as a signal to return as well. One could therefore ascribe such a "vanguard" role to the major institutions such as the IMF and the World Bank. On the other hand, their engagement often strongly coincides with the involvement of other institutions, for instance regional development banks. I leave these distinctions as an empirical question for work following this dissertation.



(a) The left y-axis shows the payoff from the status quo/peaceful bargain (S_A) and from using force (F_A). C_A indicates the cost of using force, which is increasing in $IGOs_{AB}$ (x-axis).

(b) The y-axis shows the eventual payoff from the use of force: $F_A - C_A$ from panel (a). This utility is decreasing in $IGOs_A$; when it is negative, states prefer peaceful bargains to the use of force.

Figure 3.1: The influence of international institutions on the payoff structure for states in a dispute, assuming the presence of a commitment problem.

Costs and the commitment problem. In my theory and in Figure 3.1(a), I chose to fix the payoff from the use of force as higher than the payoff of a peaceful bargain. This choice represents the commitment problem, and it is fundamental to my argument that particular international institutions address the commitment problem in interstate disputes. They do so by **publicly** manipulating the payoff structure for either disputant. The manipulation is that the utility of using force declines as institutional participation increases. Therefore, state B is aware that A has less to gain from using force when A participates in more institutional arrangements. Because B knows this, B should have to worry less about A using force at any point. This in turn reduces B's incentive to use force to prevent an attack later. As a consequence, a higher cost of using force—C_A—solves the commitment problem for both B and A, and allows for peaceful bargains to be the equilibrium solution in a dispute.

An argument about the cost of war preventing fighting needs to address the objection that potential costs or losses do not automatically steer states to settle disputes peacefully. This objection is based on the notion that if two states are equally less willing to incur the costs of fighting due to potential losses—compared to two states that face fewer potential losses—the overall effect on incentives to fight is negligible. Morrow (1999) formulates this for the example of the opportunity costs of war with regard to trade relations: "If two states have a high level of trade, and higher levels of trade reduce resolve, the two could be more or less likely to have militarized disputes with each other, compared to a pair of states with a low level of trade. The threat of the loss of trade could either deter the prospective initiator or intimidate its target into making concessions, and so encourage the prospective initiator." (Morrow 1999, 482). One could translate this argument to the case of HLIGOs and suggest that the costs of using force emanating from HLIGOs may as well incentivize revisionist states to make higher demands, and thus contribute to escalation. However, HLIGOs are special in a way that addresses this theoretical problem directly. Losses from trade are volatile and depend on a multitude of factors, ranging from a state's existing trade portfolio,

the present volatility of trade flows, the degree of investment in the production of tradable products, to potential trade partners that can function as substitutes. In contrast, the costs from HLIGOS are comparatively clear ex ante. Because this is the case, states' bargain in the shadow of these costs from HLIGOs and are thus able to signal more credibly their intentions. Because the impact of HLIGOs is long-term, credibly revealing this information helps solve commitment problems and eventually prevents the escalation of disputes to larger-scale violence. In that sense, HLIGOs and the costs they can impose echo the logic that Morrow (1999, 487) develops for the impact of trade-related costs on the escalation of crises to wars:

> "higher trade flows could create a way to avoid escalation to war. ... States with a greater ability to impose costs on themselves through their actions provide more credible signals of their unobservable resolve, and so crises between such states are more likely to reach a peaceful conclusion. States could use trade sanctions during a dispute as a way to signal their resolve to one another. Trade sanctions would impose costs on citizens benefiting from international trade; this domestic audience might then punish their leader after the crisis for taking actions that led to such sanctions. Pairs of states with higher trade flows would have more signals of their resolve available than dyads with little trade." (487)

The costs emanating from IGOs with high leverage fulfill this function of allowing credible signals; even more than trade sanctions, they do so in the long run. Therefore, the logic of IGOs' influence on interstate disputes through leverage also illuminates the difficult-to-grasp role of opportunity costs of fighting for the evolution of interstate conflicts.

The relevance of joint memberships

Finally, the cost-based solution to the commitment problem is most likely to apply when **both** states in a dispute are facing costs from one or more institution. This dyadic component of the argument is important for several reasons. First, being subject to the same types of cost-constraints from an institution makes it more likely that both states have good information about the likelihood and volume of the costs they would incur for using

force. Fearing that the other side will engage in revisionism down the road is the driver of the commitment problem. Joint memberships in cost-generating institutions present clear and symmetric information about the cost of using force now and down the road. Second, both states being a member in a shared institution gives the institution more leverage over the dispute. Returning to the nomenclature from above, an institution may be willing to signal to, or threaten A that engaging in a conflict with another state C is harmful to the institution's mandate. This threat is less effective if it cannot target C, which is not a member of the institution. If C is not constrained, C faces different incentives for using force in that dispute. To avoid the dispute turning violent, A would have to face such high costs (C_A) that giving in to C is still the best outcome for A. Because this is unlikely, **joint** membership as the prerequisite of institutions' influence via costs is an important part of the argument. The institutions' ($IGOs_{AB}$) equal influence over both A and B ensures that C_A and C_B also increase equally. Returning ot the first point, this is also known to both A and B—as they are both familiar with the IGOs' preferences, past behavior, and current signals. As a consequence, the **joint** influence of $IGOs_{AB}$ can alleviate each side's concerns about the other side's future incentives to reverse the status quo.[19]

3.2.2 Commitment problems versus other IGO effects

Scholars have frequently argued that international institutions can address information problems in several ways. I use this section to distinguish my argument from informational arguments in their typical form, and suggest that the commitment argument is more appropriate in the context of interstate disputes. The following paragraphs show why my findings would lend credence specifically to the commitment argument, rather than competing arguments about institutional effects on interstate disputes.

[19] The information about C_A, the cost of using force for A via the influence of an IGO, can also be less unequivocal if one state is under particular and public constraints from an IGO. While this dynamic is not of concern to my main argument, I explore it in more detail in a separate project on trade disputes. In trade disputes, the cost and benefit parameters arguably differ from militarized disputes; this can lead to a scenario where even monadic IGO memberships can constrain state behavior (Karreth N.d.).

Information. Scholars have suggested that institutions can **force** states to reveal information about capabilities and resolve that they would otherwise keep private: "IGOs can alleviate the motives for contests by credibly communicating information about strategic variables that otherwise remain the private domain of particular states" (Boehmer, Gartzke, and Nordstrom 2004, 10); Proposition 2 in that study expresses the same expectation. But the ability of institutions to force states to release such information is severely limited, as Long, Nordstrom, and Baek (2007) and Shannon, Morey, and Boehmke (2010, 1136) suggest. Consequently, evidence for this type of pacifying impact of institutions is rarely available, and those who tested this hypothesis (Boehmer, Gartzke, and Nordstrom 2004) found no evidence for it using the specification of their studies.

Second, if any institutions had the capability to force states to reveal private information, the type of cost-generating institutions that drive my argument would likely not be among them. Long, Nordstrom, and Baek (2007) find that only highly institutionalized military pacts might be able to collect the information necessary to overcome the information problem in Fearon's sense. But my theoretical argument is neither focused on conflict between alliance members, nor do I investigate the institutional features of alliances. At the same time, the finding that only military alliances may exercise informational effects lends more credence to my focus on the commitment problem. One rare historical example for institutions that can impose costs and withhold benefits from members would be the European Coal and Steel Community. This international organization jointly managed and monitored the production of resources that were, at the time, necessary for military build-ups. Thus, it may have had informational effects, but was at least equally tied to the joint management of resources, which implies the ability of the organization to withhold the gains of collaboration from members that engage in war.

Costly signaling. A second dimension of an informational effect of IGOs is their impact on signaling in the bargaining game. Boehmer, Gartzke, and Nordstrom (2004), Thompson (2006), and Chapman and Wolford (2010), amongst others, suggest that IGOs

allow states to send costly signals in crisis bargaining. The idea here is that states in disputes may either bring the dispute to the IGO or mobilize and take escalatory steps despite the threat of IGO sanctions. Because of the impending costs from the IGO, opponents can view these signals more credible; private information problems can then be avoided, and bargains be struck. This type of influence of IGOs on conflict processes may fall under informational effects because it addresses private information about resolve. But I argue that these informational effects can be separated into two types. The first involves highly public institutions such as the UN Security Council. In that case, the informational effect applies; Thompson's (2006; 2010) work has described this logic in the case of the two U.S.–Iraq wars. But when one considers the broader IGO environment of states, as I do in this dissertation, the commitment trajectory is the more likely causal mechanism, for one simple reason. The costs I stipulate are contingent on the actual use of force, not escalatory steps. For instance, Thompson's work on the confrontations between the U.S. and Iraq traces the decision to move to the UN Security Council and risk a public backlash should the UNSC fail to authorize the use of force. These are not costs that could emanate from the institutions I examine here; these institutions only create costs (C_A and C_B) when states actually use force. These costs affect the commitment problem more than do informational asymmetries.

Kinne's (2013) finding about the pacifying effect of states' convergence in IGO networks on dispute initiation can also be read as support for an information-based mechanism. Kinne suggests that states' structural position in IGO networks may signal their "cooperative" type. That is, (costly) participation in a state's IGO network helps reduce uncertainty over another state's type, which in turn reduces bargaining problems. This mechanism, too, differs from the explanation laid out in this dissertation. The difference is a meaningful one: the network-based mechanism treats IGOs as a tool for states' signaling; the cost-benefit explanation focuses on the exogenous impact of IGOs.

IGO intervention. International institutions may also affect disputes by actively intervening in them or mediating between disputants (Hansen, Mitchell, and Nemeth 2008).

When such an impact from international institutions on disputes is present, it should be limited to a small set of institutions that takes active steps toward mediation and intervention. Almost none of the institutions I consider have the capacity and mission to engage in such activities. This further limits the possibility that my cost-commitment argument and rival informational hypotheses yield observationally equivalent predictions. Additionally, Boehmer, Gartzke, and Nordstrom (2004, 11) suggest that direct actions by IGOs, such as intervention, may change the balance of power, but not the presence of conflict behavior. Therefore it should be unlikely that direct IGO involvement in conflicts might be responsible for a positive association between the institutions I focus on in this dissertation and the development of interstate disputes.

Strategy for identifying institutional effects. Research in international relations has, of course, long argued that international (governmental) organizations (IOs) are an effective tool for states to establish cooperation. As outlined above, this research has highlighted a number of competing causal mechanisms, resulting in a variety of perspectives making different predictions about the magnitude, timing, and effectiveness of IOs ability to resolve interstate disputes. Lacking the ability to discriminate between different causal mechanisms is problematic for this research program because it prevents us from making inferences about (a) what type of conflicts IOs may resolve (e.g., conflicts that arise from private information versus those that are due to commitment problems) and (b) necessary or sufficient conditions for IOs to prevent conflict.

I developed a concise theoretical argument to resolve this debate and identify the role of IOs as commitment devices during interstate disputes. This argument lends itself to a test using data specifically on the type of institutions that are central to the argument: formal international institutions with the structure and ability to generate costs for member states that engage in military conflict. At the same time, one can approximate the other mechanisms—foremost IGOs addressing information problems—by measuring the subset of institutions that are most likely to produce the respective mechanism. This is the main

strategy I pursue in the subsequent empirical chapters.

3.2.3 Theoretical argument: summary and general expectations

This dissertation examines which channel of influence is most likely for international institutions to help states achieve peaceful dispute resolution. The main argument, based on a study of the structure and activities of a subset of international institutions, suggests that some international institutions change the cost-benefit calculus of states engaged in disputes. They do so through their institutional leverage (based on their structure) and the resources they command. Subsequently, they solve the commitment problem that often causes interstate disputes to escalate. This effect is germane to institutions that have the ability to impose costs and withhold benefits from member states. The argument assumes two conditions. First, institutions are averse to member states engaging in war. The previous sections demonstrated the viability of this assumption through a number of illustrative examples. Second, the commitment problem in interstate disputes can be addressed by lowering the utility of using force through costs arising from international institutions. This assumption is familiar from extant research on interstate (and intrastate) disputes and conflict processes (e.g., Bearce and Omori 2005; Powell 2006; Prins and Daxecker 2008).

This logic yields the **general expectation** that:

> States should be able to settle disputes peacefully, once they arise, when joint memberships in international institutions establish sufficient costs for the use of force.

In the subsequent chapters, I discuss the specifics of (a) how to best capture the conditions under which institutions establish such costs, and (b) how this mechanism materializes in the context of issue claims, interstate rivalries, and relations between states after war.

Chapter 4

Identifying the Leverage of Institutions

What explains the possible positive influence of international institutions on the evolution and resolution of interstate disputes? The theoretical argument in the previous chapter has shown the logical foundation for investigating the role of institutions that change the cost of using force. In this chapter, I present new data on international institutions' leverage in imposing such costs. These data capture IGOs' ability to impose costs on member states as well as their demonstrated record of doing so. Following the theoretical argument, the purpose of this data collection is to identify those institutions that may exercise **high leverage** over member states. In the subsequent chapters, I then use this information to investigate whether IGOs' leverage via changing the costs and benefits of using force in disputes has any systematic relationship with how states behave in such disputes.

4.1 The Population of International Institutions

The institutional costs laid out in my argument can emerge from multilateral, formal international organizations (IGOs). I define as such IGOs all international organizations that fit the following criteria. These criteria reflect previous scholarship (e.g., Singer and Wallace 1970, see also chapter 2).

(1) An IGO must consist of at least three members of the COW-defined state system. This characteristic is necessary for my theoretical argument in particular: to be

concerned about the impact of conflict on its mandate, the IGO must involve the interests of at least one state beyond the two states involved in a potentially costly dispute.

(2) An IGO must hold regular plenary sessions at least once every ten years. This criterion assures that the IGO is operational and that it performs activities and makes decisions beyond being a one-time formal agreement with no active functions.

(3) An IGO must possess a permanent secretariat and corresponding headquarters. Having this institutional structure is necessary for the IGO to act on its own and send the signals and potential punishments or sanctions discussed in chapter 3 to member states.

These criteria are also the foundation for the Correlates of War project's data collection on IGOs as described in Pevehouse, Nordstrom, and Warnke (2004), and taken from that project's codebook Pevehouse and Nordstrom (2003, 2). The resulting "population" counts 529 IGOs. By founding year, the first IGO in this list is the Central Commission for the Navigation of the Rhine, launched in 1815. The three newest IGOs are founded in 2005 (the last year of the data set): the Baltic Euregional Network, the Coalition for Rainforest Nations (consisting of "developing nations with tropical rainforest resources"),[1] and the Group on Earth Observations (a global IGO with 89 members, targeting environmental and development policy goals). Of the 529 IGOs in the complete time period 1815-2005, 177 have "died" or merged into other IGOs (see Figure 4.1 for an illustration of the post-World War II period). But not all of these organizations possesses the capabilities to impose costs on member states. Many IGOs have coordinatory purposes and are not in charge of distributing or administering resources. On the other hand, militarized conflicts between member states hinder the mandate of one subset of organizations, while other organizations may be mostly unaffected by member states' involvement in conflicts. The remainder of this

[1] See source **W.18** (Appendix C).

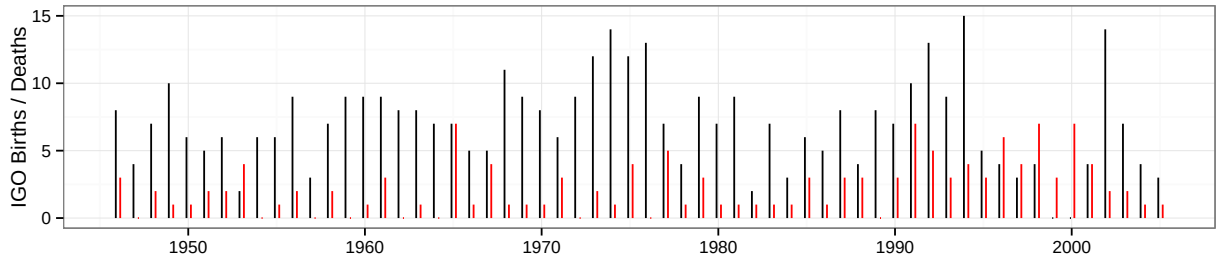


Figure 4.1: Births and deaths of IGOs, 1946-2005. The bar indicates how many IGOs began (black/left) or ceased (red/right) to exist in a given year. Source: Correlates of War-IGO Data version 2.3.

chapter identifies and describes the institutions to which these criteria apply and presents data on the leverage of these institutions.

4.2 Identification of Relevant Institutions

Beginning with the Correlates of War project's list of IGOs (Pevehouse, Nordstrom, and Warnke 2004), I built on previous work on the structure and functions of IGOs to isolate those institutions that conduct such operations that give them leverage over member states and that have the operational structure to exercise such leverage. For an impact on observed conflict or conflict resolution, institutions need to raise the cost of conflict for member states such that $F_A - C_A < S_A$ or $F_B - C_B < S_B$: the payoff from negotiating is greater than the payoff from using force, taking into account the cost imposed on member states of using force (see Section 3.2.1). To do this, my theory suggests that institutions need to fulfill several requirements.

Decision-making at the IGO. First, they need to possess some capacity to make decisions at the institutional level, rather than being a forum or occasional meeting of heads of states. For this requirement, I use two previous studies that identified institutional characteristics: Boehmer, Gartzke, and Nordstrom (2004) and Ingram, Robinson, and Busch (2005). From these studies' lists of intergovernmental organizations, I examined those that are at

least "structured" (Boehmer, Gartzke, and Nordstrom (2004, 37) and Ingram, Robinson, and Busch (2005, 855)). This feature requires that IGOs "contain structures of assembly, executive (nonceremonial), and/or bureaucracy to implement policy, as well as formal procedures and rules" (Ingram, Robinson, and Busch 2005, 855), and thus captures my requirement.[2] Subsequently, I filtered their lists for institutions that fit my criteria. When their coding showed discrepancies, I went with the higher (more structured) coding or investigated the individual institution in more detail.

Benefits through IGOs. Second, I selected from this list all institutions whose activities yield tangible benefits for member states. This step separates those institutions identified in my theoretical argument from security-related or purely coordinating institutions. These benefits can include the following typical functions or issues that IGOs cover: providing short-term or long-term loans, harmonizing currencies, harmonizing trade and enhancing market access, facilitating foreign investment, assisting with and coordinating the production of goods, and facilitating the extraction, processing, and sale of natural resources. To avoid any oversights, I also consulted other lists of institutions that provide direct and tangible benefits to member states, in particular regional trade agreements. To that end, I used two lists of regional trade agreements from Feng and Genna (2003) and from Haftel (2012; 2013).

The resulting list of institutions appears in Table 4.1. Beginning with this list, I collected more specific information on each institution to capture the aspects raised in the theory section: the institutions' ability and practice to impose costs on member states that use force in interstate disputes.

[2] I obtained the data with the authors' coding of institutionalization from Charles Boehmer and Paul Ingram respectively.

Table 4.1: International institutions with the capacity to withhold benefits and impose costs (author's coding).

African and Malagasy Coffee Organization	European Organization for Nuclear Research
African Development Bank	European Space Agency
African Export Import Bank	European Space Research Organization
African Fund for Guarantee and Economic Cooperation	European Space Vehicle Launcher Development Organization
African Malagasy Union	European Union
Andean Common Market	Gambia River Basin Development Organization
Andean Parliament	General Agreement on Tariffs and Trade
Arab Bank for Economic Development in Africa	Group of Schengen
Arab Maghreb Union	Gulf Cooperation Council
Arab Maghreb Union	Indian Ocean Commission
Asia Pacific Trade Agreement	Inter-Allied Reparations Agency
Asia-Pacific Economic Cooperation	Inter-allied Rhineland High Commission
Asian Development Bank	Inter-American Development Bank
Asian Industrial Development Council	Inter-American Investment Corporation
Association of Southeast Asian tions	Intergovernmental Authority on Development
Benelux Economic Union	International Atomic Energy Agency
Caribbean Community	International Bank for Economic Cooperation
Caribbean Development Bank	International Bank for Reconstruction and Development / World Bank
Central African Customs and Economic Union	International Coffee Organization
Central American Common Market	International Coffee Organization
Central Commission for the Navigation of the Rhine	International Fund for Agricultural Development
Central European Free Trade Agreement	International Monetary Fund
Commission of the Chad Basin	International Olive Council
Common Fund for Commodities	Islamic Development Bank
Common Market for Eastern and Southern Africa	Latin American Integration Association
Common Southern Market	Latin American Integration Association
Commonwealth Secretariat	League of Arab States
Council for Mutual Economic Assistance	Mano River Union
East African Common Market	Multilateral Investment Guarantee Agency
East African Development Bank	Niger River Commission
East Caribbean Common Market	Nordic Development Fund
Eastern Caribbean Currency Area	North American Free Trade Agreement
Economic Community of Central African States	Organisation of Eastern Caribbean States
Economic Community of Central African States	Organization for Cooperation between Railways
Economic Community of the Great Lakes Countries	Organization for Economic Cooperation and Development
Economic Community of West African States	Organization for European Economic Cooperation
Economic Cooperation Organization	Organization of Arab Petroleum Exporting Countries
Eurasian Development Bank	Organization of Petroleum Exporting Countries
Eurasian Economic Community	Permanent Interstate Committee for Drought Control in the Sahel
European Atomic Energy Community	Senegal River Development Organization
European Bank for Reconstruction and Development	South Asian Association for Regiol Cooperation
European Central Bank	Southern African Customs Union
European Coal and Steel Community	Southern African Development Community
European Economic Community	West African Economic and Monetary Union
European Free Trade Association	West African Economic Community
European Investment Bank	World Trade Organization

4.3 New Information on Relevant Institutions

For collecting this additional information, I created a question matrix covering basic and more specific aspects about the respective institution. I used this matrix to investigate each IGO in Table 4.1. In addition, I trained four advanced undergraduate students who then worked independently to investigate these IGOs as well.[3] After the coding was completed, I compared coding decisions and resolved disagreements through additional research.

In the following paragraphs, I describe the key concepts I measured for each of the institutions in Table 4.1. I also collected basic information about each IGO, such as the years when the IGO came into existence, member states, and whether the IGO had ceased to exist (and if so, when). I compared this information to that in the COW-IGO data and reconciled differences where necessary. More detailed information on the items I coded can be found in appendix A.

4.3.1 Leverage tools: Structure

To routinely impose costs on member states using force in disputes, the institution in question needs to be structured such that its operational decisions do not require the consent of **all** member states, including the one that is hindering the institution's mandate through its behavior. If the institution's procedures for operating in member states engaged in conflict depend on that member state's agreement, the institution has no credible way of imposing costs. Without such a credible mechanism, the expected cost of using force (C_A and C_B, respectively) is low or zero for member states: they can make attempts to stall the institution's decision-making or otherwise prevent it from taking action against the member state.

To gauge this institutional structure, I explicitly searched for information on two questions on all institutions that give out benefits to their member states:

[3] I gratefully acknowledge support from the University of Colorado's Beverly Sears grant in enabling me to employ these students.

(1) Can the institution itself, without necessarily involving each member state, decide whether these benefits can be withheld?

(2) Does the institution have a substantial bureaucracy that is formally independent of its member states?

(3) Can the institution make operative decisions of its own, independent of member states' vetoes or votes?

The answer to these questions, combined with a record of the practice of each institution in actually suspending benefits, lays the foundation for evaluating the leverage of each institution. The structures and procedures to more or less automatically withdraw benefits is a necessary condition for institutions to develop the leverage necessary to affect conflict trajectories as specified in the theoretical argument.

4.3.2 Leverage tools: Practice

To have the anticipated effect, institutions also need to engage in distributing and, if warranted, withholding benefits from member states. I investigated the record of each institution in doing so. For each institution, I researched the following questions:

(1) Does the institution routinely give out monetary/financial benefits (e.g., foreign aid, loans)?

(2) Does the institution have the capability to use "carrots and sticks" toward its members?

(3) Has the institution in the past used its leverage to force any member state toward a desired behavior?

Only if these conditions apply one can expect member states to anticipate the additional cost for using force in disputes. It is important to note here that, based on the theoretical

argument, the institutions need not actually impose costs on member states before we would observe an effect on the evolution of conflicts. Rather, what matters is the probability that the institution **will** impose such costs **if** the member state is involved in a military dispute. This dynamic echoes the off-the-path behavior logic that scholars have used to explain interactions between the U.S. Congress and President (Weingast 1996). A similar logic of the deterrent effect of anticipated behavior by international institutions can be applied to the role of institutions for domestic political conflicts (Karreth and Tir 2013, 99). In order to explore whether these conditions have applied in the past to any of the institutions with the structure described above, I researched a variety of sources. These included:

- the Yearbook of International Organizations (Archer 2008)
- institutions' self-reported histories
- news reports about institutions' activities in Lexis-Nexis

When there was evidence for institutions distributing benefits and withholding them in situations where their mandate was compromised, I recorded this evidence as relevant for the the institution's leverage over member states. I collected such anecdotal evidence in my database of IGO leverage and used this information in my coding decisions about institutions' leverage (see below).

4.3.3 The role of informal governance

Because recent work on IGOs has emphasized the role of informal governance in IGOs, I briefly discuss this potential challenge to my argument on the importance of formal structure—although I also refer the reader to the information on IGO practice I present below. For instance, Stone argues in a study of the IMF that (leading) states can use informal influence on the IMF Board as an "insurance policy [...] when its vital interests are

affected." (Stone 2011). Similarly, Kleine (2013) suggests that the European Union allows member states to use informal influence (at times) to be more flexible in the implementation of EU rules. Such examples of informal influence on the IMF Board is worth considering as a challenge to an argument like mine that puts substantial weight on the formal rules of IGOs and their impact on states' cost-benefit calculations. It is a particular challenge if one could realistically assume that one of the states involved in a dispute, A or B, can exploit their informal influence to limit the costs (C_A or C_B) that the IGO may impose on it or, by extension, on an ally. Three points can address this potential challenge.

First, many aspects of those IGO operations that are relevant for establishing C_A and C_B are more specific and immediate governance than the types of decisions that are made at board meetings. This limits the ad-hoc informal influence of Stone's "leading" states. For instance, at the World Bank, loan decisions are made by Executive Directors who "represent multiple countries at once" (Kilby 2013, 433). Aside from this decision-making setup, the Bank has clear rules and procedures for its operations. I describe these rules and procedures in detail in chapter 3. These rules and procedures make it comparatively clear under which conditions and in which areas of a country the Bank cannot pursue projects or sustain projects.

Second, scholars have found instances of informal governance mostly in cases where states are trying to use IGOs as a vehicle to give more favorable conditions to either themselves (e.g., Kaja and Werker 2010) or to states that are strategically important for them (e.g., Stone 2011; Vreeland 2011). The latter has been demonstrated in a series of studies identifying "horse trading" of increased loans or better conditions from the World Bank, IMF, and the Asian Development Bank for countries' votes in the UN General Assembly or the UN Security Council (Dreher, Sturm, and Vreeland 2009**a**;**b**; Lim and Vreeland 2013). However, these kinds of "favorable" conditions from IGOs are only observed on the margins and when all else is held constant. The concerns that IGOs have over the negative impact of serious militarized disputes between members on the IGOs' mandate exceeds these normal

conditions by far, as I showed in chapter 3.

Third, such informal influence only biases the empirical test in this dissertation against my argument. One (although not the only—see the discussion of IGOs' practice) approximate measure for C_A and C_B respectively is the IGOs **formal** structure that necessitates imposing C_A and C_B on A and B. Therefore, any informal influence that **suspends** the formal routines of the IGO would weaken the impact of the IGO's structure. As a consequence, any relationship between IGO structure and the behavior of A and B in a dispute would be weakened rather than inflated.

4.3.4 Breadth of leverage: issue coverage

Another dimension of leverage is the number of issue areas covered by an institution. If an institution is only tasked with managing shared resources, such as shared bodies of water like a river, the costs it can impose are limited to that shared resource. If, on the other hand, an institution dispenses foreign aid and facilitates external investment, its leverage is higher. For that reason, I also collected information on the issue areas covered by an institution:

(1) Trade facilitation (e.g., regional trade agreement)

(2) Currency harmonization (e.g., currency union)

(3) Development (e.g., foreign aid)

(4) Investment (e.g., investment corporation)

(5) Production (e.g., association of oil-producing countries)

(6) Resource usage (e.g., river management)

4.3.5 Overall leverage of international institutions

Following the theoretical argument, the overall important characteristic of international institutions with regard to the development of conflicts is their leverage over member states.

Institutions with little leverage cannot affect the cost of conflict and thus fail to resolve states' commitment problems. Such institutions may perform other functions: they may transmit information or be forums for socialization. For the specific cost-based mechanism of institutional influence, the leverage of institutions is central.

Leverage emerges from both the structure and practice of the institutions under consideration. By itself, the opportunity to selectively punish and reward gives institutions the leverage to shape potential conflict parties' incentives. This alone does not distinguish institutions from other external actors with leverage, such as a potent donor as the United States is toward Israel and Egypt. What is particular about (some) international institutions is that their institutional structure functions as an "automatic" signal about the consequences of different political choices that governments can make. Compared to third-party states and interveners, then, relevant institutions possess the advantage of both leverage and the institutional structure to incentivize member states toward avoiding military conflict.

Because the concept of leverage is based on a combination of structure, practice, and issue coverage, I combine the three measures into one ranking of each institution's leverage. This ranking has three categories, small/negligible, medium, and large.

- Institutions with small or negligible leverage are either dependent on member states' consent to distributing or withholding benefits, or they do not distribute substantial benefits and can therefore not withhold substantial resources from member states—or both. The Central Commission for the Navigation of the Rhine exemplifies small leverage: while its benefits are eventually economic (coordinating the use of the Rhine as an important cargo route), the Commission does not have the structure to autonomously exclude members from these benefits.

- Institutions with medium leverage have some independence in allocating resources, but the combination of that structure with the benefits they distribute does not give them substantial leverage to affect bargaining between two states. An example for

an institution with medium leverage is the Latin American Integration Association; it aims to establish a full common market, but has not yet developed all tools to actually withhold **substantial** benefits from member states.

- Institutions with large leverage are both comparatively independent in their decision-making and they distribute considerable benefits to their members. The World Bank, IMF, and some regional development banks as discussed above are examples for institutions with large leverage.

Evolution of leverage over time. The resulting leverage measure is sensitive to changes in the structure and practice of institutions. When research each institution, I investigated whether either of these two factors changed over time. For example, the Central American Common Market was founded in 1960, but more or less inactive between 1970 and 1991. In that case, I measure concepts separately for the time periods. In other cases, institutions were renamed as their structures deepened, such as the European Coal and Steel Community evolved into the European Union. The new institution then subsumes the old institution in my data. While this procedure does not cover each minimal institutional change over time, it should approximate the more substantial changes that will affect the institutions' leverage.

Based on these coding rules and choices, I supplemented my initial list of 92 international institutions (Table 4.1) with information on these institutions' structure, practice, breadth of leverage, and overall leverage. For IGOs with medium and high leverage, information on IGOs' issue coverage is summarized in Table 4.2. Information on their leverage tools and overall magnitude is summarized in Table 4.3. Figure 4.2 illustrates how the single leverage tools and practice of IGOs relate to their overall leverage. There is no perfect correlation between the count of leverage tools and IGOs' overall leverage because additional information on IGOs' exercise of leverage contributed to the overall leverage coding. However, it is clear that with more leverage tools comes higher overall leverage.

Table 4.2: IGOs with high leverage: Issue coverage.

IGO	**Issues**						
	Trade	*Currency*	*Development*	*Investment*	*Production*	*Resources*	*Total issues*
African Development Bank	No	No	Yes	No	No	No	1
Asian Development Bank	Yes	No	Yes	Yes	Yes	No	4
Caribbean Community	Yes	Yes	Yes	No	No	No	3
Common Southern Market	Yes	No	No	No	No	No	1
Commonwealth Secretariat	No	No	Yes	No	No	No	1
Economic Community of West African States	Yes	Yes	Yes	No	No	No	3
European Bank for Reconstruction and Development	No	No	Yes	Yes	No	No	2
European Economic Community	Yes	Yes	No	No	No	No	2
European Investment Bank	No	No	Yes	Yes	No	No	2
European Union	Yes	Yes	Yes	No	No	No	3
International Bank for Reconstruction and Development / World Bank	No	No	Yes	No	No	No	1
International Coffee Organization	Yes	No	Yes	No	Yes	Yes	4
International Fund for Agricultural Development	No	No	Yes	No	No	Yes	2
International Monetary Fund	No	No	Yes	No	No	No	1
Multilateral Investment Guarantee Agency	No	No	No	Yes	No	No	1
Southern African Development Community	Yes	No	Yes	No	No	No	2
West African Economic and Monetary Union	Yes	Yes	Yes	No	No	No	3

Table 4.3: IGOs with high leverage: Leverage tools and magnitude.

IGO	**Leverage tools**						**Magnitude**
	Financial	*Decisonmaking*	*Bureaucracy*	*Independence*	*Carrots & Sticks*	*Total tools*	**of Leverage**
African Development Bank	Yes	Yes	Yes	Yes	Yes	5	3
Asian Development Bank	Yes	Yes	Yes	No	Yes	4	3
Caribbean Community	Yes	No	Yes	Yes	No	3	3
Common Southern Market	No	No	No	No	Yes	1	3
Commonwealth Secretariat	Yes	Yes	Yes	Yes	Yes	5	3
Economic Community of West African States	Yes	No	Yes	Yes	Yes	4	3
European Bank for Reconstruction and Development	Yes	Yes	Yes	Yes	Yes	5	3
European Economic Community	Yes	Yes	Yes	Yes	Yes	5	3
European Investment Bank	Yes	Yes	No	Yes	Yes	4	3
European Union	No	Yes	Yes	Yes	Yes	4	3
International Bank for Reconstruction and Development / World Bank	Yes	Yes	Yes	Yes	Yes	5	3
International Coffee Organization	Yes	No	No	No	Yes	2	3
International Fund for Agricultural Development	Yes	No	No	No	Yes	2	3
International Monetary Fund	Yes	Yes	Yes	Yes	Yes	5	3
Multilateral Investment Guarantee Agency	No	Yes	Yes	Yes	Yes	4	3
Southern African Development Community	No	Yes	Yes	Yes	Yes	4	3
West African Economic and Monetary Union	Yes	Yes	Yes	No	Yes	4	3

For the theoretical argument of this dissertation, IGOs with **high leverage** are the relevant institutions that may exercise an influence on states' behavior in interstate disputes. The subsequent empirical tests therefore focus on the 17 "High-Leverage IGOs" (HLIGOs) shown in Tables 4.2 and 4.3. Of these institutions, many but not all have economic cooperation as their core function. They all share the ability to exercise leverage on member states, and their leverage is derived from restricting access to economic benefits.

4.4 Descriptive Data on Joint Memberships in High-Leverage IGOs

The remainder of this chapter briefly provides descriptive information on the distribution of states' participation in HLIGOs. Because my theoretical argument suggests the importance of joint memberships in HLIGOs, I limit this description to joint memberships in the universe of dyads between states in the period from 1946-2005. This time period is also the basis for the empirical test in the subsequent chapters. I focus on the post-World War II period because high-leverage IGOs only came into full existence after World War II. In the empirical investgation of HLIGOs' role in interstate disputes, the population of dyads of interest in those tests is limited to dyads that have demonstrated disagreements and face the choice of resolving their disagreement with or without the use of force. In the following pages, though, I show information on **all** dyads to demonstrate the broader variance of states' joint involvement in HLIGOs.

4.4.1 Distribution

Based on my coding, 17 different HLIGOs exist. States are co-members in 9 HLIGOs at most (Figure 4.3). About 90% of dyad-years share between 0 and 4 memberships in HLIGOs. Broken up over time, this distribution changes toward higher numbers and increases in variance (Figure 4.4). Figure 4.5 illustrates this trend as well. Overall, this development reflects directly the growth of IGOs in general (Pevehouse, Nordstrom, and Warnke 2004; Shanks, Jacobson, and Kaplan 1996, 106) as well as the "expansion" of global governance,

including into the developing world (Halabi 2004).

4.4.2 HLIGOs in different regions of the world

To illustrate how HLIGO co-memberships also vary within regions, Figures 4.6-4.10 show a snapshot of states' shared memberships in HLIGOs in different regions of the world. These figures represent networks, where nodes are states and edges (links) are joint memberships, weighted by the number of memberships. For better readability, the network representations only show joint memberships for pairs of states that are separated by 400 miles of water or less.[4] The bar graphs show the distribution of joint memberships across dyads in the respective region. Two descriptive points deserve mentioning. First, while there is some variance across regions, regions are more similar than different if one considers the overlap of the distributions of joint memberships. Second, each region exhibits some variance of joint memberships between dyads. These two types of variance are a prerequisite for establishing an empirical test of the impact of different levels of shared HLIGO memberships on the evolution of disputes between states. The next two chapters 5 and 6 investigate this relationship in different conflict contexts, before chapter 7 discusses potential reverse causality.

[4] The network representations were created using the `igraph` package (Csardi and Nepusz 2006) in R (R Core Team 2013).

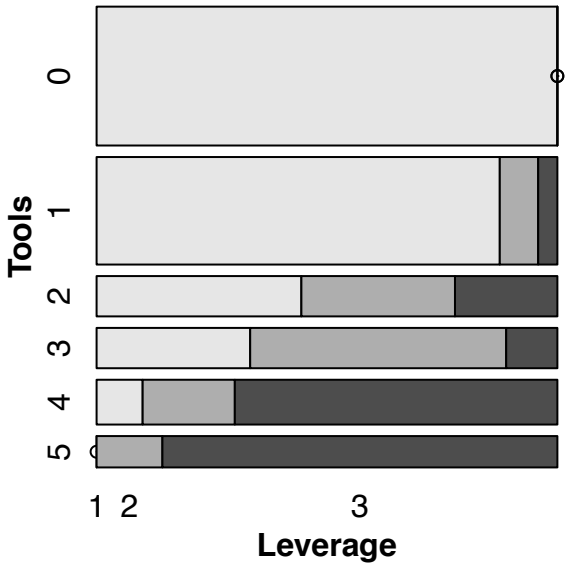


Figure 4.2: Comparison of the magnitude of leverage (x-axis) and the count of leverage tools (y-axis) identified . The width (height) of the rectangles indicates the number of IGOs with the respective magnitude (count of leverage tools), so that bigger (and darker) rectangles indicate more IGOs in that cell. Out of 17 high-leverage IGOs, 14 have three or more leverage tools at their disposal. See Table 4.3 for a list of these leverage tools.

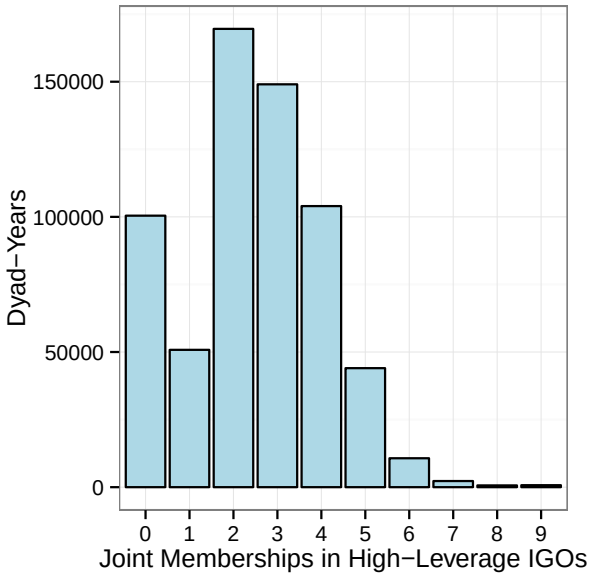


Figure 4.3: Distribution of joint membership-years in High-Leverage IGOs, 1946-2005.

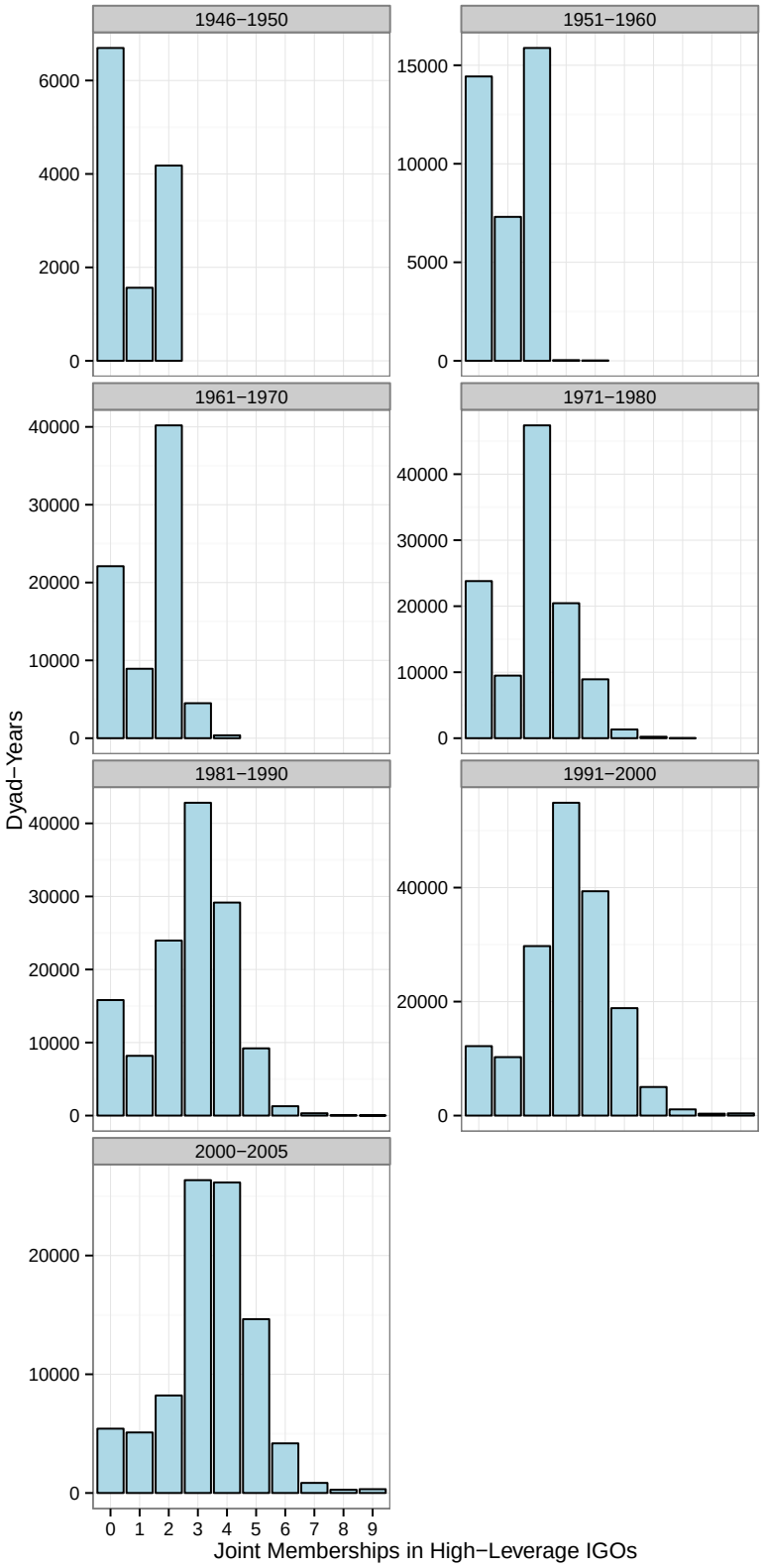


Figure 4.4: Distribution of joint membership-years in High-Leverage IGOs by decade, 1946-2005.

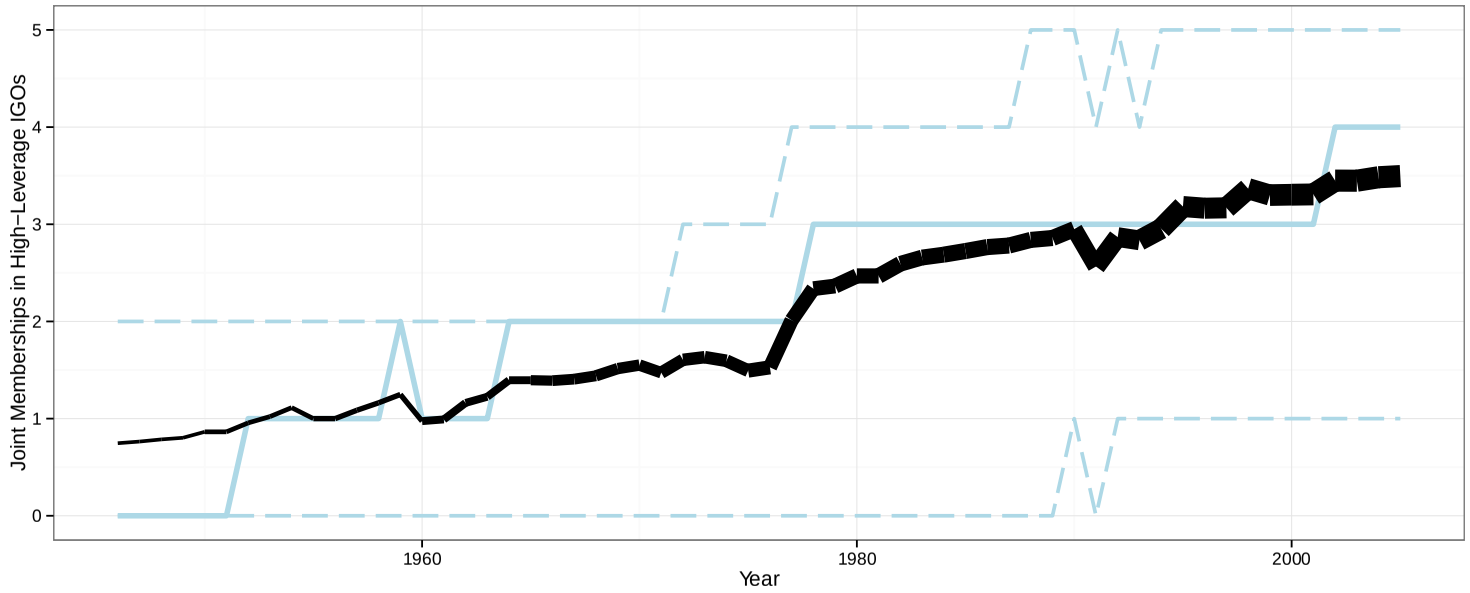


Figure 4.5: Joint memberships in High-Leverage IGOs over time. The solid black line shows mean joint memberships, the dotted (dashed) lines show the 50th (10th and 90th) percentile of joint memberships. The size of the black line indicates the number of dyads in the international system.

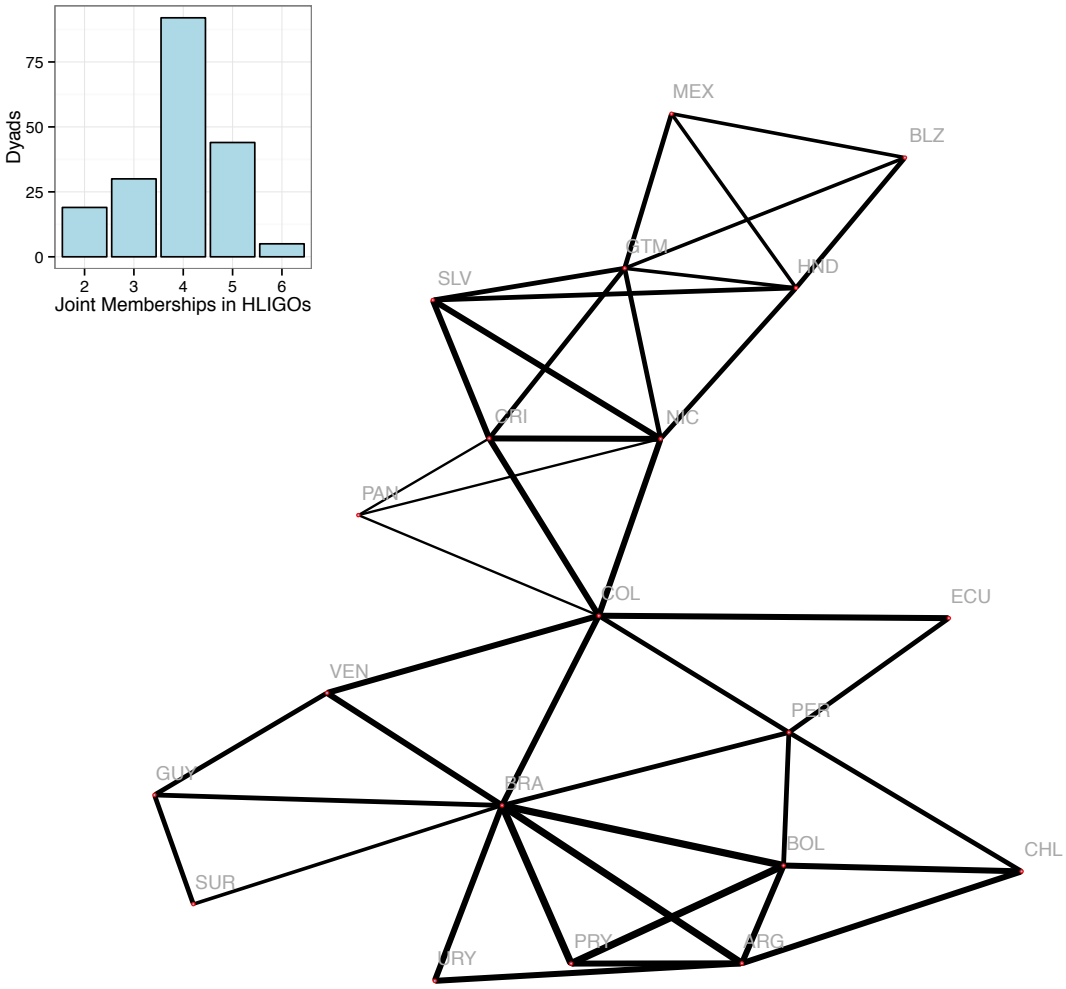


Figure 4.6: Joint memberships in High-Leverage IGOs in Central and South America, 2000 (dyads separated by 400 miles of water or less only). The solid black line indicates that two states have at least one joint membership; thicker lines indicate more joint memberships. In 2000, joint memberships ranged from 2 to 6 in this region (between all dyads.

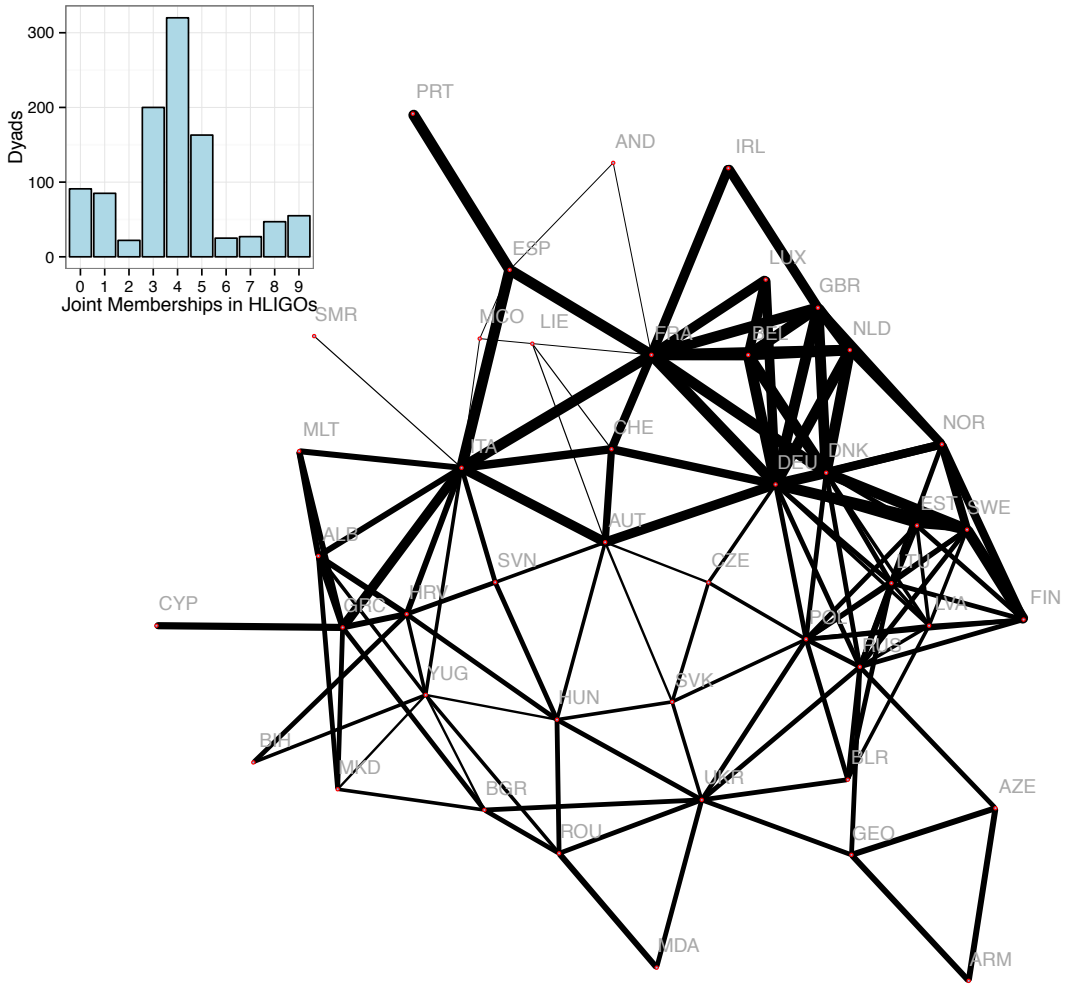


Figure 4.7: Joint memberships in High-Leverage IGOs in Europe, 2000 (dyads separated by 400 miles of water or less only). The solid black line indicates that two states have at least one joint membership; thicker lines indicate more joint memberships. In 2000, joint memberships ranged from 0 to 9 in this region (between all dyads).

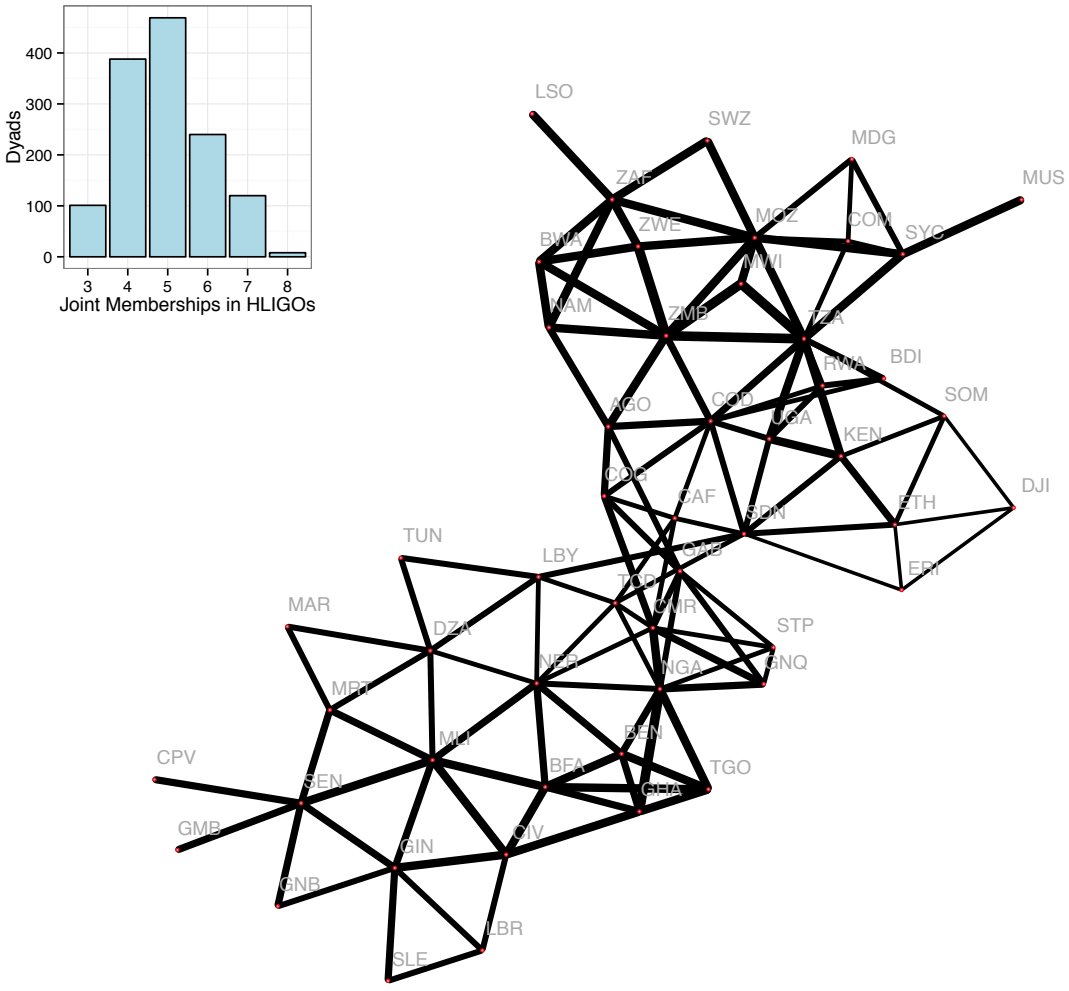


Figure 4.8: Joint memberships in High-Leverage IGOs in Africa, 2000 (dyads separated by 400 miles of water or less only). The solid black line indicates that two states have at least one joint membership; thicker lines indicate more joint memberships. In 2000, joint memberships ranged from 3 to 8 in this region (between all dyads).

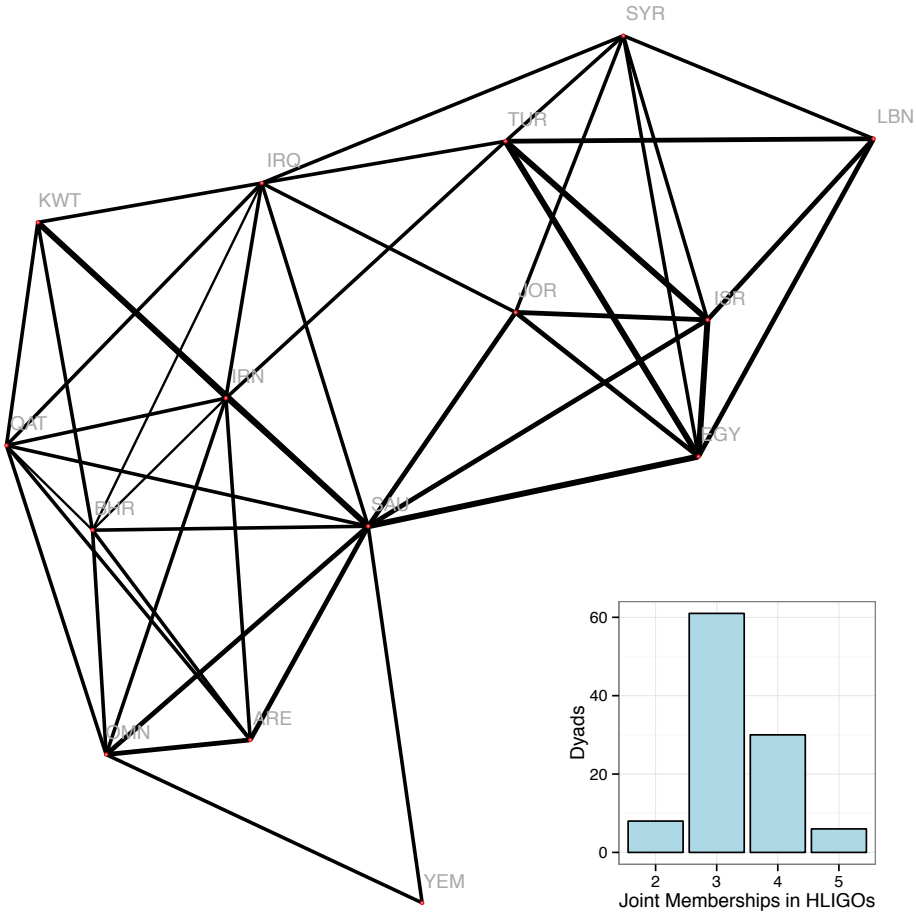


Figure 4.9: Joint memberships in High-Leverage IGOs in the Middle East, 2000 (dyads separated by 400 miles of water or less only). The solid black line indicates that two states have at least one joint membership; thicker lines indicate more joint memberships. In 2000, joint memberships ranged from 2 to 5 in this region (between all dyads).

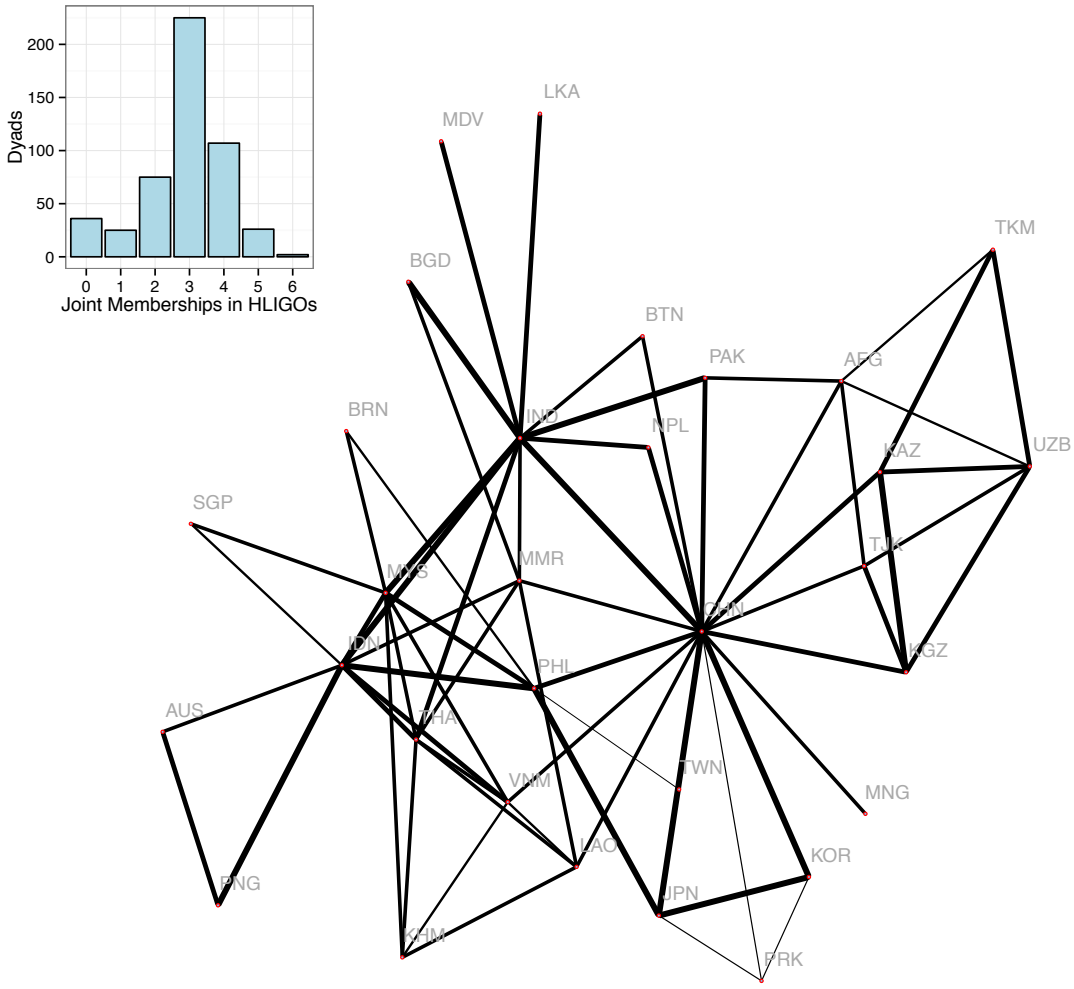


Figure 4.10: Joint memberships in High-Leverage IGOs in Asia, 2000 (dyads separated by 400 miles of water or less only). The solid black line indicates that two states have at least one joint membership; thicker lines indicate more joint memberships. In 2000, joint memberships ranged from 0 to 6 in this region (between all dyads).

Chapter 5

The First Stage of Conflict: International Institutions and the Evolution of Claims and Crises

5.1 Institutions and the Evolution of Interstate Disputes

Why do political disputes between states sometimes turn violent while states resolve them peacefully at other times? The theoretical argument laid out in chapter 3 suggests that the cost of using force in disputes plays a major role in explaining how states resolve disagreements. In turn, the involvement of high-leverage IGOs contributes to the cost of using force. This implies that when HLIGOs can exercise an influence on member states, disputes between these states should be less likely to turn violent and experience the use of force.

To evaluate this expectation, this chapter uses information on disputes between states to examine the impact of international institutions with high leverage on interstate conflict processes. I focus on the development of (a) claims that states have made toward each other and (b) interstate crises. Claims and crises are ideal outcomes to evaluate the role of IGOs on states' behavior during disagreements. The very existence of a claim or a crisis indicates that two states are facing a disagreement. Such a disagreement expresses the fundamental **willingness** of at least one state to engage in conflict with another state, and it presents an **opportunity** for both states to escalate this conflict.

This presence of both opportunity and willingness is crucial for evaluating the impact of any factor on the use of force and the eventual occurrence of war. When states engage in

conflicts, the origin of their dispute is typically a demand that one state has made toward the other. Iraq's claim over Turkey's water management, mentioned below, is one example; the United States' claim over Iraq's reported WMD program in 2002-3 is another. By focusing on claims and crises, I ensure that the causal mechanism of interest—such as the heightened costs for the use of force arising from institutions with high leverage—confronts a serious test: where states are negotiating over a claim or are in a crisis, both the willingness and opportunity for conflict can be considered as given. That is, when states already have expressed a disagreement (such as a claim), finding a marginal impact of IGOs would be strong evidence for the theoretical argument of this dissertation. In addition, claims (and the other outcomes investigated in this dissertation) are outcomes in the realm of "high politics." Showing a cost-based impact of high-leverage IGOs in this domain is key for asserting the relevance of a cost-based causal mechanism of international institutions on state behavior.

Other studies have examined the role of international institutions for interstate conflict. The majority of them examines the relationship between institutions and conflict **onset**. Previous work in this research program (Boehmer, Gartzke, and Nordstrom 2004; Bearce and Omori 2005; Pevehouse and Russett 2006; Haftel 2007) suggests that joint participation in international institutions reduces the probability of conflict onset. These studies share one feature: they explore whether international institutions (or their specific features) are associated with the risk of conflict onset.

This type of inquiry only allows limited inferences—for logical and methodological reasons that have one common cause. Only few pairs of states are at a noteworthy probability of ever facing conflicts of interest that might lead to disputes or wars. Most and Starr (1989) express this as the combination of opportunity and willingness. By examining only conflict onset among all possible combinations of states, studies remain more or less agnostic about this combination of necessary factors. Methodologically, the results of statistical analyses of an overwhelmingly large number of non-events (dyad-years without conflict onset) and a proportionally small number of events (wars or militarized interstate disputes) are not

immediately meaningful when one is searching for factors explaining the events of interest (King and Zeng 2001). Bearce and Omori (2005) and others have made use of statistical corrections for this problem. A related popular approach in this research is to limit the population of pairs of states to those that are "politically relevant" (for a review of the concept, see Lemke and Reed 2001**a**; Bennett 2006). In the majority of the literature, political relevance is treated as emerging from geographic proximity (neighboring states or indirect proximity through present or past colonial relations) and from the ability of a state to engage globally—meaning that major powers form politically relevant dyads with most, if not all, other countries in the world (Bennett 2006, 252). Alternatives include other measures of links between states, such as alliances, that establish meaningful political interactions (Quackenbush 2006), or the operationalization of political relevance as a latent variable (Xiang 2010).

However, the substantial meaning of these findings, whether they correct for small numbers of events or political relevance (or both), is restricted to the observable relation between participation in international institutions and conflict **onset**: are states less likely to end up in disagreements or disputes when they jointly engage in international institutions? Bearce and Bondanella (2007) answer this question by suggesting that international institutions promote the **convergence** of member states' interests or preferences. Because of this possibility, the main question of this dissertation and its theoretical argument address the most critical case of institutional influence: what is the role of IGOs in a situation where states have **demonstrated** a divergence of interest? I aim specifically at exploring the effect of international institutions on conflict processes: (how) can institutions change the evolution of a dispute once that dispute has begun? This is a separate question that has received slightly less attention,[1] but is at least equally important to answer because these are the cases where a potential influence of IGOs really matters.

A second particular reason for the importance of this question—and one benefit of

[1] For exceptions, see Shannon (2009); Shannon, Morey, and Boehmke (2010).

my study—is the second major issue with research on institutions and conflict: the inherent threat to inference arising from self-selection of state dyads into institutions and the resulting endogeneity of institutional effects. Popular realist (and methodological) critiques of institutionalist research on conflict suggest that states only join institutions in order to solidify existing behavior (Mearsheimer 1994; Downs, Rocke, and Barsoom 1996; von Stein 2005). This critique directly targets such studies that find associations between joint institutional participation and the risk of conflict onset because it is possible that pairs of states only join together in international institutions when they see no or a negligible risk of conflicts of interests that could evolve into disputes. In contrast, my interest in the effect of institutions on dispute development avoids this problem by examining only the relevant subset of cases where states have demonstrated a viable conflict of interest. In addition, I also address these problems empirically in chapter 7. The remainder of this chapter discusses the implications of my general argument in the specific cases of claims and crises and then presents the empirical test of these implications.

5.2 Claims Between States

The first part of this chapter treats **claims** as a situation where states have expressed a disagreement over an issue; this situation lends itself to examining the influence of international institutions on how states proceed in dealing with this dispute. States frequently express claims over issues against another state.

As an example, consider Turkey's efforts to build the Ilısu dam on the Tigris river. The Tigris flows from Turkey to Iraq (via Syria); this makes Iraq an (indirect) downstream neighbor of Turkey and means that any regulation of water supply through a dam in Turkey will affect the amount of water available in Iraq. Managing water resources between Turkey, Syria, and Iraq has been a contentious issue for decades, but Turkish plans for a multi-dam project, including the Ilısu dam, has led to more serious tensions between Turkey and Iraq. Iraq has long expressed concern about reduced water supply for Iraqi areas, should

the dam be built (Warner 2012). In 1999, Iraq demanded that Turkey change course to reflect Iraq's claims on the Tigris water supply (Hensel, Mitchell, and Sowers 2006). When a challenger (in that case, Iraq) makes a claim, the target (Turkey) can choose to accommodate the claim, or bargain over it. Depending on how the bargaining evolves, the dispute can be resolved peacefully, or one state may choose to use force and turn the claim into a militarized interstate dispute.

In Latin America, Guatemala and Belize have been involved in territorial claims since 1981, when Belize reached independence. Since that year, Guatemala has been laying claim to a considerable part of Belize's territory. Throughout the claim, troops from the two countries have confronted each other repeatedly. This case also illustrates one of the challenges of active dispute resolution through IGOs. Considerable efforts in IR scholarship have focused on the ability of IGOs to provide opportunities for mediation, arbitration, and adjudication of disputes such as the disagreement between Guatemala and Belize (see, e.g., Hansen, Mitchell, and Nemeth 2008; Mitchell and Hensel 2007; Shannon 2009; Hensel 2001**a**; Hensel, Mitchell, and Sowers 2006; Brochmann and Hensel 2009; Prins and Daxecker 2008; Hensel et al. 2008; Gent and Shannon 2011; Gent 2013; Brochmann and Hensel 2011; Hensel 2001**b**). However, as Shannon's (2009) choice of outcome variable (the onset of conflict settlement attempts) indicate, a key step in the role of this type of IGOs in conflict resolution is that states actually turn to the IGO for mediation, arbitration, or adjudication. The case of Guatemala and Belize shows that this active turn to IGOs requires the commitment from each state to use the IGO's help. Guatemala and Belize were expected to refer their case to the International Court of Justice for settlement. In early 2013, however, the Guatemalan government suspended a referendum that was to authorize the case's referral to the ICJ.[2] Getting help from IGOs to settle a conflict like this is therefore a tenuous enterprise. In contrast, the cost-based mechanism I explore in this dissertation does not involve the approval of either conflict party to accept the involvement of the IGO.

[2] See source **W.1** (Appendix C).

Another example of a claim that has experienced fewer hostilities than the Guatemalan-Belize dispute is the disageement between Bolivia and Chile over the Silala river. This river flows from Bolivia to Chile. Chile has laid claims to the Silala's water resources because it requires water for copper production.[3] So far, this claim has resulted in more or less peaceful negotations and no substantial armed clashes.

In this section, I use claims like the illustrative cases above to explore whether cost-generating institutions can steer the conflict bargaining process toward peaceful resolution. These scenarios present states with a commitment problem. Once challenger A has made a claim, it has expressed dissatisfaction with the status quo. Target B can acquiesce or bargain over the issue. The commitment problem in this situation is a typical example for the logic laid out in Fearon (1995). For both A and B, a bargaining solution rather than the costly use of force would be preferable. But neither A nor B can be sure that the other side might not try to exploit the other side in the future, trying to either push through their claim (A) or force a return to the pre-bargain status quo (B). When the commitment problem is severe, hostilities might ensue.

The argument I presented in chapter 3 fits this scenario. Both challenger and target can expect substantial costs from cost-generating IGOs if they use force. Without these costs, the utility of using force may often be higher than accepting a peaceful bargain—given that one state fears the other will use force later to exploit it. But as the costs of using force increase, the utility of using force decreases. Consequently, my expectation is that during claims, we should observe fewer occurrences of the use of force as challengers and targets are subject to more cost-generating IGOs. I express this expectation in the following

> **Claims hypothesis** (H1): Claims are less likely to experience the use of military force when states face higher potential costs from joint memberships in international institutions with the appropriate leverage.

In other words, there should be a **negative association** between states' joint participation in

[3] See source: **W.19** (Appendix C).

high-leverage IGOs and the probability of claims to ending in one or both states using force. Below, I evaluate the validity of this hypothesis against the influence of other institutional mechanisms. I focus on two mechanisms: socialization and information dissemination. The former should be captured by all active international institutions to which both states in a claim are members; the second should be germane to security institutions. More information on the details of this empirical test follows.

5.2.1 Data on claims

The Issue Correlates of War (ICOW) project (Hensel 2001**a**; Hensel and Mitchell 2005; Hensel et al. 2008) offers the data necessary for a quantitative examination of the influence of international institutions on the evolution of claims. For this analysis, I use information from the ICOW project on several hundreds of claims that states have made toward each other between 1946 and 2001. These data provide as the unit of analysis territorial, maritime, and river claims at the dyadic level. Each claim is a "focus of disagreement between two or more nation-state actors" (Hensel 2013, 4). To be recorded, a claim must be based on explicit and public statements by official representatives of the government of at least one state (ibid.). This matches closely the condition that I identify for an opportunity for international institutions to change states' behavior: a claim establishes a contention over an issue that can (but need not) result in a military confrontation. The existence of a claim means that there is a demand from one state to another. Basing my analyses on the existence of such expressed disagreements helps address the problem of identifying the relevant set of observations that should enter an analysis of the correlates of conflict onset. The substantial amount of literature on politically relevant dyads (see the discussion above and Bennett 2006; Quackenbush 2006; Xiang 2010) highlights the importance of this choice for inference. Rather than making assumptions about the population of states that might enter into disputes, I identify the relevant population as all dyads that experienced a claim made by at least one of the states in the dyad.

5.2.2 Outcome: Use of force in claims

The theoretical argument specifies that the influence of international institutions with substantial leverage should translate into a heightened cost of using force in disputes, which in turn would result in a lower probability of observing actual conflict between states in a dispute. Using claims as units of analysis, I code a binary outcome for each claim: whether either side in the claim dyad used force.

This outcome is based on the ordinal hostility measure in the ICOW data for each claim. I code it as 1 if the highest hostility level throughout a claim reached the use of force by at least one state in the dyad or if a full-scale war ensued. If hostilities remained below that level—if states only threatened with the use of force, displayed force, or no militarized dispute at all occurred—the variable is coded as 0. Here, I assume that observing at least one government (say, A) using force indicates that $F_A - C_A > S_A$, or that the payoff from using force for that government exceeded the payoff from the status quo and peaceful conflict resolution, taking into account the cost of using force incurred through relevant international institutions. Between 1946 and 2001, the ICOW data record 196 claims for which I have information on international institutions. Of these 196 claims, 40 experienced the use of force.

The current version of the ICOW data (version 1.10, as of January 2014) provides information on claims in North and South America, Europe, and the Middle East. This geographic limitation is shown in Figure 5.1. This geographic limitation requires a trade-off between the coverage of all claims in my time period of interest and the specificity of information on the evolution of claims. My research question and theory are built around the idea that the cost-driven influence of HLIGOs should be visible precisely in cases where states have expressed a disagreement. Therefore, having specific information on claims and how they proceed outweighs the drawbacks of a geographically limited sample. However, to address this problem, I investigate the global population of interstate **crises** in the second

part of this chapter.

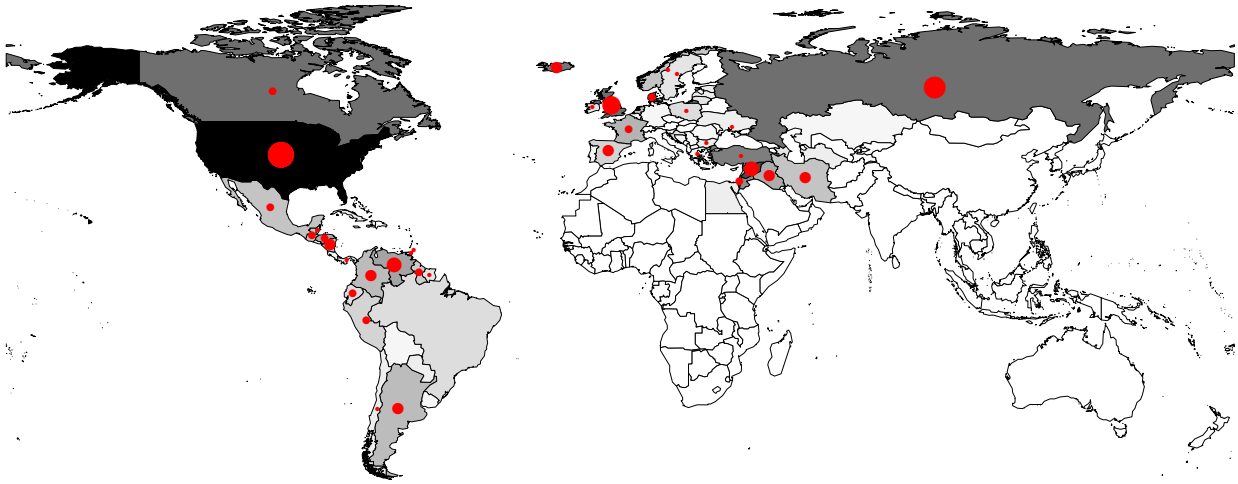


Figure 5.1: Claims and the use of force, 1946-2001. Gray shading indicates the number of claims that a country was involved in (darker shade: more claims). Red dots mark countries involved in claims that experienced the use of force, with larger dots indicating more incidents of using force. For countries in white, no information on claims is yet provided in the ICOW data (version 1.10).

5.2.3 Institutional influence: co-membership in cost-generating IGOs

The key variable to measure the economic influence of international institutions is derived from the data described in chapter 4. My theoretical argument suggests that the cost of using force in a claim increases with the influence of high-leverage IGOs (see the last paragraph of section 3.2.1). This influence is present when both states in a claim are involved in such IGOs. Therefore, I use the count of both states' joint memberships in institutions with high leverage (see Tables 4.2 and 4.3) to measure the aggregate costs that institutions can credibly impose on states engaged in a dispute. When both states are members in an institution, the costs of using force are similar for each state and transparent to each state. Because the outcome is the observed use of force by either state, joint memberships are the most appropriate measure for this type of institutional influence. Figure 5.2 displays the distribution of the HLIGO variable in the sample of interstate claims. States' joint

memberships vary from zero to nine, with two being the modal category and 20% of dyads sharing four or more HLIGOs. I measure these joint memberships in the year in which the claim begins. This choice helps isolate the influence of HLIGOs from potential processes during the claim.

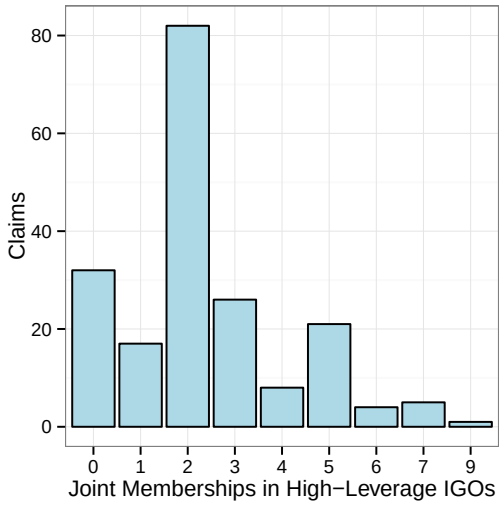


Figure 5.2: Joint memberships in high-leverage IGOs of states involved in claims, 1946-2001.

5.2.4 Other IGO variables

To distinguish the cost-based institutional mechanism from others, I also investigate the role of two other variables as a "placebo" test to see whether other IGOs also exhibit similar effects. If they do, the correlation between high-leverage IGOs and the development of claims would be insufficient evidence to support my theory's implications. The impact of a dyad's joint membership in those IGOs that can proxy the idea that interactions in international institutions can socialize states into shared identities or build trust (for examples, see for instance, Checkel 1999; Johnston 2001; Bearce and Bondanella 2007).[4] This may in turn facilitate the peaceful resolution of claims. For this concept, I measure a dyad's count of

[4] A more refined future test could use information on more specific IGO features, such as the presence of organs that facilitate regular meetings between heads of state and high-level government officials (Bearce and Omori 2005; Haftel 2007).

shared memberships in **structured IGOs**, following Bearce and Bondanella (2007) who first operationalized IGO socialization in a quantitative manner. Structured IGOs comprise IGOs with "structured" and "interventionst" character.[5] These institutional features capture the "bureaucracy necessary for a high density of member-state interactions" (Bearce and Bondanella 2007, 713); this high density is necessary for the interactions that give way to member state socialization and the resulting preference alignment.

The other channel of IGO influence addresses information problems about other states' capabilities and/or intentions (see, for instance, Shannon, Morey, and Boehmke 2010). I focus on the type of institutions with the structure and issue coverage most likely to resolve information problems when it comes to military conflict: IGOs with centralized, "interventionist" (Boehmer, Gartzke, and Nordstrom 2004) structures operating in the military-political domain. Memberships in these institutions best capture the role of IGOs for information dissemination because only centralized IGOs in the security domain have the capacity and formal authority to collect unbiased information about member states' military capacities and decision-making. This type of data matches closely the information associated with information asymmetry that may explain why states use force despite high costs. Hence highly-structured security IGOs are the best available measure for the informational mechanism behind a pacifying effect of IGOs on member states. Because each mechanism relies on the role of the respective IGOs for **both** states in a dispute, I operationalize each of these two mechanisms as the count of joint memberships in the respective type of IGOs.

5.2.5 Control variables

As a first step, I investigate the simple bivariate relationship between joint memberships in HLIGOs and the use of force in claims. This simple test is meant to ensure that the relationship is not an artifact of "garbage-can models" (Achen 2005; Clarke 2005; Ray 2005). To remove potential spurious relationships, I then estimate multivariate models with

[5] See chapter 4 for a longer discussion of this classification.

a number of control variables. A correlation matrix with all control variables is available in the Appendix (Table B.1).

Salience. In order to account for the importance of the claim in each case and the stakes each state may have in it, I control for two ordinal measures of salience provided by the ICOW project. Tangible salience measures the value of the object (such as a territory) under dispute to the states involved. Intangible salience operationalizes the ideational or historical value that states have expressed for the object under dispute. Both variables increase with higher salience (Hensel and Mitchell 2007, 15).

Territorial claims. Because disputes over territory are arguably more likely to escalate to wars (see, e.g. Huth 1996; Hensel and Mitchell 2005; Tir 2010), I include a binary indicator for territorial claims.

Democracy. I control for joint democracy to account for the finding that democracies are more likely to settle claims peacefully (see, e.g., Hensel 2001**a**). This variable is coded as 1 for pairs of states that both exceed a value of 7 on the Polity scale (from -10 to $+10$) and 0 for all others (Marshall and Jaggers 2009).

Rivalry. Due to established findings about enduring rivalries between states as hotbeds for using force (see, e.g., Diehl and Goertz 2000), I include a separate indicator for claims between pairs of states that are also coded as enduring rivalries by Klein, Goertz, and Diehl (2006). In chapter 6, I dedicate a separate empirical investigation to the role of high-leverage IGOs in the formation of international rivalries.

Power differential. Previous work suggests that power asymmetry between states is inversely related to the degree of uncertainty about potential war outcomes (see, e.g., Bennett and III 1996; Wohlforth 1999; Paul 2006), and that conflict might be more likely under greater uncertainty. I control for this relationship using the (absolute) differential in capabilities between the two states in a claim, operationalized using the National Material Capabilities/Composite Index of National Capability (Singer, Bremer, and Stuckey 1972) via EUGene (Bennett and Stam 2000). Higher values on this variable indicate greater

asymmetry.

Economic factors. Finally, I account for the pacifying effect of economic interdependence (see, e.g., Gartzke, Li, and Boehmer 2001; Hegre, Oneal, and Russett 2010; Oneal et al. 1996) by incorporating the lower value in the dyad of bilateral trade divided by GDP, using data from Gleditsch (2002). To capture the idea that wealthier countries have more to lose from militarized conflict and are thus more likely to avoid the escalation of claims (see, for instance, Gartzke 2007, 171-172), I also include the lower value of GDP per capita as a proxy for economic development (again taken from Gleditsch 2002).

Are all HLIGO co-memberships equally relevant? Controlling for economic development also helps isolate the impact of HLIGOs on the evolution of conflicts because it holds the potential impact of HLIGO-imposed costs constant. The partial effect of HLIGO-imposed costs might be different for a dyad of wealthy countries that depend less on HLIGO-based benefits—compared to a dyad of less wealthy states whose economy draws more strongly on resources from HLIGOs. Adjusting for the economic development of the dyad addresses this possibility by establishing the same baseline for the evaluation of HLGIO co-memberships.

5.2.6 Estimation

Given the binary nature of the dependent variable, I use probit regression models to evaluate the determinants of the probability of a claim experiencing the use of force. For a number of reasons, I turn to Bayesian estimation for these models. The Bayesian approach treats the parameters of interest (in this case, regression coefficients) as part of a distribution, rather than fixed (unobserved) values that are asymptotically approximated in frequentist regression models. Through simulation, I obtain the distribution of these parameters. This allows me to evaluate their statistical significance in a naturally interpretable and robust way. Because I am dealing with small samples in several of my analyses, this interpretation is particularly useful (Albert and Chib 1993, 678): rather than evaluating the significance

of a (probit) regression coefficient obtained through maximum likelihood estimation (which relies on asymptotic normality of the parameter's distribution), I simulate the distribution of the parameter and evaluate how much of that distribution includes values that support (or reject) my hypothesis. If, for instance, the distribution includes about 50% values that support my hypothesis and about 50% of values that counter my hypothesis, the hypothesis should be rejected. On the other hand, if more than 95% of the posterior distribution contains values that support the hypothesis, one has a good reason to continue to investigate the substantive significance of the partiuclar relationship. In addition, the Bayesian approach allows me flexibility to estimate unit-specific variance parameters (for instance, for dyads that experience multiple claims) for robustness tests and additional tests in follow-up work. With regard to substantive interpretation, the results I present in this dissertation using Bayesian methods are highly similar to those from frequentist models. I choose to avoid inserting strongly directional or certain prior information about the direction of the hypothesized relationship into any of the Bayesian models I estimate. While using prior information is one of the advantages of Bayesian methods (see, e.g., Western and Jackman 1994; Jackman 2004; Gill and Walker 2005), in the current version of this project I keep any results I present as comparable to widespread frequentist methods. Therefore, I use uniform prior distributions for all parameter estimates, that is, I treat each potential value for a regression coefficient (from negative to positive) as equally plausible ex ante.

5.2.7 Results and discussion

In a simple difference-of-means test, claims that experienced the use of force happened between dyads that shared a mean 1.9 memberships in HLIGOs; claims that were resolved without either state using force had an average 2.5 HLIGO memberships ($p = 0.03$). Figure 5.3 shows this difference of means (red dots) in a boxplot.

High-Leverage IGOs predict a lower probability of using force

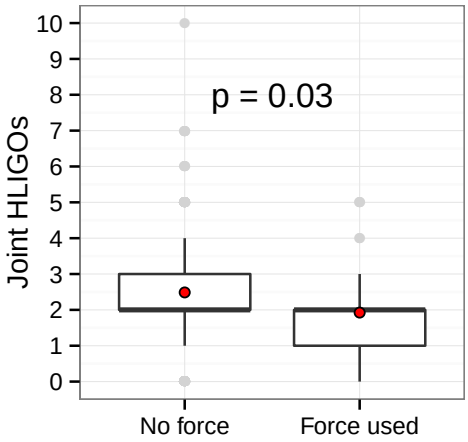


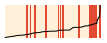
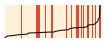
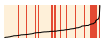
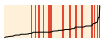
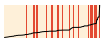
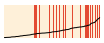
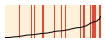
Figure 5.3: Difference in means of joint memberships in high-leverage IGOs of states involved in claims, 1946-2001. Red dots show the mean HLIGO memberships by outcome. The thick black horizontal line indicates the mean in joint HLIGO memberships for each outcome, the thin horizontal lines the 25th and 75th percentiles.

This initial evidence for H1, a negative association between states' joint participation in high-leverage IGOs and the probability of claims to ending in one or both states using force, is substantiated in the probit models shown in Table 5.1. The first row (Models 1, 2, 5 and 6) all show a negative coefficient on states' joint memberships in high-leverage IGOs, suggesting that when states with more joint memberships engage in a claim, they are less likely to use force in it. This relationship holds in the absence (Model 1) and presence (Models 2, 5, and 6) of control variables, and it is statistically significant: in each of the models, more than 95% of simulated parameter values are below 0. Across all models, over 97% of simulated values are below 0. The posterior estimates peak around values of around -0.15 or lower, depending on which model is estimated. Figure 5.4 illustrates this statement; it shows the posterior distribution of the coefficients on joint HLIGO memberships for each model, separated by color. These density plots indicate how many of the posterior draws of the coefficient estimates fall to the left of 0, to the right of 0, or close to 0. Seeing how many draws are in the hypothesized direction (to the left of 0) as well as where the posterior distribution's highest density occurs (around -0.15 or lower) allows to evaluate the certainty with which to make inferences about the relationship between joint HLIGO memberships and the probability that one or both states in a claim used force.

To distinguish the cost-based mechanism of IGO influence from other mechanisms, I also estimate separate models where I focus on the role of socialization (through states' co-memberships in structured IGOs) and information provision (through states' membership in highly structured security-related IGOs). The coefficient estimates for these two mechanisms cannot be reliably distinguished from 0, as the two top left plots in Figure 5.6 show.

The substantive impact of High-Leverage IGOs is considerable. Figure 5.5 shows the predicted probability of using force at each possible count of joint memberships in HLIGOs in the ICOW sample. In the Bayesian setup, these predicted probabilities are obtained through the posterior distribution of (simulated) predicted probabilities of using force at the given number of joint HLIGO memberships. This also allows a measure of uncertainty

Table 5.1: Determinants of using force in claims, 1946-2001.

Model	1	2	3	4	5	6	7	8
Joint High-Leverage IGOs	−0.122	−0.162		−0.256		−0.155	−0.166	−0.316
	(0.065)	(0.08)		(0.121)		(0.081)	(0.085)	(0.137)
Joint Structured IGOs (Socialization)			−0.012	0.023				0.037
			(0.014)	(0.021)				(0.026)
Joint Security HSIGOs (Information)					−0.325	−0.275	−0.278	−0.365
					(0.265)	(0.272)	(0.293)	(0.295)
Intangible Salience		−0.592	−0.564	−0.579	−0.545	−0.587	−0.757	−0.723
		(0.198)	(0.189)	(0.192)	(0.192)	(0.2)	(0.224)	(0.231)
Tangible Salience		0.138	0.136	0.126	0.157	0.169	0.236	0.256
		(0.079)	(0.079)	(0.08)	(0.083)	(0.084)	(0.106)	(0.105)
Territorial Claim		1.411	1.287	1.455	1.239	1.385	1.539	1.607
		(0.446)	(0.427)	(0.446)	(0.426)	(0.453)	(0.497)	(0.499)
Joint Democracy		−0.41	−0.421	−0.579	−0.199	−0.099	−0.167	−0.143
		(0.354)	(0.374)	(0.387)	(0.445)	(0.46)	(0.571)	(0.57)
Enduring Rivalry		0.596	0.573	0.571	0.632	0.662	0.532	0.465
		(0.276)	(0.267)	(0.275)	(0.278)	(0.281)	(0.321)	(0.329)
Power Differential							−0.128	−0.124
							(0.056)	(0.057)
Trade dependence (lower)							−0.032	−0.07
							(0.064)	(0.069)
GDPpc (lower)							0.081	−0.02
							(0.306)	(0.316)
Claims	196	167	167	167	167	167	161	161
Model fit								

Binary outcome variable: did a claim experience the use of force?

Estimation method: Bayesian probit regression with uniform prior distributions on all parameters.

Cell entries: Means of the posterior distributions of Bayesian probit coefficients;
posterior standard deviations in parentheses. Intercept not shown.

Convergence: Tests passed for all parameters (see Appendix E.1).

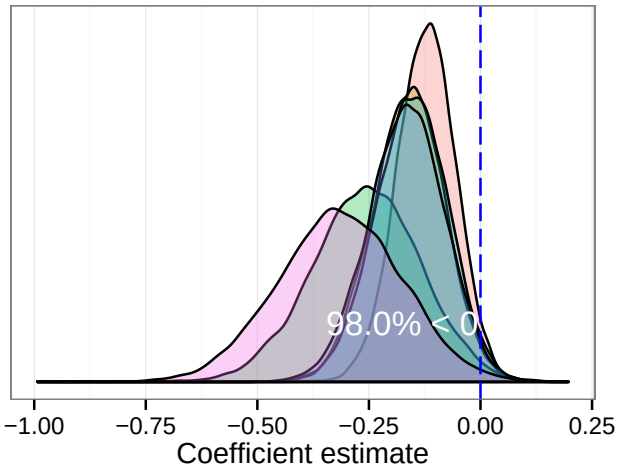


Figure 5.4: Joint memberships in high-leverage IGOs and the use force in claims, 1946-2001. Posterior distribution of probit regression coefficients. Colors of the density plots indicate the different Models (1, 2, 4, 6, 7, 8) in Table 5.1.

based on that posterior distribution. Here, the data show that dyads with more HLIGO memberships substantially drop in the probability of either side using force. Moving from no co-memberships to 3 cuts the probability of using force in half, from over 30% to about 15%. At 6 co-memberships, that probability drops below 10%. Keeping in mind the overall distribution of HLIGO memberships in this sample (Figure 5.2), values between 3 and 6 are frequent; the lower probabilities in this area are therefore substantially relevant.

Control variables and model quality

In Models 2 through 6, control variables behave as one would expect from the extant literature. Claims over issues that have higher tangible salience are more likely to experience the use of force, whereas higher intangible salience is associated with a lower risk of that outcome—a relationship that has been shown previously, for instance, by Hensel and Mitchell (2005). As the large literature on territory as a source of violent conflict suggests, territorial claims are more likely to experience the use of force; the same applies to enduring rivalries (see, e.g., Diehl and Goertz 2000). If high power asymmetries are interpreted as the absence of uncertainty over potential war outcomes, the models support the idea that claims are more likely to be resolved peacefully when opponents have a clear understanding (and little uncertainty) over which side would prevail in a militarized conflict. The coefficients for democracy and trading relationships point in the expected direction (negatively associated with the use of force), but do not allow for inferring such a relationship with a high degree of certainty. Economic development exhibits no relationship with how claims evolve. Figure 5.6 again illustrates the posterior distribution of these variables.

Judging by the models' classification of the binary outcome variable, the models perform satisfactorily, with the area under the Receiver Operator Characteristic-curve (see Ward, Greenhill, and Bakke 2010) being above 70% for each model but the bivariate Model 1. Each model in Table 5.1 also contains separation plots to graphically evaluate how well these binary models classify the binary outcomes to which they are fit. Separation plots

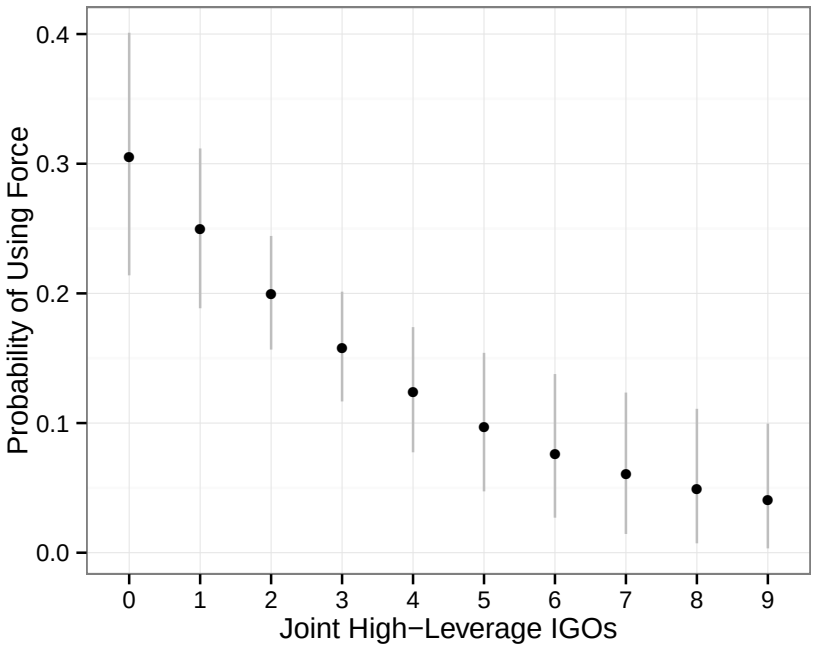


Figure 5.5: Predicted probabilities of using force in claims, 1946-2001. Black dots are the means of the posterior distribution of (simulated) predicted probabilities of using force at the given number of joint HLIGO memberships, with other covariates held constant. Grey bars indicate 90% credible intervals based on the posterior distribution of predicted probabilities. Calculations based on Model 2, Table 5.1.

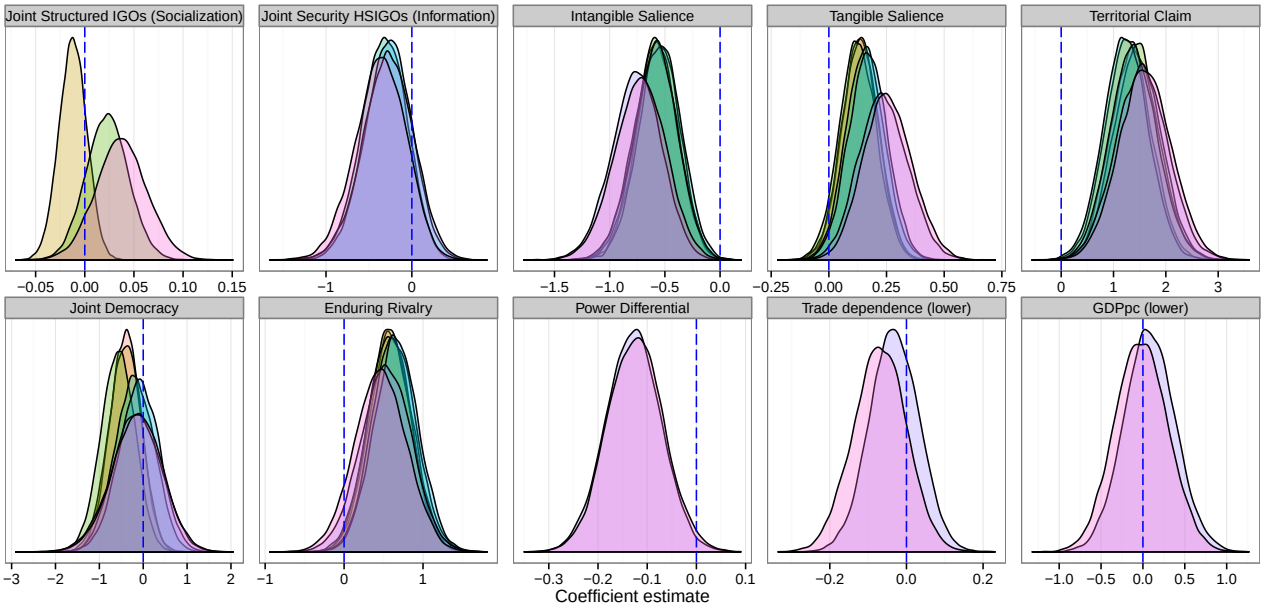
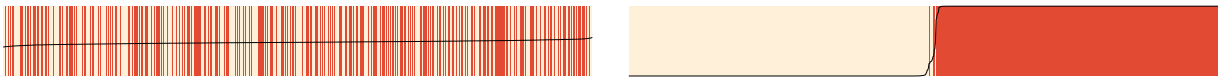


Figure 5.6: Posterior distributions of probit regression coefficients for control variables.



(a) No useful classification (b) Near-perfect separation

Figure 5.7: Two simulated separation plots for a model that does not fit the data and does not predict outcomes better than random guesses (a) and a model that overfits the data and predicts nearly every observation correctly (b).

display how well the predicted probabilities from a statistical model correspond to the actually observed events in the data. The implementation chosen in this dissertation is based on work by Greenhill, Ward, and Sacks (2011). These plots contain three important elements. First, they show events (outcomes of 1) as dark bars and non-events (outcomes of 0) as light bars. Second, they order these bars by increasing order of the probability of an outcome of 1 that the statistical model assigns to them. Third, the plots contain a black line connecting the predicted probabilities (as values on the vertical axis) of each outcome from the far left to the far right of the plot. Two extreme examples in Figure 5.7 can clarify the utility of these plots. Panel 5.7a is based on a simulated logit model that predicts a binary outcome y with a continuous variable x that is randomly drawn from a normal distribution with no relationship to the data-generating process for y. The dark bars are equally distributed across the space of the plot and the predicted probabilities (visualized as a black line) is flat, suggesting that almost each outcome is predicted to have about the same probability of being 1 or 0 — around 50%. This model does not fit the data well. In panel 5.7b, the separation plot is based on a model that predicts y with a latent continuous variable that was used to generate the binary y, as well as random draws from a normal distribution. This model predicts the data almost perfectly — it overfits the data and leads to "perfect separation" of 0s and 1s of the observed outcome variable. This is indicated by the strict grouping of light bars to the left and dark bars to the right, and a sharp increase in $pr(y)$ where the bars are separated. The fit of all models presented in this dissertation is at neither extreme, but comparing these separation plots allow to compare how well different models

fit on the same outcome. The plots also allow to verify that the models containing variables for joint memberships in high-leverage IGOs fit the data reasonably well and outperform random guesses. This serves as an additional check on evaluating the utility of these models in assessing the hypotheses tested in this dissertation.

Modeling selection into claims

The previous test chooses claims between states as its relevant sample. For an unbiased estimate of the effect of HLIGOs on the probability of using force in a claim, the test assumes that claims with dyads are a random sample of all dyads. But it might be possible that in pairs of states where one state makes a claim another state, some unobserved factor explains why these two states in particular enter into a claim. If that is the case, one would need to correct for potential (downward) bias in the estimates of the coefficients on HLIGOs.

Based on theory, there should be little reason to be concerned about **upward** bias, i.e. findings that are too optimistic about HLIGOs, arising from this selection process. If the sample of dyads in claims were more conflictual or ridden with animosity, for instance, evidence for a positive impact of HLIGOs in that sample would be based on a particularly hard test. This is part of this study's motivation to focus on revealed disagreements only, rather than all (politically relevant) dyads. On the other hand, one could imagine that an unobserved factor gives rise to the peaceful resolution of claims **as well as** states' joint membership in HLIGOs. I address this concern separately in chapter 7.

In either case, I also test for the robustness of the previous findings to selection bias comparing these findings to those from a model that corrects for sample selection, the most common approach to this problem in the quantitative IR literature. This technique has been widely used in studies of international and intrastate conflict (Lebovic 2004; Shannon, Morey, and Boehmke 2010; Lemke and Reed 2001**b**; Reed 2000; Sartori 2003; Allee and Huth 2006; Hansen, Mitchell, and Nemeth 2008; Beardsley and Asal 2009**a**; Brochmann 2012; Clayton and Gleditsch Forthcoming), international political economy (Jensen 2003;

von Stein 2005; Kim 2008; Busch and Pelc 2010), and international organization and law (Plümper, Schneider, and Troeger 2006; Donno 2010; Gray 2009; Conrad and Ritter 2013). This type of sample selection model estimates two equations, one for selection of all dyads into claims, and one for the use of force in claims (akin to Models 1 through 6 above). The population for the selection equation is all pairs of states; the dependent variable is the onset of a claim. As in Models 1 through 6 above, there are just short of 200 claim onsets. The outcome equation is then estimated on the sample of these claims, with the binary dependent variable being the indicator of whether force was used during the claim. The correlation between the error terms of both equations can then indicate the presence or absence of selection if both equations are appropriately specified.

For proper specification, the sample selection model requires variables that identify the selection equation; that is: at least one variable that explains only why states begin claims. I choose two variables that plausibly perform this function. First, two states' affinity should be strongly related to states' probability of starting a claim against each other in the first place. For affinity, I use a common measure based on states' voting in the United Nations General Assembly (Gartzke 1998; 2000; Voeten 2000; Gartzke and Jo 2002; Voeten 2013). For robustness, I also rely on a recent alternative, dynamic ideal point estimation (Bailey, Strezhnev, and Voeten 2013), that arguably outperforms the previous measure based on voting similarity. On each of these measures, lower values indicate greater preference divergence, and higher values indicate higher concordance. To be a plausible identifying variable for the selection equation, the instrument should contribute to the process of claim onsets but not be related to the evolution of the claim and whether either or both states choose to use force. Affinity is a good candidate for this requirement on a theoretical basis: states with a high degree of preference similarity are by definition quite unlikely to establish claims or demands against each other. Otherwise, one would expect that their latent dispute would also materialize in preference divergence in, for instance, their voting behavior in the UN General Assembly. On the other hand, it is difficult to imagine that two states with high preference

alignment would first make a public claim but then resolve it peacefully—in that case, one would expect that either these states have no latent disagreements that would lead them to make a public claim, or that they resolve latent disagreements in amicable negotiations without having to publicly stake hostile claims against the other states. Empirically, there is no observable relationship between affinity and the probability of using force in claims ($p = 0.55$ in a bivariate model).

Second, I also use the contiguity of the two members of a dyad to help explain the onset of claims. This variable is also plausible because one would expect that states are far more likely to make claims about territorial, maritime, or freshwater resources of states that are in reasonable proximity to the claim-making state. I use the Correlates of War project as the source for this variable (Stinnett et al. 2002).

Table 5.2 shows three key results from Heckman probit selection models. First, the coefficients on HLIGOs are virtually unchanged from the results in Table 5.1. Assuming that the selection model is correctly identified, this suggests the absence of selection bias on my variable of interest. While identification cannot be tested objectively, the good model fit (with an area under the ROC curve around 0.88) suggests that modeling the selection stage with the chosen variables is appropriate, and does not invalidate the assumptions behind identification.

Second, none of the models in Table 5.2 indicate a significant correlation between selection and outcome equation, also indicating the absence of selection bias. Third, the information shown in the visualization of the results in Figure 5.8 is consistent with what one would expect, lending some credence to the specification of the selection model. First, dyads that find themselves in claims share the following characteristics: they are likely to be geographically close to each other; they express divering preferences in their voting in the UN General Assembly, and they are enduring rivals. Interestingly, states that make claims to each other also share more highly-structured IGOs with a security mandate. This can indicate that states have turned to such IGOs to manage claims. As my previous models

Table 5.2: Accounting for selection into claims: determinants of using force in claims

Model	7	8	9
Outcome: Using force			
Joint High-Leverage IGOs	−0.151	−0.158	−0.165
	(0.066)	(0.07)	(0.069)
Intangible Salience		−0.48	−0.511
		(0.157)	(0.196)
Tangible Salience		0.089	0.164
		(0.089)	(0.099)
Territorial Claim		1.156	1.043
		(0.366)	(0.384)
Joint Democracy			−0.274
			(0.319)
Enduring Rivalry			0.515
			(0.433)
Power Differential			−0.098
			(0.058)
Intercept	−0.614	0.842	−1.136
	(0.643)	(0.883)	(1.039)
Selection: Claim onset			
Joint High-Leverage IGOs	−0.04	−0.039	−0.041
	(0.018)	(0.018)	(0.019)
Joint Security HSIGOs (Information)	0.234	0.23	0.246
	(0.058)	(0.058)	(0.058)
Enduring Rivalry	0.552	0.56	0.542
	(0.118)	(0.116)	(0.119)
UNGA Affinity	−0.57	−0.567	−0.604
	(0.089)	(0.089)	(0.087)
Contiguity	1.113	1.112	1.131
	(0.105)	(0.104)	(0.107)
Intercept	−3.315	−3.317	−3.319
	(0.053)	(0.053)	(0.053)
ρ	0.045	−0.297	0.127
	(0.2)	(0.229)	(0.257)
Claims	178	178	173
Dyad-years	537485	537485	537480
Wald test $\rho = 0$	0.82	0.19	0.62

Binary outcome variable: did a claim experience the use of force?

Binary outcome variable—selection: did a dyad experience a claim?

Estimation method: Heckman probit regression with sample selection.

Cell entries: Point estimates of probit coefficients;
standard errors (robust for dyads) in parentheses.

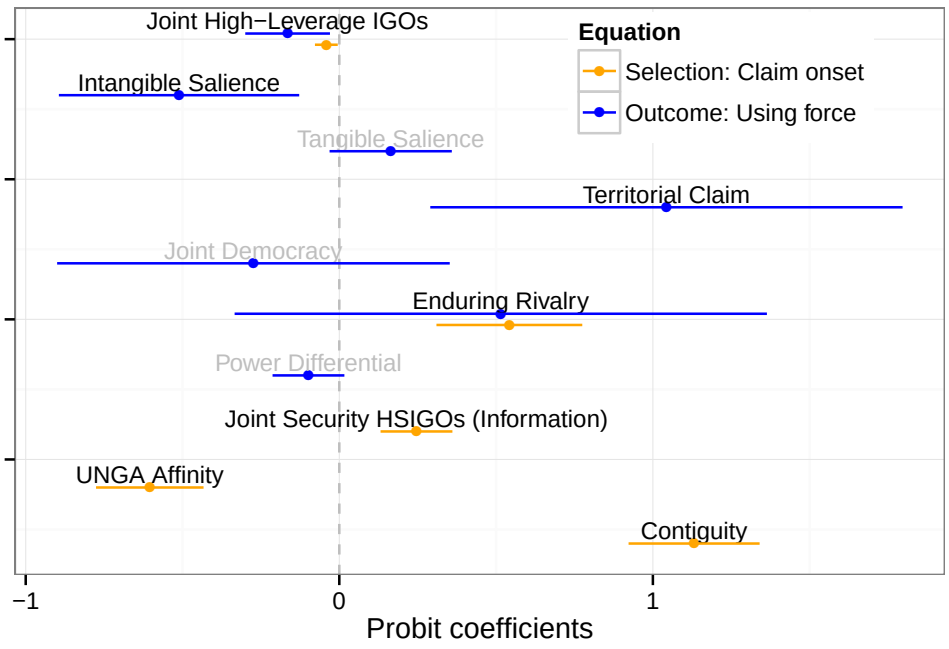


Figure 5.8: Modeling selection into claims, 1946-2001. Dots represent probit coefficients, whiskers are 90% confidence intervals. Orange/light (bottom) coefficient estimates come from the selection equation; blue/dark (top) estimates from the outcome equation. Results from Model 3 in Table 5.2.

and the work of others (Shannon, Morey, and Boehmke 2010) have shown, though, these institutions do not necessarily succeed at this task. States' memberships in High-Leverage IGOs has a negligible impact on the **onset** of claims. This can be seen as evidence that HLIGOs really affect states' cost calculations once both willingness and opportunity for conflict are given; they do not necessarily affect states' choice in making claims.

5.3 Interstate Crises

Investigating how claims evolve is ideal from a theoretical point of view: it offers an opportunity to test for the role of HLIGOs in cases where states have revealed disagreements. But the current geographic limitation of the Issue Correlates of War (version 1.10) data (Figure 5.1) to the Western hemisphere, Europe, and parts of Asia might restrict the generalizability of these findings. It also leads to a comparatively small number of cases (just short of 200). To address these issues, I repeat the previous empirical test on a different set of cases: all international crises from 1946-2001. In this investigation, I lean on the definition of crises developed by the International Crisis Behavior (ICB) project at the University of Maryland (Brecher and Wilkenfeld 2000; Hewitt 2003) and the data that this project has collected.

5.3.1 Crises versus claims

International crises, or more specifically "interstate military-security crises" (Brecher and Wilkenfeld 2000, 1), are events that can, but need not, lead to armed conflicts and wars between countries: "[m]any crises do not involve violence [... i]n fact, one significant question is why some do—and some do not—escalate to military hostilities" (Brecher and Wilkenfeld 2000, 2). For my research question on the influence of IGOs in the evolution of interstate disputes, crises are a useful alternative to claims. In the context of international relations and the work of the ICB project, crises are:

> "(1) a change and/or an increase in intensity of disruptive [...] interactions between two or more states [...] that
>
> (2) destabilizes their relationship and challenges the structure of an international system—global, dominant, or subsystem.
>
> [(3) usually focused on] a single issue: a territorial dispute, an economic boycott, a threat to a political regime, etc." (Brecher and Wilkenfeld 2000, 4-5)

In that sense, crises are functionally similar to claims in that they indicate a disagreement between (usually) two states over a policy. This disagreement can result in militarized conflict, but states can of course also resolve crises without using force. Crises are therefore an appropriate alternative set of cases to investigate the role of HLIGOs. While some claims and crises overlap, not all crises start with the types of claims recorded by the ICOW project. Information on crises is available globally, extending the geographic range of this empirical test.

In addition, crises have been the object of a good amount of political science research. This allows for a test of the role of HLIGOs in a set of cases that have been "vetted" by a research community. Research on crises has also revealed a number of dynamics that have become key findings in the field. For instance, the unit of analysis of the crisis has lent itself to research on how nuclear weapons affect states' leverage in international relations (Asal and Beardsley 2007; Beardsley and Asal 2009**a**;**b**); on the role of mediation in disagreements between states (Beardsley 2008; 2010; 2012); on the role of leaders' choices in international disputes (Chiozza and Goemans 2004); and important validation checks of previous work on the liberal peace between democracies as well as between trade partners (Gartzke and Hewitt 2010; Lektzian and Souva 2009).

5.3.2 HLIGOs and crises

International crises mark a disruption of relations between two (or more) states. The involved states have different options of how to deal with this disruption. For instance, the

Berlin Blockade in 1948 was a grave crisis that triggered fears of a renewed war, but it was resolved without major militarized conflict between the Western allies and the Soviet Union. On the other hand, the crisis over Argentina's demands on the Falkland Islands led to a full-scale war. This variation in states' choices and behavior in crises allows investigating the role of high-leverage IGOs. The argument about HLIGOs' impact on the utility of using force in crises parallels the dynamics as laid out in chapter 3 and as applied to claims (see section 5.2). I expect that the influence of HLIGOs on **both** states in a crisis increases the cost of using force in a way that states derive a higher utility from resolving their disagreement in a crisis peacefully and without engaging in major militarized conflict. This expectation results in the following hypothesis:

> **Crisis hypothesis** (H2): International crises are less likely to experience the use of military force when states face higher potential costs from joint memberships in international institutions with the appropriate leverage.

5.3.3 Data on crises

To test this hypothesis, I use data on international crises between pairs of states from the ICB project (Brecher and Wilkenfeld 2000; Hewitt 2003). Specifically, I use the dyadic-level crisis data (version 2.0) because my theoretical model focuses on conflict dynamics between two states and the influence of international institutions on both of these states. For the time period under consideration, the ICB data contain information on 540 crises, the unit of analysis for this test. A crisis is defined as "a threat to one or more basic values, along with an awareness of finite time for response to the value threat, and a heightened probability of involvement in military hostilities" (Hewitt 2003, 671). More specifically, a **dyadic** crisis is identified following three criteria: both states need to be members of the international system; the event between the states needs to meet the criteria for an ICB crisis (see previous sentence); and it must be given that "at least one of the states perceives that the other has directed a threatening or hostile action against it" (Hewitt 2003, 673-674).

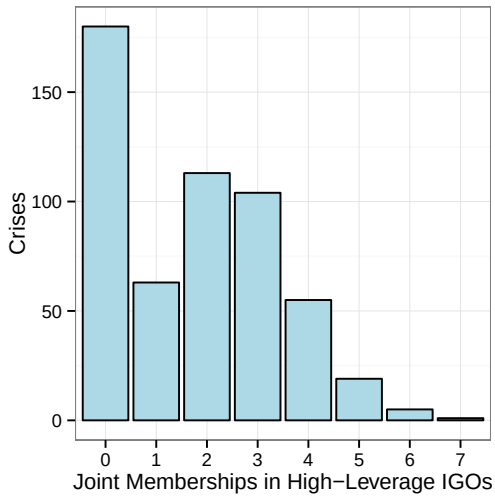
5.3.4 Outcome: Serious clashes or wars

During crises, states can seek mediation, consult international courts, resolve the crisis peacefully, or escalate the crisis. Because my argument suggests that the costs of using force derived from IGOs with high leverage should reduce the probability of states choosing to use force, I use the ICB data's coding of the highest level of violence during the crisis as the outcome variable for this test. That variable, "violence", identifies the severity of clashes between two states involved in a crisis. I recode all "serious clashes" and "full-scale wars" values as 1 and "minor clashes" and "no violence" values as 0, aligning the measure to the variable I used in the test of my argument on claims. Of 540 crises, 332 escalated and experienced at least serious clashes, while the remaining 208 experienced no violence or only minor clashes between the two states.

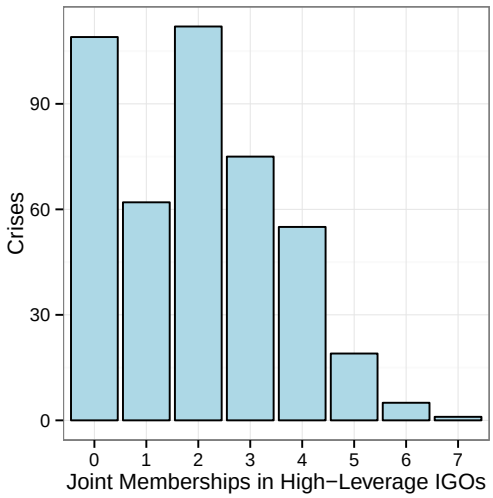
The key variable of interest for predicting the escalation of crises is again the level of joint memberships in IGOs with high leverage. This variable is described previously in chapter 4 and section 5.2.3. In the sample of crises, the distribution of joint memberships in HLIGOs varies from zero to seven, with over one-third of crises happening between states with three or more HLIGO memberships. The left panel of Figure 5.9 shows the full distribution.

5.3.5 Control variables

The control variables in the following analyses mirror those described in section 5.2.5, except for one variable that I use to replace the claim-specific "salience" variables. Here, I use the ICB project's information on the gravity of a crisis and recode the following threats as "existential threats" to at least one of the involved states: threats to a state's existence, threats of grave damage, and threats to a state's influence at the global or regional level. Economic threats, political threats, and limited military threats are grouped together as non-existential threats.



(a) All crises



(b) Crises with related dyads collapsed to the main crisis dyad

Figure 5.9: Joint memberships in high-leverage IGOs of states involved in crises, 1946-2001.

5.3.6 Results and discussion

Table 5.3 reveals support for H2 and shows that states' participation in IGOs with high leverage is associated with a lower probability of crises escalating and experiencing major clashes or wars. Again, the table reports estimates from Bayesian probit models, with negative coefficients expressing that the respective variable reduces the probability of crisis escalation. Figure 5.10 shows that 99.8% of all simulated parameter estimates are below 0, indicating that the negative relationship supporting H2 is statistically solid. On the other hand, the other two IGO mechanisms receive less or no support. Joint security IGOs are not consistently associated with the probability of crisis escalation. Membership in joint structured IGOs exhibits a negative relationship with crisis escalation, but the relationship is small in size, about one-sixth of the relationship shown for high-leverage IGOs. Even if one takes into account that the range of co-memberships in joint structured IGOs naturally exceeds that of joint memberships in HLIGOs, the substantial effect size remains small.

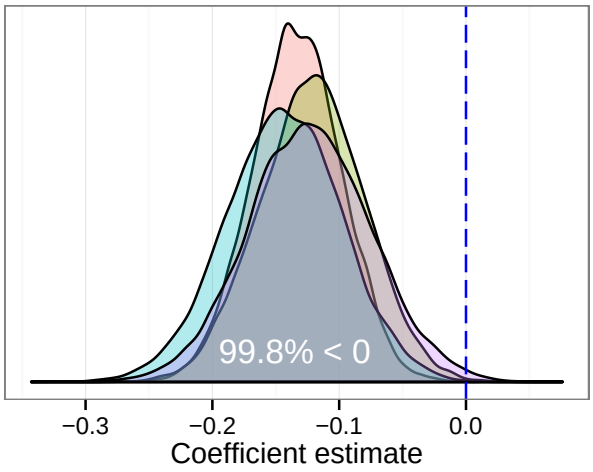
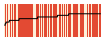


Figure 5.10: Joint memberships in high-leverage IGOs and the escalation of crises to serious clashes or war, 1946-2001. Posterior distribution of probit regression coefficients.

In contrast, the substantive effect of HLIGOs is again considerable, as Figure 5.11 clarifies. While the baseline probability of escalation is high at close to 70% (given the

Table 5.3: Determinants of crises experiencing serious clashes or war, 1946-2001.

Model	1	2	3	4	5	6
Joint High-Leverage IGOs	−0.133	−0.121			−0.144	−0.123
	(0.035)	(0.041)			(0.045)	(0.049)
Joint Structured IGOs (Socialization)			−0.023			
			(0.007)			
Joint Security HSIGOs (Information)				−0.021	0.115	0.131
				(0.088)	(0.097)	(0.099)
Existential threat		1.257	1.242	1.267	1.28	1.13
		(0.146)	(0.145)	(0.145)	(0.147)	(0.157)
Territorial dispute		0.507	0.487	0.433	0.511	0.469
		(0.18)	(0.178)	(0.177)	(0.181)	(0.189)
Joint democracy		−0.045	0.152	−0.176	−0.115	0.315
		(0.595)	(0.608)	(0.599)	(0.581)	(0.605)
Enduring rivalry		−0.498	−0.45	−0.514	−0.481	−0.426
		(0.134)	(0.137)	(0.134)	(0.136)	(0.144)
Power differential		0.029	0.027	0.035	0.035	0.149
		(0.059)	(0.059)	(0.058)	(0.058)	(0.064)
Trade dependence (low)						−0.055
						(0.016)
GDPpc (low)						−0.391
						(0.089)
Crises	540	508	508	508	508	494
Model fit						

Binary outcome variable: did a crisis experience serious clashes or a war?

Estimation method: Bayesian probit regression with uniform prior distributions on all parameters.

Cell entries: Means of the posterior distributions of Bayesian probit coefficients;
posterior standard deviations in parentheses. Intercept not shown.

Convergence: Tests passed for all parameters (see Appendix E.2).

distribution of the outcome variable), a pair of states that shares 3 HLIGOs faces a risk of just over 50%. Considering that one third of dyads share 3 or more HLIGOs, this decrease is substantial and relevant.

The control variables perform as extant literature would suggest: existential threats and territorial disputes are associated with crisis escalation; economic interdependence and development reduce that risk. Surprisingly at first sight, enduring rivals are **less** likely to escalate their crises. This is, however, a potential artefact of how enduring rivalries are defined and operationalized (Klein, Goertz, and Diehl 2006). Since enduring rivalries are defined as pairs of states that experience repeated disputes, repeated disputes can be counted as part of one crisis. The larger number of non-rivalry crises experiencing escalation can then can produce the negative relationship shown in Table 5.3. This finding also mirrors previous findings of no or even a negative relationship (DeRouen and Sprecher 2004, 65). DeRouen and Sprecher speculated that "rivalries receive more mediation efforts by outside parties than do other dispute dyads"; verifying this explanation remains beyond the scope of this dissertation, although I do address the topic of rivalry separately in the next chapter.

Collapsing crises

The crises used to estimate the regressions above are at the format of the dyad. However, a number of conflicts occur not only between two states, but between a number of states—they may be described as "multilateral events" Poast (2010). For instance, the Korean War in 1950 enters the **dyadic** ICB data as a number of separate dyadic crises. If the two sides in such multilateral crises (e.g., the United States, the United Kingdom, and South Korea versus North Korea, China, and the Soviet Union) each have similar profiles with regard to HLIGO memberships, then the estimates of the effect of HLIGO memberships might be biased upward. One could correct for this by sampling from these multilateral events; this is the practice suggested in Poast (2010). But in this particular case, the source of the potential bias is so clear that a more direct solution may be preferable. Because in such crises

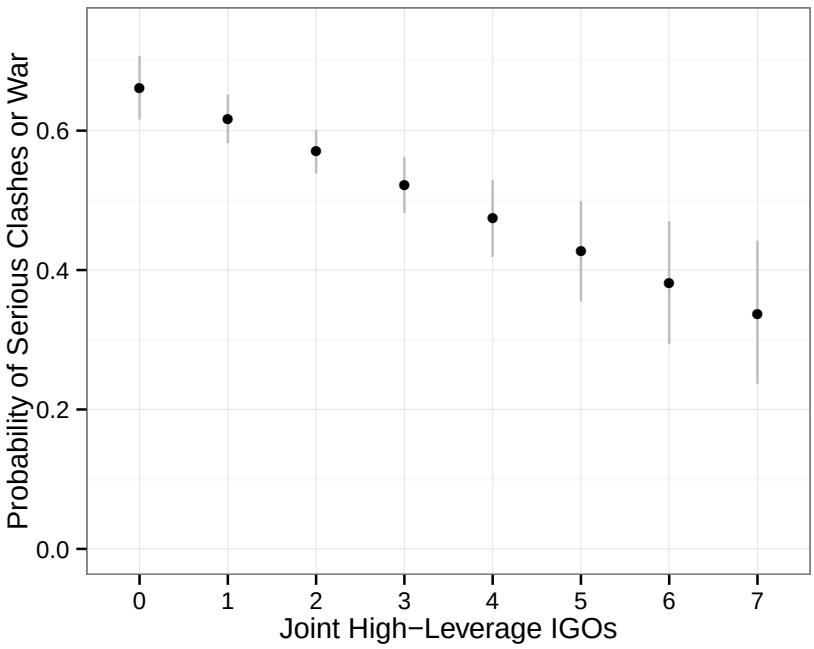


Figure 5.11: Predicted probabilities of crises experiencing major clashes or wars, 1946-2001. Black dots are the means of the posterior distribution of (simulated) predicted probabilities of major clashes or war at the given number of joint HLIGO memberships, with other covariates held constant. Grey bars indicate 90% credible intervals based on the posterior distribution of predicted probabilities. Calculations based on Model 2, Table 5.3.

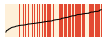
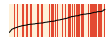
between a multitude of states, one state usually took the lead on each side, I simply collapse these crises to those dyads that had the highest and second-highest troop involvement on opposing sides. This restricts my sample to those pairs of states that were instrumental in deciding whether to use force or not in a crisis.

The resulting universe of cases is naturally smaller, 438 instead of 540 cases, with 230 crises ending in serious clashes or wars, and 208 ending more or less peacefully. Regardless, the relationships I uncovered previously persist in Table 5.4. As suspected, the effect is slightly smaller after removing crisis participants that were not instrumental actors in the crisis. However, the substantial effect remains sizeable (moving from 0 to 3 HLIGOs now reduces the probability of crisis escalation by about 15%), and it remains solidly negative.

5.4 Conclusion

This chapter asked why states sometimes resolve political disputes peacefully and resort to using force at other times. It then tested the key expectation of my theoretical argument: that international institutions with high leverage raise the cost of using force in disputes for states to an extent that states are substantially less likely to use force when such institutions exercise any influence. Two sets of cases provide a well-matching testing environment for this argument, where the influence of HLIGOs can be examined **after** states have revealed a disagreement that is serious enough to provoke either an official claim or a crisis between two states. Claims are relevant events because they are based on public and explicit demands made by leading state officials. Crises are equally relevant given their threat to the involved states' values. Thus, claims and crises both establish a situation where states may have a good reason to resort to the use of force. This makes looking for HLIGOs' influence on states' choices a comparatively hard test in the high politics domain. In the empirical investigation, I find robust support for the expected pacifying effect of states' participation in HLIGOs. A variety of model specifications and estimators show that states that are subject to more IGOs with considerable leverage are relatively unlikely to use severe force and let a claim or

Table 5.4: Determinants of crises experiencing serious clashes or war (crisis clusters collapsed), 1946-2001.

Model	1	2	3	4	5	6
Joint High-Leverage IGOs	−0.059	−0.084			−0.098	−0.115
	(0.038)	(0.043)			(0.048)	(0.051)
Joint Structured IGOs (Socialization)			−0.018			
			(0.008)			
Joint Security HSIGOs (Information)				−0.016	0.073	0.106
				(0.091)	(0.101)	(0.104)
Existential threat		0.862	0.854	0.844	0.88	0.745
		(0.159)	(0.159)	(0.159)	(0.16)	(0.168)
Territorial dispute		0.446	0.429	0.393	0.444	0.443
		(0.179)	(0.178)	(0.175)	(0.179)	(0.187)
Joint democracy		0.045	0.201	−0.029	0.019	0.507
		(0.562)	(0.58)	(0.572)	(0.56)	(0.588)
Enduring rivalry		−0.338	−0.3	−0.339	−0.329	−0.308
		(0.141)	(0.142)	(0.142)	(0.144)	(0.151)
Power differential		0.085	0.083	0.09	0.088	0.192
		(0.059)	(0.059)	(0.059)	(0.059)	(0.065)
Trade dependence (low)						−0.067
						(0.017)
GDPpc (low)						−0.386
						(0.096)
Crises (clusters collapsed)	438	406	406	406	406	393
Model fit						

Unit of analysis: Crises related to major wars (Korea, Iraq) were collapsed to the major crisis dyads.

Binary outcome variable: did a crisis experience serious clashes or a war?

Estimation method: Bayesian probit regression with uniform prior distributions on all parameters.

Cell entries: Means of the posterior distributions of Bayesian probit coefficients;
posterior standard deviations in parentheses. Intercept not shown.

Convergence: Tests passed for all parameters (see Appendix E.3).

a crisis escalate. This finding stands in contrast to the negligible or non-existing effect that I find for other types of IGO influence: socialization and information about states' capabilities or preferences.

This central finding helps answering two questions in international relations research: **if** and **how** IGOs can contribute to the avoidance of serious militarized conflict between states. Previous work has often shown that IGOs help states avoid disputes, possibly by promoting preference alignment (Bearce and Bondanella 2007). However, once states **do** find themselves in a dispute, the role of IGOs appeared to be limited to situations where states actively seek them out for mediation or adjudication—a process that is often long and fragile, as can be seen in the example of Guatemala's negative referendum over involving the International Court of Justice over a claim with Belize. In contrast to this pessimistic view on IGOs in dispute situations, I show that a subset of IGOs—those institutions that have high economic leverage over member states—can steer states away from conflict escalation even when the conditions may be difficult for other IGOs. Relatedly, previous work has only recently addressed the more fine-grained question of the mechanisms through which IGOs may contribute to avoiding serious conflict. The findings in this chapter lend some support to this dissertation's argument that in cases of revealed disagreement between states, a cost-based mechanism is the most likely candidate for explaining the influence of IGOs. In the next chapter, I further test the implications of my argument in an equally consequential scenario: whether individual clashes between states result in **enduring rivalries**, which produce the most deadly and drawn-out conflicts between states.

Chapter 6

The Second Stage of Conflict: International Institutions and Interstate Rivalries

6.1 Introduction

If IGOs with high leverage can change the utility of using force when states are in disagreement, can they also incentivize states to limit disputes to singular events and prevent long-term and repeated confrontations? As the results in the previous chapter have shown, although the involvement of high-leverage IGOs substantially reduces conflict between member states, it does not completely eliminate it. If two states engage in hostile interactions beyond claims or crisis-inducing threats, they can resolve these hostilities or engage in prolonged, protracted, and repeated disputes. Therefore, a second critical test for the validity of the cost-based influence of HLIGOs on conflict trajectories between states is the following: one can examine whether HLIGOs play any role in explaining why some militarized disputes between states remain isolated incidents, while others become the starting point for long-term rivalries.

6.2 Rivalries: Hotbeds for International Conflict

Rivalry has become a central concept in the study of international conflict. The colloquial use of the term rivalry has been popular for a long time, describing long-term hostile relationships between two states, such as Germany and France in the 19th and 20th centuries until the end of World War II. In the scientific study of conflict, the focus on rivalry

departs in at least two meaningful ways from the study of wars or militarized disputes in isolation. Rivalries are the relational **context** and the **environment** in which wars occur. Rivalries also integrate the temporal dimension of international conflict. Militarized disputes and wars do not occur independently from previous altercations, but are often, if not always, related to past relations; they also have implications for future interactions between states. Together, then, studying rivalries rather than isolated wars or militarized disputes is one way to contextualize the occurrence of interstate conflict. This allows a better understanding of (superficial) triggers and (deeper) causes of conflict.

6.2.1 Defining rivalries

Rivalries are contentious relationships between two states. This relationship can be short or long; short rivalries are **isolated**, and longer rivalries are usually considered **enduring** rivalries in the IR literature. With much more consideration of details and placing rivalries in the larger body of IR scholarship, Diehl and Goertz (2000, chapter 2) emphasize three specific elements of rivalry. The first, **spatial consistency**, expresses the dyadic nature of rivalry: rivalries occur between two states. Although they can, by extension through alliance commitments, get to involve other states, the original rivalrous relationship occures between two states. Second, the temporal nature of rivalries exceeds the isolated incident of one militarized dispute, one crisis, or one war: rivalries are an extended relationship between two states, although the duration of that relationship may vary from short to long. Third, rivalries are characterized by "militarized competitiveness" (Diehl and Goertz 2000, 22-26). This means that a trade dispute between countries alone, even if it lasts several years, does not make a rivalry. On the other hand, using gunboat diplomacy to collect debt (Diehl and Goertz 2000, 25) or making repeated military threats are types of events that create rivalries.

Specifically with regard to the temporal dimension of rivalries, scholars have distinguished between two (Klein, Goertz, and Diehl 2006) or three (Goertz and Diehl 1993; Diehl and Goertz 2000) types of rivalries: isolated rivalries, proto-rivalries, and enduring rivalries.

Of these, enduring rivalries are the most consequential: "Enduring rivalries are the longest of the rivalries and have the greatest expectations of an ongoing conflictual relationship" (Diehl and Goertz 2000, 22). Because of their duration, they are the most consequential rivalrous relationships. A number of studies illustrates the multiple dimensions of this danger of enduring rivalries.

6.2.2 The relevance of rivalries

Thinking of rivalry as the "context" or "environment" of interstate disputes is productive because rivalries have been shown to be associated with a variety of outcomes—outcomes that are consequential in terms of international relations. For that reason, knowing what leads to enduring rivalries is key to explaining what can prevent prolonged episodes of interstate conflict. A brief overview of the relevance of rivalries indicates why studying the role of IGOs in shaping rivalries is a crucial test for any argument about the role of IGOs for interstate conflict in general.

First, by definition, rivalries—and in particular enduring ones—are the environment for repeated interstate conflict. Goertz and Diehl (1993, 148) report that

> "45 percent of militarized disputes take place in the context of enduring rivalries. Enduring rivalries are also the setting for over half of the interstate wars since 1816; the most serious enduring rivalries are almost eight times more likely to experience a war than paris of states in isolated conflict. [... W]hen [territorial] transfers occur in enduring rivalries, they are three times more likely to involve military conflict than territorial changes in isolated conflicts."

. This has important theoretical implications. Diehl and Goertz (2000) describe one model of enduring rivalries as "punctuated equilibrium": "enduring rivalries [are] phenomena that establish themselves quite rapidly and then do not change much until some shock sets the stage for rivalry termination" (Diehl and Goertz 2000, 167). This means that enduring rivalries are stable in their hostility level between states. This is consequential because it makes the relationship between rivals quite "dangerous": signals might be more likely to be

interpreted in a hostile manner, and disagreements may be more likely to lead to altercations than in a non-rivalrous relationship.

Rivalries in general make crisis escalation more likely; they also exacerbate the effect of other crisis triggers (Colaresi and Thompson 2002). As one specific example in the context of the domestic politics of international conflict, there is consistent evidence that enduring rivalries make it more likely that states respond to interal crises with conflictual policies against the respective rival. This is evident in Bennett and Nordstrom's (2000) findings that states are more likely to initiate conflicts against rivals when economic growth is slow. Similarly, Mitchell and Prins (2004) find that domestic disturbances (in the form of upward shocks to domestic consumer price indices) are associated with conflict initiation—but only between pairs of states in enduring rivalries.

Rivalries are also crucial for long-term conflict because they tend to prolong themselves. Rivalries create dynamics whereby peace-seeking leaders are punished and removed from office when they make concessions in the context of rivalries (Colaresi 2004). They also promote patterns in arms transfers that may protract conflictual relationships between rivals and extend them beyond the rivalrous dyad (Kinsella 2002). Recent work in terrorism studies also suggests that states involved in rivalries are more likely to be targeted by terrorist attacks (Conrad 2011).

While rivalries are characterized by a start and end point (Diehl and Goertz 2000), rivalry termination is not easy, and often related to (mostly exogenous) shocks such as the two world wars (Goertz and Diehl 1995) or a high concentration of conflict within the rivalry that erodes public support for continued fighting (Morey 2011). Both of these "solutions", however, bring further conflict and the loss of lives. Other potential correlates of rivalry termination are difficult to implement. For instance, the conflict management strategy of third-party mediation is more likely to happen in the context of rivalries, but also less likely to be successful in these protracted conflicts (Greig 2005). Some studies, most recently Prins and Daxecker (2008), suggest that "liberal" factors such as democratization and participation

in IGOs are associated with rivalry termination. But other evidence makes it difficult to conclude that these factors can truly **cause** the termination of rivalries. If Gibler's (2007) and Gibler and Tir's (2010) argument about territorial conflict settlement as a **prerequisite** for democratization can be transported to the rivalry context, then democratization during a rivalry is unlikely. Rasler and Thompson (2011) suggest that this pattern exists. In addition, Prins and Daxecker (2008, 28) posit that international "organizations that provide mechanisms for the peaceful resolution of inter-state disputes" contribute to the termination of rivalries. However, as I discuss elsewhere in this dissertation, states' participation in such IGOs may well be contingent on an underlying process of detente and rapprochement, voiding an independent effect of these institutions. This is especially true for IGOs that have potentially binding settlement functions and obligations. One illustration for this problem is the example of Guatemala and Belize discussed in chapter 5, where a domestic referendum blocked the referral of a territorial claim to the International Court of Justice. The ICJ is one of the IGOs to which Prins and Daxecker ascribe rivalry-terminating influence (Prins and Daxecker 2008, footnote 97).

This brief survey of the causes and consequences of international enduring rivalries shows two important points. First, rivalries are highly consequential for interstate relations: they are hotbeds for prolonged conflict and have other detrimental consequences. Second, these consequences of rivalries make it all the more important to understand why they emerge from isolated altercations between states. The next section explains why IGOs with high leverage can shape the trajectory of conflicts between isolated and enduring rivalries, followed by an empirical test of this argument.

6.3 High-Leverage IGOs and the Path of Rivalry

Rivalries begin with militarized disputes: "The rivalry can be considered to have begun when that risk reaches a certain level, when the relationship takes a militarized turn" (Diehl and Goertz 2000, 30). This occurrence of a militarized altercation creates a more harmful

and tense relationship between two states than voicing a demand through a claim or a foreign policy crisis, as I discussed in chapter 5. A militarized dispute between two states A and B can be a first step toward war. Choosing to militarize a disagreement sends a strong signal about a state's willingness to engage in conflict about a disputed issue. Because at least one state was willing to incur this cost, a central question becomes what factors might contribute to preventing the further escalation of such militarized disputes toward long-term rivalries.

It is possible that the isolated dispute conveys sufficient information about, for instance, the value that the initiator ascribes to the dispute's object, as well as about the target's (limited) willingness to fight over this object. In the (simplified) terms of chapter 3, the occurrence of a dispute clarifies that for the initiator (say, A), the payoff from using force (F_A) exceeds the payoff from negotiating (S_A). If asymmetric information over capabilities and resolve was a central cause for the onset of the militarized dispute, then the occurrence of the dispute itself can contribute to removing this asymmetry. Powell (2004, 352) shows formally that fighting can convey information about cost tolerance (or resolve) via a state's willingness to settle; it can also convey information about capabilities: "When there is uncertainty over the distribution of power, fighting itself conveys information even about types that behave identically." If one assumes that the occurrence of a militarized dispute and an isolated rivalry may resolve information asymmetries, isolated disputes can still turn into prolonged and enduring rivalries. In this case, Fearon (1995, 401) suggests that "Even if private information and incentives to misrepresent it do not tempt states into a risky process of discovery or foster costly investments in reputation, states may be unable to settle on an efficient bargained outcome when for structural reasons they cannot trust each other to uphold the deal." This situation is the commitment problem, described in more detail in chapter 3. International institutions can contribute to resolving this commitment problem by increasing the cost of using force, and therefore help prevent the development of enduring rivalries.

When two states have engaged in a militarized dispute, they have not only communi-

cated a disagreement (as was the case for claims); they have also demonstrated the value of the disputed territory, policy, or resources. The states can negotiate a settlement over the object. But by themselves, they cannot credibly commit to maintaining this settlement. Each of the two sides may fear that the other side will exploit any future advantages and try to fight again for an outcome that is preferable to the status quo after the first militarized dispute. Because of that fear, either state may be incentivized to use force again at the current time in order to change the status quo toward its favor. Doing so—fighting again—would pave the way for an enduring rivalry characterized by repeated commitment problems.

At this point, the influence of IGOs with high leverage can substantially change the dynamics that would otherwise lead to an enduring rivalry. Their specific influence is due to two characteristics of high-leverage IGOs that distinguish them from other IGO mechanisms. This also makes the link between militarized disputes and enduring rivalries another critical test for the influence of high-leverage IGOs.

First, high-leverage IGOs change the utility of using force now (at time t) or in the future (at time $t + i$, where $i = 1, \ldots, n$). They do so in a predictable and durable manner. The costs for using force that are derived from HLIGOs are comparatively clear; they do not disappear over time (i.e., are more or less constant at t, $t + 1$, and $t + i$); and they are public information. Because of the structure of high-leverage IGOs, member states trapped in a commitment problem can expect the cost of using force (C_A or C_B respectively) at any point in time—t as well as $t + i$—to be constant with the states' participation in HLIGOs. This added cost of using force indirectly affects the dynamics of the commitment problem. It still holds that each side may anticipate future changes in the other side's favor. These changes could motivate military action now in order to avoid losing territory or influence down the road. But in the presence of HLIGOs, future shifts in power in favor of state B do not automatically mean that B will take up arms against A. Only if using force down the road improves B's position at $t+i$ and if B cannot credibly commit to not using force at $t+i$,

A would have to take preemptive action at t. In that case, one militarized dispute can lead to repeated armed conflict and generate an enduring rivalry. However, if high-leverage IGOs increase the cost of using force at t and $t+i$, B's incentives to use force at $t+i$ to obtain a better deal are removed: the perspective of losing various benefits from HLIGOs should make B more content with the status quo after the initial militarized dispute at t. In the absence of any HLIGO-related costs, B's simply communicating satisfaction with the status quo or promising to accept the status quo in the long run is not credible: because B faces no additional costs beyond using its military to use force at $t+i$, B's promises are empty. In the presence of HLIGOs, B incurs C_B for using force—at t and $t+i$. These costs give B a good reason to **not** use force at $t+i$. In turn, for A, these costs make B's statements considerably more credible. Having the assurance of B facing C_B at $t+i$, A has much less reason to use force at t to preempt B's action at $t+i$. This dynamic resolves the commitment problem, or at least reduces it substantially.

Second, following this hypothetical scenario, not only does B face costs that affect A's incentives for taking preemptive action that would lead to an enduring rivalry. A faces similar costs that would, in turn, change B's incentives for taking preemptive action. Being subject to the same types of cost-constraints from high-leverage institutions makes it more likely that both states have good information about the likelihood and volume of the costs they would incur for using force. Fearing that the other side will engage in revisionism down the road is the driver of the commitment problem. Joint memberships in cost-generating institutions present clear and symmetric information about the cost of using force now at t and down the road at $t+1$. Because this information is symmetric, the commitment problem for both A and B is substantially reduced. As a result, the risk of renewed conflict that would lead to an enduring rivalry also decreases.

When states engage in one or several militarized disputes, they exchange information about their capabilities and their resolve. This still leaves them in a commitment problem to credibly abstain from using force in the future to reverse the status quo in their favor. My

argument suggests that states' ties to high-leverage IGOs mitigate this commitment problem after initial disputes; they do so by establishing costs for using force in the future. This logic implies that initial militarized disputes between states should be less likely to evolve into enduring rivalries as states' joint involvement in high-leverage IGOs increases:

> **Rivalry hypothesis** (H3): Enduring rivalries are less likely to emerge from isolated conflicts between states when these states face higher potential costs from joint memberships in international institutions with the appropriate leverage.

6.4 Research Design

To evaluate this hypothesis, one needs to track the evolution of initial disputes: do they lead to repeated militarized interactions and thus enduring rivalries, or do they remain isolated? For such a test, I make use of information on international rivalries (Klein, Goertz, and Diehl 2006). This **New Rivalry Dataset** provides data on isolated and enduring rivalries and thus offers the information needed to evaluate the hypothesis about the influence of high-leverage IGOs on the evolution of rivalries. As in the previous chapter, I test this hypothesis over the time period from 1946 to 2001 because high-leverage IGOs only came into full existence after World War II. As in the previous chapter, I test this hypothesis over the time period from 1946 to 2001 because high-leverage IGOs only came into full existence after World War II. Information about rivalries from Klein, Goertz, and Diehl (2006) extends until 2001. Potential concerns might refer to the post-World War II period as a time of relative peace, for instance due to the distribution of power during the Cold War (Mearsheimer 1990). However, available information about the intensity of rivalries suggests that this concern is unfounded: "There may be a secular trend toward more intense rivalries after World War II" (Diehl and Goertz 2000, 144). In all, then, the population of international rivalries from 1946 to 2001 offers sufficient variance in both rivalry development and the involvement of potential rivals in high-leverage IGOs to motivate an empirical test.

6.4.1 Outcome: Isolated conflicts and enduring rivalries

If the hypothesized mechanism of IGO influence through leverage over the costs and benefits of using force applies, one should expect that militarized conflicts between states are less likely to turn into enduring rivalries when high-leverage IGOs can impact states in a dispute. Thus, the outcome of interest of this test is whether an isolated conflict becomes an enduring rivalry. This information is available from the **New Rivalry Dataset** (Klein, Goertz, and Diehl 2006). As the unit of analysis, I use the dataset's individual observations of "rivalry." Here, I use "rivalry" as another term for militarized interstate conflict, where rivalries can either be short/isolated or long, repeated, and therefore enduring. Rivalries are defined by four characteristics. They are spatially consistent, meaning that they occur between two states (Klein, Goertz, and Diehl 2006, 332). Rivalries can also vary in duration (Klein, Goertz, and Diehl 2006, 333). Rivalries are militarized competition (Klein, Goertz, and Diehl 2006, 334). This criterion emphasizes that rivalries include a militarized component, rather than just a perceptional basis for rivalry. One alternative approach to these rivalries, Thompson's (2001) separate rivalry project, is less amenable to testing my hypothesis for this particular reason: it does not require rivalries to be militarized. But the prerequisite of militarized conflict is important for this test because militarized conflict allows isolating the commitment problem from informational issues; this in turn aligns the test well with the theoretical argument. The fourth and final criterion for rivalries is that the militarized competition within a rivalry is linked in space and time (Klein, Goertz, and Diehl 2006, 334).

To separate isolated conflicts from enduring rivalries, I rely on Klein, Goertz, and Diehl's (2006) case-based research on identifying enduring rivalries. Klein and colleagues investigated all cases of militarized conflict (through direct contact) between two states. They then used their criteria for enduring rivalries to identify all enduring rivalries in that list of cases. Whether conflicts are parts of enduring rivalries or isolated conflicts depends

on the temporal density of incidents of armed conflict and the consistency of the disputed issues, that is, whether repeated confrontations occurred over the same (or related) issue.

Based on these distinctions from Klein, Goertz, and Diehl (2006), there are 612 cases of militarized conflicts between pairs of states between 1946 and 2001. Of these 612 cases, 190 turned into enduring rivalries; 422 remained isolated conflicts. In Figure 6.1, I show the distribution of these conflicts over time. The number of conflicts and enduring rivalries during that time period shows some peaks and lows, but no secular overall trend—neither in the overall occurrence of conflict nor in the ratio of isolated conflicts to enduring rivalries.

The frequency of disputes within rivalries is one of the key features that define **enduring** rivalries. Based on Klein, Goertz, and Diehl's (2006) theoretical approach to rivalries, frequent and repeated militarized conflict between two states is a central driver of enduring rivalries. However, it is not the exclusive feature of enduring rivalries, since enduring rivalries also must be fought within the same context and over related issues. Figure 6.2 illustrates this significant but not deterministic relationship between the frequency of disputes and enduring rivalries. Several isolated conflicts experience up to 4 disputes during a consistent conflict context, and some experience up to 9 disputes. All conflicts that experience 10 or more conflicts, though, are enduring rivalries. This strong relationship between the frequency of disputes and the emergence of enduring rivalries necessitates that one account for the frequency of disputes in empirical tests; I return to this issue below.

6.4.2 HLIGOs in the rivalry sample

As in chapter 5, I measure the influence of high-leverage IGOs using both states' joint membership in these IGOs, relying on the data described in chapter 4. My theoretical argument suggests that the cost of using force in a conflict increases with the influence of high-leverage IGOs. This influence is present when both states in a conflict are involved in such IGOs. Figure 6.3 displays the distribution of the HLIGO variable in the sample of interstate conflicts. States' joint memberships vary from zero to seven. About 20% of

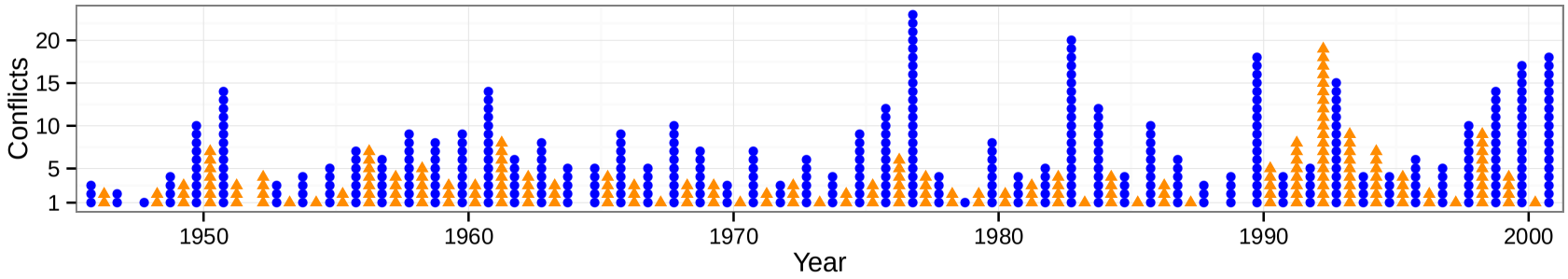


Figure 6.1: Isolated conflicts and enduring rivalries. Blue (dark) dots are conflicts that remained isolated, orange (light) triangles indicate conflicts that led to enduring rivalries.

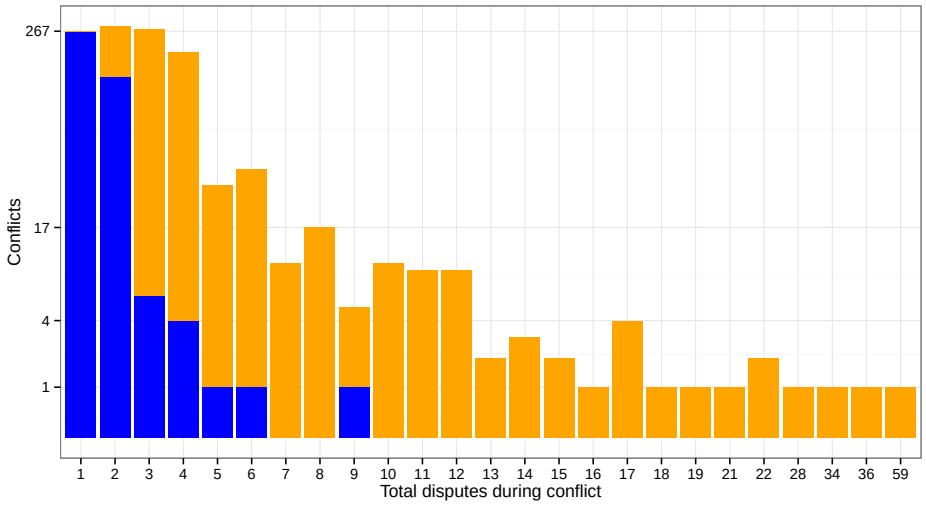


Figure 6.2: Isolated conflicts and enduring rivalries. Blue (dark) bars are disputes that remained isolated, orange (light) bars indicate disputes that led to enduring rivalries. The height of the bars (on the x-axis) is rescaled by the logarithmic transformation of the counts of cases.

dyads have no high-leverage IGOs in common, another 21% share two HLIGOs, and another 20% share three such IGOs. About 20% of dyads in conflicts share four or more HLIGO memberships. I count these joint memberships in the year in which the conflict begins. This choice helps isolate the influence of HLIGOs from potential processes during the course of the conflict.

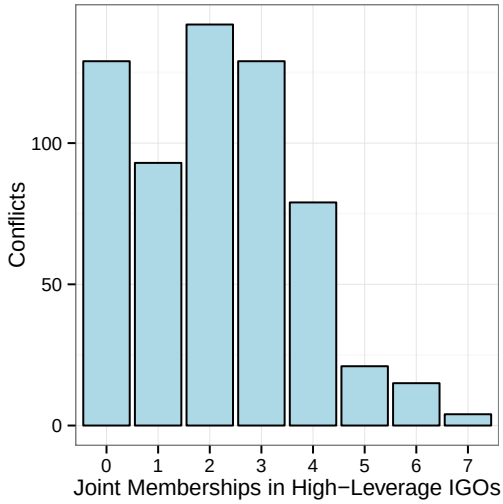


Figure 6.3: Joint memberships in high-leverage IGOs of states involved in conflicts, 1946-2001.

6.4.3 Control variables

As Figure 6.2 suggests, the frequency of disputes during a conflict has a strong influence on a conflict turning into an enduring rivalry. I therefore include the natural log of the count of disputes during a conflict as a control variable. Taking into account that the count of disputes increases quite sharply for only few observations (the total number of cases with more than 10 conflicts only makes up 6% of all conflicts), I choose the natural log as the appropriate transformation. Controlling for the frequency of disputes is important here because it isolates the **partial** impact of IGOs: it estimates the effect of IGOs in cases that face the same baseline probability of turning into enduring rivalries. An alternative approach

could investigate the relationship between IGOs and the frequency of disputes themselves; but such an analysis would miss all relevant information on the **consistency** of enduring rivalries. That consistency is crucial for the theoretical argument, which assumes the presence of a commitment problem with regards to accepting the status quo over a disputed issue. Therefore, the binary classification of isolated conflict versus enduring rivalry best matches the outcome that the theoretical argument aims to explain; accounting for the frequency of disputes within a conflict then assures that the test evaluates the influence of IGOs on comparable cases.

In addition, I rely on a similar set of control variables as in the previous analyses, capturing a number of arguments that should have an influence on whether interstate conflicts turn into enduring rivalries. Some previous studies have found descriptive evidence suggesting that conflicts are more likely to escalate when both conflict parties are **contiguous** (Diehl 1985), although that relationship becomes substantially quite small in analyses that control for other factors (Stinnett and Diehl 2001; Rasler and Thompson 2006). To capture contiguity, I include a binary indicator for pairs of states that share a land border.

Democracy may exercise a pacifying influence on the chances that conflicts evolve into long-standing rivalries. To account for this possibility, I employ a binary indicator that is coded as 1 for pairs of states that both exceed a value of 7 on the Polity scale (from -10 to $+10$) and 0 for all others (Marshall and Jaggers 2009).

Echoing the logic that the balance of power between two states in a conflict may contribute to the degree of certainty over future war outcomes, I control again for the degree to which the capabilities of the two states are different by including the absolute **power differential** as a control variable. This information comes from the National Material Capabilities/Composite Index of National Capability (Singer, Bremer, and Stuckey 1972) via EUGene (Bennett and Stam 2000). Higher values on this variable indicate greater asymmetry.

I also include a binary indicator for the presence of an alliance between two states,

capturing the potential influence of security institutions on the threat from disputes; this influence may make enduring rivalries less likely. For this indicator, I use the Alliance Treaty Obligations and Provisions project (Leeds et al. 2002) as a source and code all dyads with defense pacts in effect as 1, and all others as 0.[1]

Mirroring my previous analyses, I account for the pacifying effect of economic interdependence (see, e.g., Gartzke, Li, and Boehmer 2001; Hegre, Oneal, and Russett 2010; Oneal et al. 1996) by incorporating the lower value in the dyad of bilateral trade divided by GDP, using data from Gleditsch (2002). To capture the idea that wealthier countries have more to lose from militarized conflict and are thus more likely to avoid the escalation of claims (see, for instance, Gartzke 2007, 171-172), I also include the lower value of GDP per capita as a proxy for economic development (again taken from Gleditsch 2002).

Finally, I again attempt to distinguish the hypothesized cost-benefit effect of high-leverage IGOs from other "agents" of IGO influence, socialization and information dissemination. The impact of a dyad's joint membership in **structured IGOs** can proxy the idea that interactions in international institutions that allow for a high density of interactions can socialize states into shared identities or build trust (for examples, see for instance, Checkel 1999; Johnston 2001; Bearce and Bondanella 2007).[2] This may in turn facilitate the peaceful resolution of claims.

The other channel of IGO influence addresses information problems about other states' capabilities and/or intentions (see, for instance, Shannon, Morey, and Boehmke 2010). This may still be relevant **despite** the information revealed through fighting itself. I focus on the type of institutions with the structure and issue coverage most likely to resolve information problems when it comes to military conflict: IGOs with centralized, "interventionist" (Boehmer, Gartzke, and Nordstrom 2004) structures operating in the military-political do-

[1] Despite the title of the article that initially introduced the ATOP project, data are available for alliances until 2003.

[2] A more appropriate future test could use information on more specific IGO features, such as the presence of organs that facilitate regular meetings between heads of state and high-level government officials (Bearce and Omori 2005; Haftel 2007).

main. Because each mechanism relies on the role of the respective IGOs for **both** states in a dispute, I operationalize each of these two mechanisms as the count of joint memberships in the respective type of IGOs.

6.4.4 Estimation

Due to the binary outcome variable, I fit Bayesian probit regression models to the data. Uniform prior distributions on all parameters of interest insert no prior expectation about the impact of any of the right-hand side variables on the probability of conflicts turning into enduring rivalries. The advantages of using Bayesian estimation in this application include a more robust evaluation of statistical significance that is particularly useful in small samples; I refer the reader to section 5.2.6 for a more thorough discussion of this issue.

6.5 Results and Discussion

Hypothesis 3 receives support in this empirical test. The regression models that include a count variable for two states' shared memberships in high-leverage IGOs all show a negative relationship between high-leverage IGOs and the odds for conflicts turning into enduring rivalries (Models 1, 2, 5, and 6 in Table 6.1). This relationship holds in a simple model (1) as well as in the presence of control variables (2, 5, and 6). All models control for the (logged) total number of disputes during a conflict to establish a comparable baseline for the evaluation of the impact of high-leverage IGOs. Figure 6.4 shows that the HLIGO-rivalry relationship is statistically significant; almost 99% of posterior coefficient estimates fall below 0.

The other two potential agents of IGO influence, measured through states' memberships in structured IGOs and in highly structured security IGOs, receive less or no empirical support, as the first two plots in Figure 6.5 indicate. Joint participation in structured IGOs reduces the risk of enduring rivalries only to a small extent. For joint memberships in highly structured security IGOs, about half of estimates fall to both sides of 0, not presenting reli-

able evidence to conclude that this mechanism is at work when it comes to explaining why conflicts turn into enduring rivalries. These non-findings are not the result of multicollinearity: in the respective models (3 and 4), all other IGO variables are excluded.

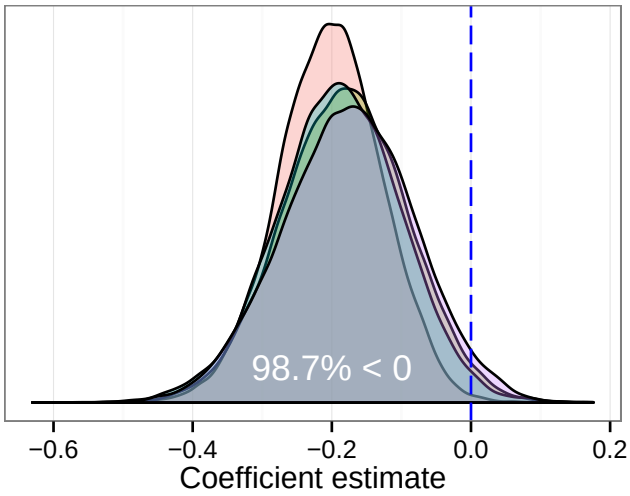


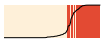
Figure 6.4: Joint memberships in high-leverage IGOs and enduring rivalries, 1946-2001. Posterior distribution of probit regression coefficients.

The substantive impact of high-leverage IGOs is displayed in Figure 6.6. The y-axis shows the predicted probability of conflict-dyads ending up in enduring rivalries, depending on how many high-leverage IGOs they share. Comparing a dyad with no shared memberships (e.g., Congo versus Angola in 1975) to a dyad that shares three memberships (e.g., Rwanda and Uganda in 1971), the probability of enduring rivalry is cut in less than half (from 21% to 8%). Three or more shared memberships in high-leverage IGOs are not rare (Figure 6.3); this drop in the risk of the onset of enduring rivalries is therefore notable.

6.6 Control Variables and Model Quality

The control variables in Models 2 through show relationships that are consistent with the literature. The previous discussion on the link between dispute frequency and conflicts turning into enduring rivalries is reflected in a large positive coefficient on the (logged) num-

Table 6.1: Determinants of conflicts turning into enduring rivalries, 1946-2001.

Model	1	2	3	4	5	6
Joint High-Leverage IGOs	-0.203	-0.182			-0.19	-0.176
	(0.074)	(0.089)			(0.089)	(0.094)
Joint Structured IGOs (Socialization)			-0.038			
			(0.017)			
Joint Security HSIGOs (Information)				-0.063	0.043	-0.026
				(0.189)	(0.202)	(0.211)
Total disputes during rivalry	3.971	4.107	4.072	4.08	4.115	4.175
	(0.346)	(0.375)	(0.389)	(0.397)	(0.37)	(0.409)
Contiguity		1.004	0.907	1.089	1.015	0.88
		(0.304)	(0.33)	(0.3)	(0.31)	(0.321)
Joint democracy		-0.55	-0.333	-0.669	-0.521	-0.202
		(0.871)	(0.906)	(0.893)	(0.866)	(0.998)
Power differential		1.383	0.72	2.862	1.353	0.509
		(2.221)	(2.422)	(2.237)	(2.298)	(2.449)
Alliance		-0.254	-0.06	-0.368	-0.275	-0.022
		(0.297)	(0.33)	(0.305)	(0.309)	(0.336)
Trade dependence (low)						-0.04
						(0.098)
GDPpc (low)						-0.318
						(0.165)
Conflicts	612	569	569	569	569	545
Model fit						

Binary outcome variable: did an interstate conflict turn into an enduring rivalry?

Estimation method: Bayesian probit regression with uniform priors.

Cell entries: Means of the posterior distributions of Bayesian probit coefficients; posterior standard deviations in parentheses. Intercept not shown.

Convergence: Tests passed for all parameters (see Appendix E.4).

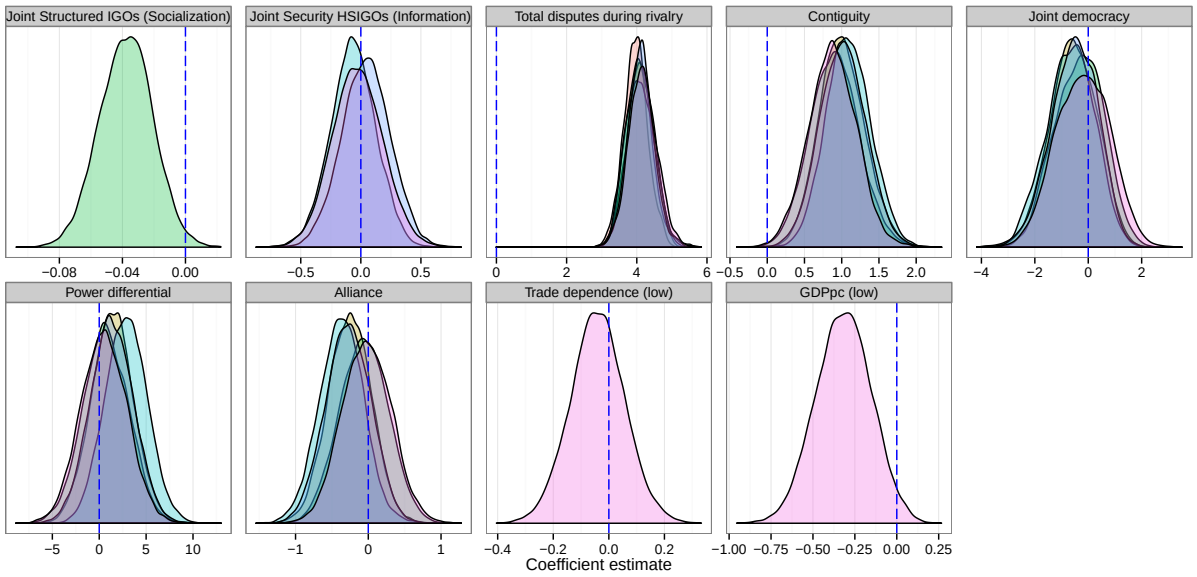


Figure 6.5: Joint memberships in high-leverage IGOs and enduring rivalries, 1946-2001. Posterior distribution of probit regression coefficients.

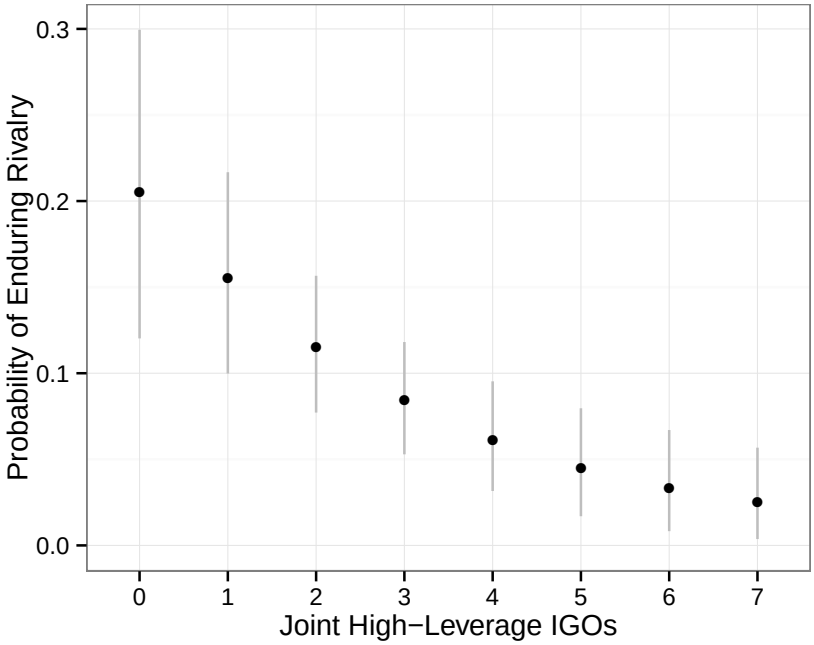


Figure 6.6: Predicted probabilities of conflicts turning into enduring rivalries, 1946-2001. Black dots are the means of the posterior distribution of (simulated) predicted probabilities of using force at the given number of joint HLIGO memberships, with other covariates held constant. Grey bars indicate 90% credible intervals based on the posterior distribution of predicted probabilities. Calculations based on Model 2, Table 6.1.

ber of disputes during a conflict. Contiguous dyads are more likely to experience enduring rivalries after conflicts. The remaining control variables fall short of producing consistently significant relationships, with the exception of economic development; with a higher overall level of wealth in a dyad, conflicts are more likely to remain isolated.

The strong influence of the frequency of disputes on the classification of enduring rivalries produces statistical models that fit the data quite well. Model 1, for example, predicts 96% of cases correctly and reduces the error from a model with modal predictions by 86%—exceptionally high values. This high degree of model fit may induce concerns about overfitting and, specifically in the context of binary estimators, separation: a scenario where a predictor (here, the frequency of disputes) perfectly predicts the outcome (the beginning of an enduring rivalry). That scenario would potentially produce unstable estimates. Fortunately, perfect prediction and separation do not result from the inclusion of dispute frequency in any of the models presented in Table 6.1; however, the strong influence of dispute frequency on the outcome variable merits a brief discussion of this issue. For theoretical reasons that I describe above, including dispute frequency is necessary. Zorn's (2005) discussion of potential problems in dealing with this scenario highlights the importance of avoiding omitted variable bias by removing the offending variable. The current application gives sufficient reason to warrant that concern. As a potential solution, Zorn (2005) suggests a penalized-likelihood estimator (Firth 1993) as a solution to separation problems. Implementing this estimator[3] and comparing it to (frequentist or Bayesian) maximum likelihood logit estimates comparable to Model 2 returns virtually identical results: the relationship between high-leverage IGOs and the odds of enduring rivalry are still negative and statistically significant.

Additionally, I also vary the way in which I treat the role of the number of disputes during a conflict. In Table 6.2, I present alternative estimates of Model 2. In the first three columns (Models 2a–2c), I use binary indicators for those conflicts that experienced 2 or more, 3 or more, or 4 or more disputes during the conflict. Neither of these indicators

[3] I use the logistf package Heinze et al. (2013) in R (R Core Team 2013).

perfectly predicts enduring rivalry (compare to Figure 6.2) and therefore alleviates concerns about near-perfect separation. In Model 2d, I fit the standard model on only those cases that experienced 2 or more disputes, and drop the control for dispute frequency—removing the potentially offending variable. The results are again virtually identical to the main findings presented above. Figure 6.7 again breaks down the posterior distributions of the parameter estimates for my main variable of interest, the number of shared memberships in high-leverage IGOs. In each of the revised Models 2a–2d, the posterior distributions are robustly to the left of 0, strengthening the evidence in favor of H3.

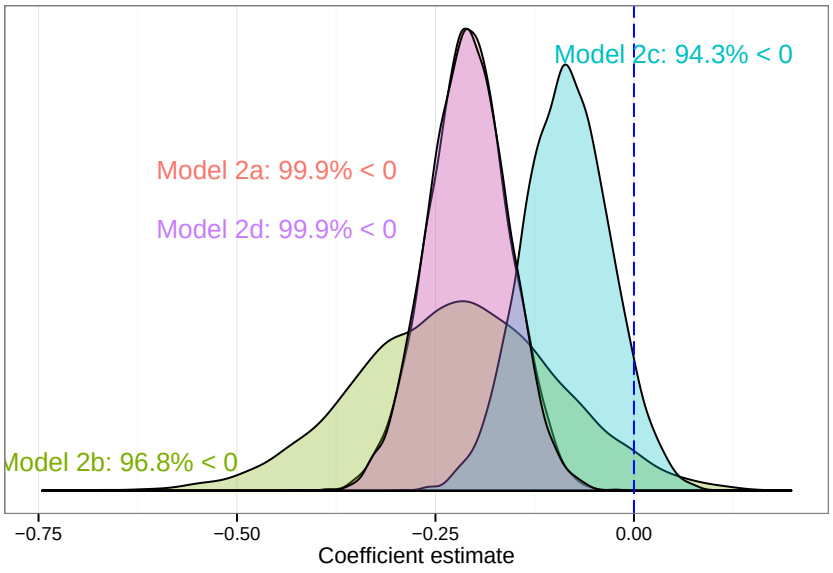
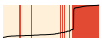


Figure 6.7: Joint memberships in high-leverage IGOs and enduring rivalries, 1946-2001. Posterior distribution of probit regression coefficients from alternative Models 2a–2d.

6.7 Conclusion

Enduring rivalries are hotbeds for international conflict. Within such rivalries, states are more likely to use force, and as a result, militarized altercations are more frequent during rivalries. Because enduring rivalries are so central to interstate conflict, any factors that prevent isolated interstate conflicts from evolving into enduring rivalries are important

Table 6.2: Determinants of enduring rivalries; alternative accounting for total disputes during rivalry.

Model	2a	2b	2c	2d
Joint High-Leverage IGOs	−0.21	−0.224	−0.085	−0.209
	(0.051)	(0.122)	(0.054)	(0.051)
2+ Total disputes	12.604			
	(3.507)			
3+ Total disputes		5.368		
		(0.573)		
4+ Total disputes			3.059	
			(0.212)	
Contiguity	0.174	0.305	0.14	0.175
	(0.035)	(0.092)	(0.038)	(0.034)
Joint democracy	−0.446	0.203	−0.806	−0.449
	(0.419)	(1.059)	(0.566)	(0.422)
Power differential	1.907	1.735	0.801	1.92
	(1.297)	(2.459)	(1.244)	(1.29)
Alliance	−0.188	0.359	−0.168	−0.188
	(0.163)	(0.38)	(0.193)	(0.16)
Conflicts	569	569	569	306
Sample	All	All	All	2+ total disputes only
Model fit				

Binary outcome variable: did an interstate conflict turn into an enduring rivalry?

Estimation method: Bayesian probit regression with uniform priors.

Cell entries: Means of the posterior distributions of Bayesian probit coefficients; posterior standard deviations in parentheses. Intercept not shown.

Convergence: Tests passed for all parameters.

in explaining trends in the prevalence of interstate conflict overall. The argument of this chapter suggests a logic of a pacifying influence of high-leverage IGOs through changing the utility of using force after initial altercations. Initial militarized disputes between two states can resolve information asymmetries. Yet, initial disputes also create commitment problems for the two states involved in the dispute. If this commitment problem cannot be resolved, states are likely to find themselves in an enduring rivalry. The influence of IGOs that have leverage over member states' utility of using force, however, can resolve this commitment problem. Because high-leverage IGOs are averse to militarized conflict between member states, and because they are in a position to impose costs on member states if they engage in prolonged conflict, these IGOs make it easier for member states to credibly commit to the status quo after an initial dispute and to resolve disagreements without the use of force. As a consequence, enduring rivalries should be less likely where the influence of high-leverage IGOs is high. An empirical analysis of all interstate conflicts between 1946 and 2001 provides some support for this hypothesis. Militarized conflicts between states that are jointly involved in a larger number of high-leverage IGOs are substantially less likely to result in enduring rivalries. IGOs associated with other types of influence—through socialization or the mitigation of information asymmetries—do not exhibit this effect. In combination with my other findings about the role of high-leverage IGOs in the first stage of interstate conflict—the evolution of claims and crises—this finding lends more support to the overall theoretical argument that the key agent through which IGOs can help states resolve disputes is by changing the utility of using force.

Chapter 7

Institutions, Conflict, and Reverse Causation

7.1 Reverse Causation as a Concern for Inference

The main argument of this dissertation posits that international institutions help states avoid major episodes of militarized conflict by changing the utility of using armed force. IGOs can exercise this pacifying influence on pairs of states that are members to the particular institution or institutions. If an argument about such influence of international institutions is to have any major implications for international relations theory and for empirically grounded predictions of interstate conflict risk, then it is important that the argument can rely on the assumption that the influence of IGOs is exogenous. Assuming exogeneity in this context creates a challenge for inference primarily because of the empirical measurement for IGO influence: states' joint memberships in high-leverage IGOs. The main concern here is that states' involvement in high-leverage IGOs is also related to their conflict behavior. More conflict-prone states could be less likely to subject themselves to the influence of high-leverage IGOs. Several dynamics could cause such behavior. States that see an opportunity to gain territory, resources, or influence over another state may see these gains as outweighing the various economic benefits they can derive from any IGO that can exercise leverage over its member state. States in an ongoing militarized conflict with another state may also be wary of incurring additional costs from an IGO before the conflict is settled. From the perspective of institutions, it is also possible that IGOs are hesitant to admit new member states that

show a high risk of engaging in conflict with other current or potential member states. If IGOs are truly averse to conflict, one could expect that they force their members to settle ongoing conflicts as well as future conflict sources before they are admitted.

7.1.1 Reverse causation in the literature

These arguments mount a challenge to empirical studies that make inferences about effects of international institutions (or international law) on state behavior from states' memberships in institutions. Early institutionalists made the point that institutions help states to cooperate by increasing the value of long-term gains over short-term benefits (Keohane 1984). This raises the question whether institutions are the causal driver of states' accepting short-term losses in favor of future gains. Accordingly, institutionalist research in international relations has prompted a considerable number of responses that point out the difficulty of arguing for truly independent and exogenous effects of international institutions. Mearsheimer (1994), cited over 2,000 times, paints international institutions as secondary to the structure of the international system when it comes to explaining why states choose between cooperative or conflictual policies. von Stein (2005) more directly shows how unobservable factors cause states to join international regimes **and** subsequent behavior that is compliant with regimes' stipulations in the context of international monetary relations, questioning Simmons's (2000) finding about the exogenous impact of the IMF prohibitive regime on states' use of current account restrictions.

Similar questions have been raised in a variety of research programs. These questions always become relevant for theoretical **and** policy-oriented concerns when scholars make arguments about a casual impact of international institutions on types of state behavior that institutions aim to prevent. For instance, the human rights research program has long grappled with the question whether human rights treaties or –clauses improve human rights practices (Conrad and Ritter 2013; Hafner-Burton 2005; Lupu 2013; Simmons 2009; Spilker and Böhmelt 2013). International political economy scholars debate the causal effect

of trade agreements and –regimes on trade flows (Rose 2004; 2007; Tomz, Goldstein, and Rivers 2007; Goldstein, Rivers, and Tomz 2007; Baier and Bergstrand 2007). Whether international institutions can cause states to reduce emissions and protect natural resources is equally contested (Downs, Rocke, and Barsoom 1996; Mitchell 2003; von Stein 2008). In many studies, the inferential challenge is presented as a selection effect: the population of states that subject themselves to international institutions may differ, on an underlying propensity to cooperate and comply with the institution's stipulations, from those states that choose not to join the respective institution. Or, in the words of Jupille, Caporaso, and Checkel (2003, 22): "rational institutional choice both shapes and responds to (endogenous) national preferences." In the case of interstate conflict, these preferences can be thought of as states' position on the trade-off between the gains from joining high-leverage IGOs on the one side and the increased costs on using force that these institutions create on the other side. Choosing to submit themselves to this particular institutional design could then also indicate a preference **against** using force against other member states. In general terms, this selection problem challenges arguments about the exogenous impact of institutions on the behavior of states that are actually subject to these institutions' influence.

7.1.2 Relevance for the role of high-leverage IGOs in interstate conflict

This brief selective list of topics and studies is far from exhaustive, but it illustrates the central position that the question about the exogenous impact of international institutions occupies in different literatures. The central argument of this dissertation is that IGOs independently affect how states behave in disputes: states subject to institutions will behave differently from states that are not subject to the influence of these institutions—and the variation in behavior can be traced back to the institution's influence and no other factor. Therefore, addressing the aforementioned challenges to inference is crucial to substantiate the argument and to demonstrate its relevance.

In the context of interstate conflict, concerns about an endogenous relationship between

states' participation in international institutions and their risk to engage in militarized conflict are equally important and should be taken seriously if one wishes to make an argument about international institutions as a causal driver of peaceful interstate relationships. Given the strong objections from realist scholars against an exogenous impact of IGOs on state behavior, and the long tradition of these objections, it is particularly important to address this issue. However, few studies have explicitly dealt with this challenge. One of the most-cited and influential studies on IGOs and interstate conflict, Boehmer, Gartzke, and Nordstrom (2004, 20), relegates the problem to future research via a footnote. In later work, Boehmer and Nordstrom (2008, 296) conclude that "[although] [t]here is of course some reason to suspect endogenous relationships between IGOs and conflict ... [c]learly any endogeneity here appears to be quite weak across dyadic membership in IGOs." Similarly, Haftel (2007, 232) finds no evidence that the institutional features driving his argument about a pacifying influence of IGOs are themselves determined by interstate enmity.

The exogeneity challenge is particularly strong, though, when one considers the **active** involvement of IGOs in facilitating dispute resolution. Recall the earlier example of states turning to IGOs to help with the adjudication and resolution of international disputes and, specifically, the case of Guatemala's postponed referendum on letting the ICJ rule over its disputatious claim with Belize. Intuition would suggest here that it is quite unlikely that IGOs will help resolve disputes across the board, without any influence of states' previous willingness to either join institutions with resolution capabilities or, alternatively, to actively ask these institutions to take on a mediating role. It is therefore not surprising that one of the few studies that explicitly addresses this issue, Hansen, Mitchell, and Nemeth (2008, 314), finds evidence "that unobserved factors that promote IO involvement in the conflict management process also bolster their chances for success." In a different context, mediation (not only by IGOs) in intrastate conflicts, may be subject to similar dynamics. Beber (2009; 2012) uses an innovative instrumental variable solution for the onset of mediation—the seasonality of mediation attempts—and concludes that multi-party mediation is not as

effective as previous studies had indicated.

7.1.3 Theoretical concerns

These studies clarify the importance of asserting the exogeneity of pacifying influences on dispute behavior. In this chapter, I address this issue on theoretical and empirical grounds. On a theoretical level, it is first important to repeat and outline the exact trajectory of an endogenous relationship between high-leverage IGOs and the behavior of member states in interstate disputes. This trajectory is straightforward. States may be hesitant to commit to international institutions that can exercise leverage over them if they anticipate being targeted by the institution for using force against another member state. If state leaders responsible for making international commitments are involved in an ongoing conflict and if they know that joining a particular IGO would expose the state to negative repercussions for engaging in conflict, they may choose to forego the benefits they can receive from the IGO in order to avoid the constraints or additional costs for fighting that the IGO would impose. A second scenario would rely not on the state's decision to join, but the IGO's decision to admit member states. In that vein, some scholars argue that some international institutions screen member states for conflict potential (Donno, Russett, and Metzger N.d.).

Both concerns are plausible for a variety of international institutions but less so, I argue, for those institutions I identified as high-leverage IGOs. The second concern, IGO screening, is veritable at first sight. IGOs may be less likely to admit members that will create "trouble" or costs—arising from militarized disputes—for the institution. Existing member states can even drive such a screening process when they aim to exclude potential rivals from the benefits of the institution. This may be a concern particularly for IGOs that promote collaboration on security-sensitive issues, such as NATO. But considering the list of IGOs with high leverage that I identified in Table 4.3, this possibility appears far less realistic. Most of these institutions are concerned with economic cooperation or cooperation with indirect economic benefits. None of them is concerned with exchanging security-relevant in-

formation or military resources. None of them has the authority to adjudicate over member states' political disputes. In fact, these institutions' official mandates often prohibit such political functions. Recall from chapter 3 that my theory precisely emphasized the non-political nature of these institutions' mandates—but, at the same time, highlighted that these non-political mandates are severely hampered by militarized interstate conflicts, giving rise to these IGOs' interest in preventing the escalation of such conflicts. From a theoretical perspective, then, concerns about IGO screening-out of "rivalrous" candidates for membership is unlikely.

The first concern, states' hesitation to subject themselves to IGOs that can exercise leverage over them, is also substantial for IGOs with a security or binding adjudication component. Even in that context, though, extant research is ambivalent. The rational design project's work could be interpreted that states are actually more likely to subject themselves to centralized institutions as enforcement problems and uncertainty about others' behavior increase (conjectures C1 and C4 in Koremenos 2001). On the other hand, Koremenos (2001) also proposed that IGOs will be more restrictive in membership as they envision stronger enforcement problems. At the same time, this also suggests, in line with previous work, that IGOs can have play an independent role in enforcing their rules. Downs, Rocke, and Barsoom (1996), cited often as skeptics of an independent effect of institutions, suggest that institutions promote compliance with their rules through enforcing—rather than simply managing—state behavior. The problem, according to Downs, Rocke, and Barsoom (1996), is that IGOs rarely can use enforcement strategies that are aggressive enough to actually affect state behavior. Yet again, Vicard (2012) presents somewhat contradictory evidence to that thesis, supporting part of the rational design conjecture mentioned before: states with an arguably high enforcement problem—those that recently engaged in militarized disputes—are more likely to form regional trade agreements with deep institutional structures, compared to states without such disputes. This ambivalence of existing work highlights the need to specifically address the context of high-leverage IGOs when theorizing

about potential endogeneity through states' self-selection into institutions. Considering the benefits that are available through high-leverage IGOs, it seems plausible to suggest that states are more interested in these potential benefits rather than anxious about anticipated costs from the beginning. For the plausibility of this argument, consider again the logic of the argument. High-leverage IGOs change the utility of using force once states are members of these IGOs. The channel through which they affect member states' utility is by withholding benefits and imposing costs. But neither these benefits nor potential costs are available to a state that is **not** a member of the IGO. This is the logic behind asserting the influence of C_A and C_B in chapter 3. If states were to self-select into IGOs only when they do not anticipate any reasons to engage in conflictual behavior down the road, they would need to cautiously assess first the benefits provided by the institution and then the volume of imposed costs and withheld benefits in the case of conflict. Behavioral economics and specifically prospect theory (Kahneman and Tversky 1979) suggest that attributing a high value to these benefits ex ante is less likely than after joining. Rather, states may experience an endowment effect whereby they are more concerned about losing the benefits provided by a high-leverage IGO **after** they joined that IGO.

Following these theoretical considerations, concerns about reverse causation—that only states at a low risk of peace join high-leverage IGOs and any correlation is endogenous to this process—may be less acute for the case of high-leverage IGOs compared to IGOs with a security or conflict resolution mandate. In addition to the theoretical discussion, though, I also examine the empirical case for or against reverse causation: are states with a higher conflict risk less likely to be exposed to the influence of high-leverage IGOs? The next section discusses this empirical test and presents its results.

7.2 Empirical Strategy

7.2.1 Potential solutions

An empirical test of reverse causation probes the possibility that states with a higher propensity to engage in hostilities with another state are less likely to **jointly** subject themselves to the influence of high-leverage IGOs. The propensity to engage in hostilities is the driving concept in this test. If one were able to empirically gauge this latent conflict propensity, it would be possible to turn to standard approaches for reverse causality problems. One such approach would be to create an instrumental variable that explains states' joint participation in high-leverage IGOs but does **not** explain states' latent or observed conflict propensity. In the observational context of states' behavior in international relations, finding an instrument that satisfies this restriction is especially difficult and, according to a recent survey of the literature, rarely properly implemented (Sovey and Green 2011, 199): "most publications that use instrumental variables regression fail to provide the arguments or evidence that readers need in order to evaluate the statistical claims."

Particularly in the context of international relations, finding instrumental variables is challenging due to the lack of truly exogenous factors in an empirical universe that is relational or interdependent. For that reason, one promising solution might come in the estimation of **latent**, i.e. unobserved, instrumental variables. This approach is emerging in the marketing literature (Ebbes et al. 2005; Ebbes, Lenk, and Wedel 2006; Ebbes, Wedel, and Böckenholt 2009; Rutz, Bucklin, and Sonnier 2012) and estimates a latent instrument based on the correlation between the endogenous variable and the error term in the initial regression equation. It is implemented via Bayesian estimation and allows evaluating the robustness of initial estimates to potential endogeneity in the absence of a valid, observed instrument. This approach is, however, in its infancy and dependent on parametric assumptions and simulations that render it less feasible for the present version of this dissertation.

7.2.2 Testing for reverse causation in the HLIGO-conflict relationship

Rather than assuming the presence of endogeneity and attempting to build an empirical model with fully credible causal identification that isolates a causal effect of high-leverage IGOs independent of states' conflict propensity, I focus directly on evaluating the empirical evidence for a reverse causal relationship between states' joint participation in high-leverage IGOs and their conflict behavior. Presenting this evidence directly has at least two advantages. First, it is more efficient in that it evaluates whether there is a substantial problem for making inferences about the effect of high-leverage IGOs, rather than using tools that build on challenging assumptions to fix a problem that might not be present. Second, it provides direct evidence to motivate potential future work on resolving the challenge of reverse causality. This strategy has been used before by other scholars interested in the effect of international institutions on interstate conflict (Boehmer and Nordstrom 2008; Haftel 2007; Vicard 2012). Third, it follows the suggestion by Jupille, Caporaso, and Checkel (2003, 17) to integrate empirical tests of endogeneity with theoretical explorations of the matter.

In presenting evidence for reverse causation, I primarily aim to evaluate the hypothesis that would challenge my findings in chapters 5 and 6. This hypothesis suggests that states with a higher propensity to fight are less likely to be joint members of a larger number of high-leverage IGOs. As a consequence, one would then observe that high-leverage IGOs comprise mostly or exclusively pairs of states with a low baseline risk of conflict; the relationships I showed in chapters 5 and 6 would then be caused by this selective process of IGO membership rather than IGO effects themselves. This hypothesis can be stated as:

> **Reverse causation hypothesis** (H4): States with a higher risk of engaging in militarized conflict on average share fewer memberships in high-leverage IGOs than states with low conflict risk.

If reverse causation is a concern, I expect support for H4; if the data reject H4, there is no direct evidence for reverse causation.

7.2.3 Data

To evaluate this hypothesis, I estimate the relationship between two states' likelihood of engaging in militarized conflict and their joint participation in high-leverage IGOs. The unit of analysis for this test is the country dyad-year in the post-World War II era. The outcome variable is my predictor from chapters 5 and 6: the count of two states' joint memberships in high-leverage IGOs in a given year.

The most direct indicator of conflict risk is observed conflict behavior: did two states exhibit any hostile behavior in the past? For this indicator, I take the most conservative approach and assume that any incident of militarized conflict between the respective two states in the recent past indicates conflict potential for the present and future. If H4 were accurate, this conflict potential should result in lower levels of joint participation in high-leverage IGOs. To operationalize recent conflict, I create binary indicators coded 1 for the **occurrence of a militarized interstate disputes in the 10 years before the current dyad-year** and 0 otherwise, using the Correlates of War Militarized Interstate Dispute data (Maoz 2005). The lowest bar here is the occurrence of a militarized interstate dispute within the dyad with no specific militarized action. As an alternative indicator, I use a binary variable that is coded 1 for the occurrence of a militarized interstate dispute involving the use of force in the last 10 years and 0 otherwise. For these measures, I use the highest hostility level used by either side.

I assume several other economic and political variables to have an impact on states' joint participation in high-leverage IGOs. Because many high-leverage IGOs dispense economic benefits such as loans or the coordination of resource use, it is conceivable that poorer dyads are more likely to be members in high-leverage IGOs; I include the lower value of (logged) GDP per capita in the analysis. States that trade more with each other are also potentially more likely to be members in high-leverage IGOs, warranting the inclusion of the (lower) ratio of dyadic trade over each country's GDP in the estimation. Both variables

come from Gleditsch (2002). Allies and joint democracies may reveal the political proximity of countries; I include these variables from the ATOP alliance data (Leeds et al. 2002) and the Polity IV project (Marshall and Jaggers 2009), coding joint democracy as present if both states exceed 7 on the Polity IV scale from -10 to $+10$. Finally, I include as a measure of affinity the proximity of two countries' ideal points as derived from their voting behavior in the United Nations General assembly, using a recently constructed measure of affinity that improves upon previous efforts (Bailey, Strezhnev, and Voeten 2013; Voeten 2013).

The distribution of the count of joint HLIGO memberships necessitates the use of an estimator that is appropriate for count outcomes. Because a considerable share of dyads (26%) in the period under consideration shares no HLIGOs at all but overdispersion is not a concern (the mean and variance of joint memberships are approximately equaly at 2.5), I fit a zero-inflated Poisson regression model via maximum likelihood (Lambert 1992).[1] This model estimates two equations. The outcome equation addresses the relationship between dyads' non-zero co-memberships in HLIGOs and the predictors summarized above. The zero inflation equation estimates a dyad's probability to have zero co-memberships. To set up the test in favor of H4, I do not include fixed effects for dyads or years that would shrink the estimate of the effect of previous militarized disputes on joint HLIGO memberships.

7.2.4 Results

Models 1 and 2 in Table 7.1 both show negative coefficients for the indicators of previous militarized interstate disputes; these coefficients are statistically significant. Given the large sample size (close to 400,000), statistical significance is not nearly as relevant as the actual effect size (see, e.g., Lin, Lucas, and Shmueli 2013, for a recent discussion). To evaluate effect size and the substantial significance of this relationship, I calculate the predicted counts of joint HLIGO memberships at relevant values of the predictors as well as the resulting changes in predicted values if the predictors vary from minimal/small to maximal/large values. Figure

[1] For estimation, I use the zeroinfl function (Zeileis, Kleiber, and Jackman 2008) in R.

7.1 visualizes these calculations and clarifies that the substantial effect of militarized disputes on states' joint participation in high-leverage IGOs. Two states that clashed in a militarized interstate dispute in the previous 10 years share 2.61 high-leverage IGOs; two states that did not engage in any altercation share about 2.66 such IGO memberships. This means that the occurrence of a militarized interstate dispute, whether it involved the use of force or not, decreases the average number of joint memberships by only 0.05, holding everything else constant. This effect is substantially negligible. Models 1 and 2 therefore offer no support for H4 and should mitigate concerns about reverse causation.

In contrast, some of the other predictors exhibit substantially considerable relationships with states' co-memberships in HLIGOs. Moving from low to high values of proximity in voting in the UN General assembly is associated with gaining almost one additional HLIGO co-membership; joint democracies share also just less than one additional membership. Trade dependence and economic development also exhibit the suspected relationships, although they change less than 0.5 memberships for the dyad.

A potential concern would be that the large sample introduces statistical noise that shrinks the coefficient estimates and biases the results against H4. To address this possibility, I reduce the sample in Models 1a and 2a to the most restrictive group of dyads possible: only dyads that share direct land borders. Given previous work about the importance of territorial conflict between countries that share land borders (Gibler 2007; 2012; Gibler and Tir 2014), this sample would be the most likely sample where H4 could be supported. However, Models 1a and 2a also reveal no support for H4; the coefficients on previous militarized interstate disputes are either indistinguishable from no effect (Model 1a) or even smaller than in the previous models (Model 2a). In addition, model fit is important to evaluate whether the relationships summarized in Table 7.1 are reasonable estimates. Because absolute model fit is difficult to evaluate in count models, Figure 7.3 presents information on how well each model predicts count outcomes in comparison to observed counts. Well-fitting models would produce plots where predicted and observed counts correlate highly and the boxplots

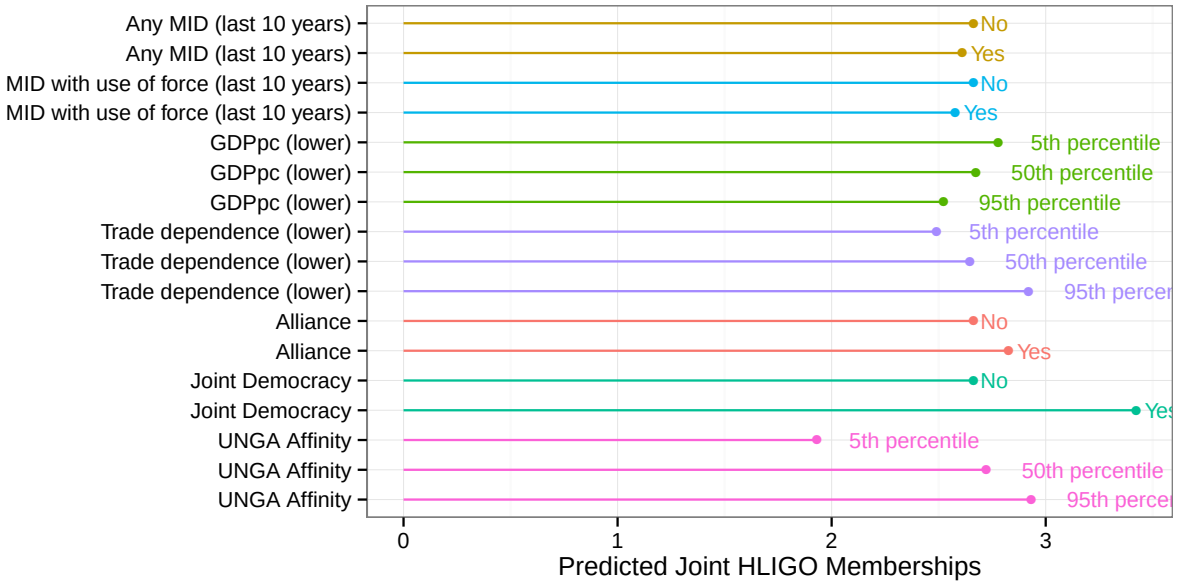
Table 7.1: Determinants of the number of joint memberships in High-Leverage IGOs, 1951-2001.

	Model 1	Model 1a	Model 2	Model 2a
Any MID (last 10 years)	-0.026	-0.008		
	(0.008)	(0.014)		
MID with use of force (last 10 years)			-0.040	-0.026
			(0.009)	(0.014)
GDPpc (lower)	-0.029	-0.078	-0.029	-0.078
	(0.001)	(0.008)	(0.001)	(0.008)
Trade dependence (lower)	0.014	0.012	0.014	0.012
	(0.0003)	(0.002)	(0.0003)	(0.002)
Alliance	0.070	-0.009	0.070	-0.009
	(0.003)	(0.015)	(0.003)	(0.015)
Joint Democracy	0.240	0.418	0.240	0.418
	(0.004)	(0.021)	(0.004)	(0.021)
UNGA Affinity	0.092	0.185	0.092	0.182
	(0.001)	(0.013)	(0.001)	(0.013)
Dyad-years	379311	9466	379311	9466
Sample	All	Contiguous only	All	Contiguous only

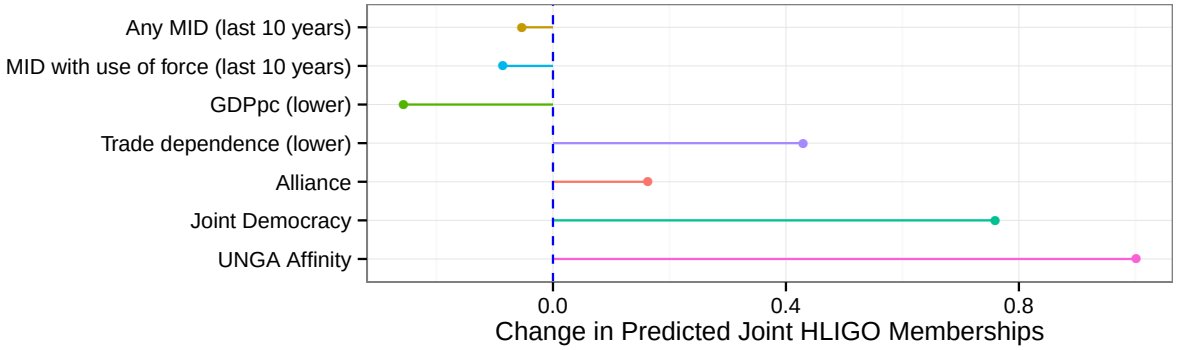
Outcome variable: Count of joint HLIGO memberships in a given dyad-year.

Estimator: Zero-inflated Poisson regression via maximum likelihood. All predictors lagged by one year.

Cell entries: Point estimates of Poisson coefficients; standard errors in parentheses. Intercepts not shown.



(a) Predicted joint memberships



(b) Change in predicted joint memberships

Figure 7.1: Predicted counts and changes in joint memberships in high-leverage IGOs of states, 1951-2001. Estimates based on Models 1 and 2 in Table 7.1.

move in monotone, increasing direction—showing some correspondence between observed and predicted values. Figure 7.2 illustrates this with the examples of two extremes: a model that does not fit the data at all (on the left) and a model that overfits the data (on the right). Using this visual measure, the models estimating the determinants of states' joint

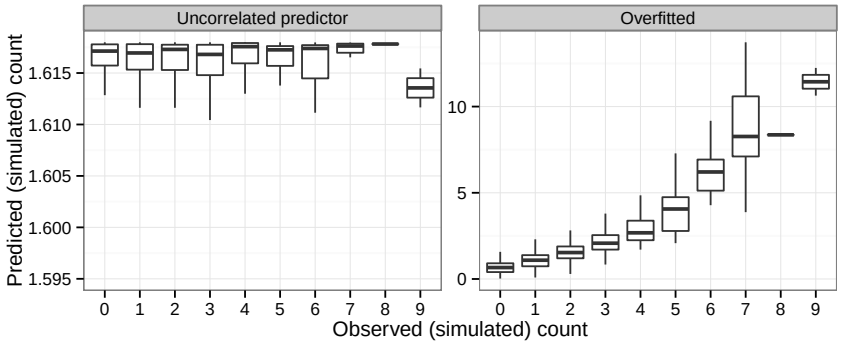


Figure 7.2: Simulation for illustrative purposes: Observed and predicted counts of count variables, based on a model with a predictor that is uncorrelated with the data generating process of observed counts (left) and a model with a predictor that overfits the data (right).

memberships in HLIGOs fit the data reasonably well (Figure 7.3): observed and predicted counts correspond to an extent. This offers some confidence in the models in Table 7.1 as valid tools to judge the degree of reverse causation that could undermine the conclusions of this dissertation. The results above are robust to other estimators (Poisson models or OLS with and without lagged dependent variables). They uniformly reject H4 and, with it, alleviate the concern that high-leverage IGOs are more likely to include mostly member states with low or no baseline risk of engaging in militarized conflict.

7.3 Conclusion

Many arguments that posit independent effects of international institutions on state behavior are subject to the problem of excluding the possibility of reverse causality. In this study, reverse causality comes in the form of high-leverage IGOs screening their membership for states that may engage in militarized conflict with other member states. This raises

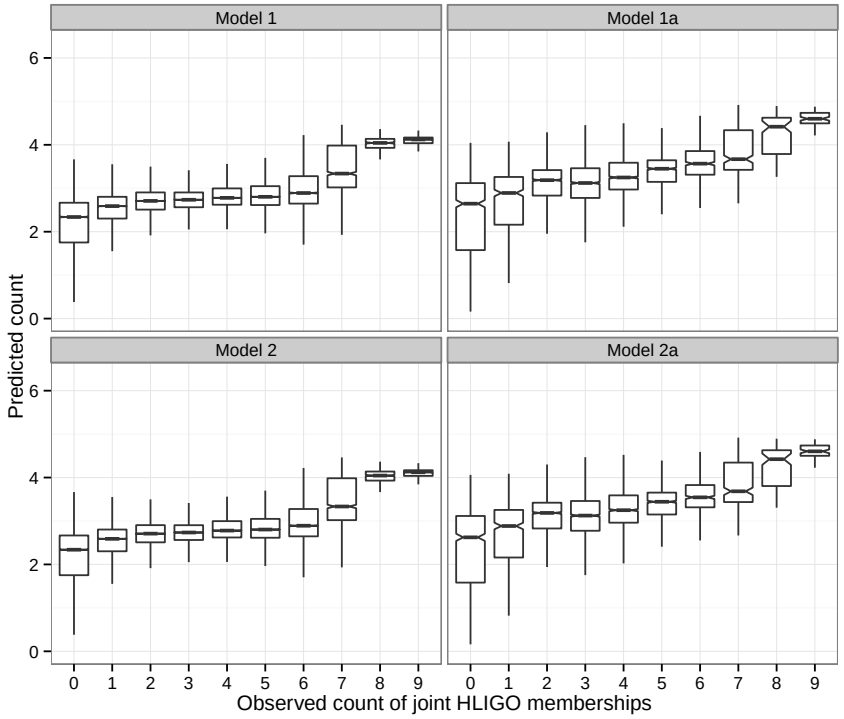


Figure 7.3: Observed and predicted counts of joint HLIGO memberships, based on the models in Table 7.1.

concerns about both the validity and the relevance of the main findings of this dissertation that high-leverage IGOs prevent serious and prolonged conflict between member states by lowering the utility of using force. To address this possibility, this chapter presents both theoretical arguments and empirical evidence against the presence of reverse causation in the case of high-leverage IGOs and interstate conflict. Theoretically, high-leverage IGOs are less likely to exhibit screening mechanisms due to their mostly economic mandates and their exclusion of tasks that are **directly** related to security or conflict adjudication and mediation. Empirically, I estimate the presence and size of the reverse causal arrow and find that the reverse relationship—conflict risk shaping joint participation in HLIGOs—is negligible or non-existent, even in the most sensitive setting for detecting reverse causation. While future work may be able to exploit newer methods for detecting bias arising from reverse causation, this two-pronged approach to detecting such bias indicates that the findings presented in chapters 5 and 6 are not affected by reverse causation.

Chapter 8

Conclusion: The Leverage of IGOs During the Evolution of Interstate Conflicts

What explains why states sometimes resolve disagreements peacefully, but sometimes engage in major episodes of organized violence? This dissertation highlights how international institutions can exercise leverage over member states and substantially reduce the risk that interstate disputes turn into prolonged armed hostilities and enduring rivalries. Leverage is derived from three characteristics of a subset of IGOs. First, militarized conflict between member states can threaten the previous and future work of IGOs, putting their assets and projects at risk, with losses also radiating to other IGO members. Some IGOs are therefore substantially more averse to militarized conflict between member states than others. Second, comparatively independent and centralized structures in order to fulfill IGOs' mandates create the prerequisites for exercising leverage by putting in place mechanisms that guarantee negative IGO responses to militarized conflict in member states. Third, IGOs' activities in issue areas that provide economic benefits to member states generate tangible leverage in the form of benefits that can be disbursed or withheld if member states engage in militarized conflict.

Based on this argument about the origin of the specific leverage of IGOs, I develop a theory showing how this leverage addresses the commitment problem between two states that have indicated, through words or action, a disagreement over an issue, such as territory, water, or other political issues. Being subject to the leverage of IGOs changes the utility of using force in the context of such a disagreement. If both states in a disagreement participate

in IGOs with leverage over them, the IGOs' leverage helps both states to resolve the credible commitment problem that would otherwise make it more likely that the disagreement escalates to more serious hostilities.

Newly collected information about the leverage of international institutions over member states identifies a group of "high-leverage IGOs" that possesses and has previously exercised in the context of militarized conflict behavior of member states. Using this information then allows for a test of the main argument's implications. Empirical analyses show support for these implications. When states make claims against another state over contentious territory or other disputed resources, those pairs of states that are subject to more potential costs through high-leverage IGOs for using military force are substantially less likely to engage in armed hostilities. International political crises between states exposed to more high-leverage IGOs are at a lower risk to escalate to major clashes or war, compared to crises between states that share few or no links through high-leverage IGOs. Enduring rivalries, widely identified as the environment for the escalation of international disputes and long-standing conflicts, are less likely to develop between states that are subject to the influence of high-leverage IGOs.

These findings show that international institutions can affect state behavior through their leverage over member states, by changing the utility of states' choices in interstate disputes. The concept of leverage used in this argument is primarily economic, and the IGOs that possess it have primarily economic mandates. This separates and highlights the importance of economic leverage compared to other channels of IGO influence on state behavior, resulting in implications for theories about the relationship between international institutions and states as well as international conflict.

8.1 Implications for Theory

The emphasis on the role of economic leverage for commitment problems in interstate disputes speaks to central questions in international relations theory. First, it identifies

a specific mechanism that aligns the theoretical argument with a measure of IGOs that directly capture the theoretical mechanism. This helps isolate the hypothesized mechanism from other potential agents of IGO influence. Second, this work emphasizes the **indirect** impact of international institutions on state behavior. Indirect impact here means that high-leverage IGOs arguably change state behavior in a domain outside the key tasks of these IGOs. Third, this indirect impact helps address a key problem in institutionalist research: dealing with states' self-selection into IGOs based on the expected adjustment costs arising from states' current and future behavior and the IGOs' membership rules and potential influence.

8.1.1 Leverage as a mechanism of institutional influence

Whether international institutions can independently change state behavior is a central question in international relations. It is an important question for both mid-range theorizing about specific international phenomena from interstate conflict to human rights and international trade, as well as for the major theoretical perspectives on international relations. Yet, despite the long tradition of theoretical and empirical research on this question one can find the following quote in Wagner (2010, 36): "we do not know what contribution international institutions short of a world government might make to the resolution of interstate conflicts."

This quote can be seen as hyperbolic in its skepticism about the state of knowledge about the role of international institutions for interstate conflict resolution. But it indicates that extant work disagrees about this role of IGOs and that it has perhaps not yet fully demonstrated that one particular mechanism of institutional influence is logically valid and empirically verifiable. Scholars have pointed out that international institutions can change the perception of states' security environments. They can align states' preferences or build trust between adversaries. They can also reduce information asymmetries and thus eliminate a potential cause for war. Often, though, international institutions share a variety of features that can be associated with each of these mechanisms. This complicates making inferences

about the contributions of IGOs to conflict resolution that Wagner asks about.

My argument does not suggest that socialization or information dissemination are not valid mechanisms through which IGOs help states prevent conflicts. Rather, I focus on institutions' ability to resolve commitment problems between states that have expressed disagreements. Here, I show that in the absence of a "world government," the economic leverage of IGOs is most likely to exhibit the kind of influence on states that allows for credible commitments to resolving disagreements without massive fighting. I identify (1) the specific institutional features that help states make credible commitments, (2) the reasons for why these features have the hypothesized effect, and (3) a theoretically grounded classification of the institutions that satisfy the criteria necessary to exercise this commitment-promoting effect.

For future work, this implies that scholars interested in the role of international institutions for interstate conflict resolution should probe more carefully the impact of IGOs on credible commitments. Here, this dissertation suggests that one can identify leverage as one channel through which IGOs enable credible commitments. Follow-up work could investigate how the threat or exercise of leverage affects specifically how states bargain over disagreements; I suggest strategies for such investigations below.

8.1.2 The indirect influence of IGOs

My argument suggests that high-leverage IGOs can shape state behavior outside these institutions' core domain. The institutions I identify as high-leverage IGOs are not regional security organizations, international courts, or other bodies aimed specifically at conflict resolution. Instead, their key mandates are economic or related to resource usage. But militarized conflict between member states threatens these mandates. Through the threat or exercise of their economic leverage, these IGOs change states' utilities in political and potentially militarized disputes, making their influence an indirect one. This indirect influence of IGOs offers rich opportunities for research on the role that IGOs may play outside their

"original" domain. For example, Karreth and Tir (2013) investigate the role of a broader set of IGOs in preventing the escalation of domestic political conflicts to civil wars. This is one example of an indirect effect, as no IGO has a mandate in preventing civil wars. Vabulas and von Borzyskowski (N.d.) show that a broad variety of IGO types, covering a wide spectrum of issue mandates, can suspend members for domestic political reasons—independently of whether the IGO actually has a mandate of democracy promotion or political rights protection. Understanding such indirect effects becomes more important as the number and interdependence of global governance institutions increases.

Research in this area should engage in more theorizing and empirical investigation of such indirect effects. For instance, one aspect not addressed in this dissertation in its current form is how different IGOs interact in how they evaluate prospects for their engagement in member states. In chapter 3, I present some information about how the World Bank and IMF act as vanguards for other IGOs and NGOs in that terminating their engagement often sends strong signals to other organizations about conditions on the ground, as does resuming their engagement. For instance, Greenhill (2010**a**;**b**) shows that human rights norms spread not only through IGOs explicitly tasked with human rights promotion. Rather, "IGOs can have a positive impact on human rights even if human rights issues do not feature prominently on the organizations' agendas" (Greenhill 2010**a**, 143). My dissertation shows that such findings are not restricted to diffusion and socialization or human rights. Rather, even in the high politics domain of interstate conflict one can observe indirect IGO effects—through the way in which IGOs change the utility of using armed force to change the status quo of contested issues. This also helps answer Wagner's (and others') questions about how institutions outside the European Union with its governance apparatus can ever affect state behavior: they may be able to do so through their economic leverage, even in the absence of creating a fully developed supranational governance body.

8.1.3 Addressing reverse causality and self-selection into institutions

Discussing indirect effects raises the question of whether an observation of IGO effects outside their original domain might mask other unobserved processes that are causing the observed effect. Chaudoin, Hays, and Hicks (2013) pointedly summarize this problem by asking: "Do we really know the WTO cures cancer?" Chaudoin and co-authors show that it is possible to generate false-positive findings of an association between membership in the WTO and domestic political outcomes that have no plausible connection to any type of political dynamics that might emerge from the WTO's influence. I address this problem in chapter 7, but also suggest that my findings can contribute to the larger question of isolating IGO effects from other variables that are causally prior to both states' joining IGOs and then behaving in a manner that conforms with the IGOs' mandate.

Instead of evaluating the effect of IGOs on their core mandate, I develop an argument about how the **economic** mandate of high-leverage IGOs affects **conflict** bargaining between states. I present some qualitative evidence for the causal pathway for this cross-domain influence. This combination of theory and evidence helps address concerns about false positives. But it also offers an alternative perspective on the problem of asserting IGO effects where states might self-select into IGOs only when the adjustment costs for behavior are low or zero. The material benefits from high-leverage IGOs are considerable. At the same time, unlike security-related IGOs or settlement treaties, high-leverage IGOs do not require potential members to submit themselves to security-related constraints. This minimizes the inferential problem that it is difficult to conclude that IGO memberships have an effect independently of states' previous behavioral trajectory. In addition, I estimate the size of what a potential reverse causal effect would be, and find that reverse causality is not present in a substantial way.

For other work, this suggests that it is imperative to carefully consider the pathways through which reverse causality and self-selection would impact conclusions about the influ-

ence of international institutions on state behavior. Rather than assume a universal problem of reverse causality whenever international institutions are involved, it may be preferable to theorize specifically about how reverse causality would look like. In the present case, for instance, I have shown strong theoretical reasons for why it is unlikely that reverse causation biases the main findings of this study. In other cases, scholars should devote more attention to the dynamics of institutional rules and states' decision to subject themselves to these rules in light of their likely effect on these states' behavior. For instance, recent work in international law has measured states' "treaty preferences" to capture the latent factor that explains why states self-select into human rights treaties (Lupu 2013). But my findings suggest that self-selection is less of a problem for inference when one aims to estimate the effect of institutions outside their core domain. From this finding, one could advance a theory of when a record of past behavior of IGOs outside their domain might prompt self-selection processes of states or, more appropriately, function as a gatekeeper for states that are unwilling to incur IGO-based costs for behavior that is unrelated to the IGO's core mandate.

An illustrative example, albeit not related to IGO membership but rather specific policies in the aid literature, are World Bank standards on sustainability. The World Bank is facing increasing "competition" from new donors, particularly China (Dreher, Fuchs, and Nunnenkamp 2013). This has led some to suggest that "[b]ased on its principles of non-intervention and respect for sovereignty, China gives [aid] money with little or no strings attached" (Condon 2012, 5). If this is true, one might observe upwardly biased impact estimates of the effectiveness of the World Bank's sustainability standards because only those countries that are likely to implement such standards anyway are going to apply for such loans. However, World Bank officials often (and perhaps increasingly) seem to take a more managerial approach at first in order to retain influence on projects. This managerial approach can mean in practice that country officers and project leaders are willing to work with client governments even when initial prospects to match sustainability criteria are bleak. For

example, in the early 2000s the World Bank decided to fund a project that would create a pipeline from Chad through Cameroon to the Atlantic coast.[1] Critics contended that the project fell short of the Bank' sustainability guidelines. Yet, the Bank's country director stated that the Bank chose to co-fund this particular enterprise in order to retain some influence on the implementation of the project—even considering its problematic prospects for complying with the Bank's standards.[2] This is only an illustrative example in a different context, but it suggests that screening processes by IGOs are often context-specific. Therefore, research on international institutions and their effects on state behavior should take a more nuanced approach to investigate the presence and dynamics of self-selection and the concerns about reverse causation that they create.

8.2 Implications for Policy and Conflict Resolution

The leverage of institutions and the idea of indirect effects in general also have direct policy implications. I emphasized in the theoretical discussion that most high-leverage IGOs have no explicitly political mandate. Even though institutions such as the World Bank have **publicly** become more attentive to the negative consequences of many forms of violent conflict, including interstate conflict, on the Bank's mandate, the Bank and its employees still carefully hasten to emphasize that the Bank has no political mandate and cannot take sides in international or intrastate disputes. Suggesting that high-leverage IGOs exploit their leverage more aggressively in order to promote interstate conflict resolution therefore is not a conclusion readers should draw from this dissertation.

However, the argument and empirical evidence present at least two direct policy implications. First, if it is true that high-leverage IGOs are instrumental in changing the utility of two states in a dispute so that these states are more likely to resolve their dispute without fighting, then member states should make efforts to strengthen and increase this specific

[1] See "Cameroon: Pipeline to Prosperity? What happened to the project promoters called a 'cargo of hope' for Africans", PBS Frontline, June 7, 2010. See source **W.20** (Appendix C).

[2] See interview with Mary A. Barton-Dock in the previous source.

leverage of IGOs. It is commonplace to assume that states unwillingly give up authority to IGOs. But in this particular case, my findings suggest that high-leverage IGOs are a useful commitment device for **pairs** of states. That is, high-leverage IGOs do not only constrain states unilaterally. They exercise a positive effect on conflict resolution because their constraints strengthen commitments by both states involved in a dispute. In addition, their leverage is derived from their rather static preference for an absence of militarized conflict among members. This is different from mediation or adjudication through IGOs that can take sides. High-leverage IGOs rarely take sides because their mandates are not political. This makes them an effective commitment device and eliminates one of the reasons that would otherwise make states hesitant to subject themselves to the IGO's constraints.

Second, this dissertation also suggests how IGOs' leverage should be increased. Current member states of high-leverage IGOs and the institutions themselves should bolster efforts to promote collaboration and coordination between these IGOs in responding to the risk of conflict between member states. My argument and some illustrative evidence suggest that a key driver of IGOs' leverage is that they function as vanguards for other organizations in assessing conflict risk and acting accordingly, for instance by withdrawing from countries that face the immediate risk of a substantial armed dispute with a neighbor, or by returning to countries in the aftermath of conflicts. If leverage comes from this leading role of the IGOs in consideration, it could be strengthened by further coordinating how IGOs deal with conflict environments. Such coordination would send even stronger signals to member states that there are guaranteed costs for engaging in the massive use of force in disputes with other member states. Informal evidence from recent efforts by the World Bank and other development banks indicates that there is already substantial collaboration and coordination in the form of disseminating research and also staff moving from one institution to another. This type of collaboration could further strengthen the pacifying influence of high-leverage IGOs on disputatious relations between member states.

8.3 Limitations and Future Work

The evidence in this dissertation supports the argument of a specific, leverage-based influence of IGOs on state behavior in critical cases of high politics. Its limitations, however, suggest several avenues for future research.

High-leverage IGOs influence on decision-makers in interstate conflicts. While I do show evidence for the decision-making process on the side of the IGOs, further qualitative evidence could come from a detailed case study of the role of concerns about costs emerging from IGOs for decision-makers in governments that are managing a dispute with another state. The quote from the British House of Lords in chapter 1 is illustrative of what such evidence could look like: the British minister for agriculture mentions the long-term costs of losing access to the benefits the institution (in that case, the European Union) provides. One case that could lend itself to such a study may be the Ethiopian-Eritrean conflict that has previously attracted the attention of several high-leverage IGOs. Complementary cases would illustrate the conflict bargaining process between countries exposed to little or no influence from high-leverage IGOs.

Using events data to identify HLIGO signals. This dissertation's empirical investigation aggregates interstate conflict behavior to the claim, crisis, or conflict. For an empirical test, this is a defensible strategy as it is comparable to many other studies in the field. The alternative of studying yearly data on the onset or evolution of conflicts is inappropriate: because the current measure of IGO leverage is based on membership in the respective IGOs, expanding data to yearly observations would not add much substantial new information on the IGO side. However, a better way to examine the specific dynamics of IGO influence in conflict processes would be to obtain information about explicit signals that IGOs are sending. Such signals can range from making public statements (as I reference at a few points in chapter 3) to the actual withdrawal of IGO resources. My theory would suggest that one should observe subsequent changes in conflict behavior after such events.

Detailed events data that incorporate IGOs as actors would provide this information.

Focus on inter-HLIGO collaboration. One reason for measuring IGO influence through the additive count of IGOs that have high leverage over member states was that IGOs can coordinate the influence they exercise over member states' utility of using force in disputes. A potentially more appropriate method to address this inter-HLIGO coordination and collaboration would go beyond the dyadic membership count measure used in this dissertation and rely on network measures to approximate IGOs' influence on member states. For instance, it might be possible that states' position in IGO networks vary in centrality. Different operationalizations of centrality express the degree to which a states is linked to other states, for instance, that are more or less well connected in the HLIGO network. Such centrality could proxy for the likelihood of inter-IGO coordination, and this centrality could express the degree to which IGOs are likely to use its leverage against the particular member state—so that the role of leverage is not equal for all member states even if they share the same number of memberships in high-leverage IGOs.

IGO leverage in other domains. Finally, this dissertation has emphasized that claims, crises, and pre-rivalry conflicts are the hardest possible tests for an argument about a cost-based influence of IGOs on state behavior because they mark areas of high politics in which high-leverage IGOs are not nominally involved. Having found supportive evidence for the argument in these "tough" cases, a natural expansion would be to carry the argument further in other domains. I have begun to do so by influencing the leverage of specific IGOs, multilateral trade agreements with dispute resolution provisions, on the behavior of defendant states in trade disputes in the global trade regime in the GATT/WTO (Karreth N.d.). Here, I modify the main argument of this dissertation to identify the unilateral effect of trade agreement provisions on how likely member states are to make concessions in disputes outside of the institution. This work echoes the logic of an indirect effects of IGOs on member states, and it also adds counterintuitive implications to the popular argument that states form outside institutions to gain leverage in global regimes.

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Appendix A

Coding Matrix for High-Leverage IGOs

I used the following coding matrix for collecting information on the IGOs listed in Table 4.1. Note that I abandoned coding of an IGO as soon as it became clear that the IGO did not have the capacity to exercise leverage.

(1) Full name of the IGO

(2) COW identification number of the IGO

(3) Founding year of the IGO

(4) Last year the IGO was in function (2013 if the IGO is still active.)

(5) Member states: List of all member states' COW codes.

(6) Issue coverage of the IGO: All areas in which the IGO is active.

- Trade facilitation (e.g., regional trade agreement)
- Currency harmonization (e.g., currency union)
- Development (e.g., foreign aid)
- Investment (e.g., investment corporation)
- Production (e.g., association of oil-producing countries)
- Resource usage (e.g., river management)

(7) Coverage sources: list of sources used to answer this question

(8) Leverage of the IGO: Features that accurately describe this IGO.

- The IGO routinely gives out monetary benefits (e.g., foreign aid, loans)
- The IGO itself (not its member states) can decide whether these benefits can be withheld
- The IGO has a substantial bureaucracy that is independent of its member states
- The IGO can make decisions on its own, independent of member states' votes or vetoes
- The IGO has the ability to use "carrots and sticks" toward its members

(9) Magnitude of the IGOs' leverage—overall rating. For instance, what is the amount of money the IGO gives out to its members, either directly (aid) or indirectly (trade facilitation)? As an example, an IGO that routinely gives out lots of foreign aid and uses conditionality would be considered to have large leverage. An IGO that mostly consists of meetings between heads of states would be considered to have small leverage. Staff size (provided in the Yearbook of IOs) can also be indicative of leverage: an IGO that only has a staff size of 10 will be unlikely to have the information and means to exercise leverage over its members.

- Small
- Medium
- Large

(10) Leverage sources: list of sources used to answer this question

(11) Used leverage: Descriptive information on whether the IGO used its leverage in the past to force any member state toward a desired behavior in the area of political conflict. Default sources: Lexis-Nexis. Default search terms in Lexis-Nexis:

- Paste the name of the IGO between quotation marks, for instance

```
"East Caribbean Common Market"
```

- Set the "Select Source - By Type" dropdown menu to **All News (English)**
- If the IGO name alone returns too many news stories to filter out relevant ones, try combining it with terms that make sense, such as:

```
"Caribbean Development Bank" AND conflict*
```

- For search terms, try each or a combination of the following:
  - conflict (try this one by itself)
  - military (try this one by itself)
  - sanction* (try this one by itself)
  - force
  - dispute
  - influence
  - threat*
  - pressure
- Use operators and combine them like this:

```
"Caribbean Development Bank" AND
(sanction* OR military OR force OR dispute OR conflict...)
```

(12) Leverage-use sources: list of sources used to answer this question

(13) Changes: Did any of the information above change during the existence of the IGO? For instance, note here that the European Union began as "trade facilitation," but added "currency harmonization" in 1990.

(14) Uncertainty about the information collected above. Was information easy to find and from reliable sources?

- High certainty
- Information seemed valid but was sparse
- Information highly difficult to collect or unavailable

Appendix B

Correlation Matrices for Regression Analyses

Table B.1: Pairwise correlation matrix for analyses of the use of force in claims (chapter 5).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Use of force	1.00	−0.12	−0.09	−0.10	−0.07	0.08	0.13	−0.12	0.12	−0.02	−0.04	−0.09
(2) Joint High-Leverage IGOs	−0.12	1.00	0.78	0.27	0.00	0.04	−0.06	0.25	−0.00	0.03	0.24	0.18
(3) Joint Structured IGOs (Socialization)	−0.09	0.78	1.00	0.46	−0.10	0.16	−0.15	0.52	−0.12	0.13	0.52	0.48
(4) Joint Security HSIGOs (Information)	−0.10	0.27	0.46	1.00	−0.22	0.30	−0.15	0.70	−0.12	0.17	0.41	0.61
(5) Intangible Salience	−0.07	0.00	−0.10	−0.22	1.00	−0.17	0.53	−0.15	0.22	−0.29	0.05	−0.30
(6) Tangible Salience	0.08	0.04	0.16	0.30	−0.17	1.00	−0.09	0.16	−0.20	0.33	0.34	0.38
(7) Territorial Claim	0.13	−0.06	−0.15	−0.15	0.53	−0.09	1.00	−0.06	−0.05	−0.08	0.03	−0.12
(8) Joint Democracy	−0.12	0.25	0.52	0.70	−0.15	0.16	−0.06	1.00	−0.22	0.24	0.55	0.67
(9) Enduring Rivalry	0.12	−0.00	−0.12	−0.12	0.22	−0.20	−0.05	−0.22	1.00	−0.27	−0.24	−0.39
(10) Power Differential	−0.02	0.03	0.13	0.17	−0.29	0.33	−0.08	0.24	−0.27	1.00	0.26	0.45
(11) Trade dependence (lower)	−0.04	0.24	0.52	0.41	0.05	0.34	0.03	0.55	−0.24	0.26	1.00	0.49
(12) GDPpc (lower)	−0.09	0.18	0.48	0.61	−0.30	0.38	−0.12	0.67	−0.39	0.45	0.49	1.00

Cell entries: Spearman correlation coefficients based on complete pairs of observations on the respective variables.

Table B.2: Pairwise correlation matrix for analyses of crisis development (chapter 5).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Serious clashes or war	1.00	−0.17	−0.23	−0.07	0.40	−0.14	−0.03	−0.16	0.15	−0.28	−0.27
(2) Joint High-Leverage IGOs	−0.17	1.00	0.87	0.45	−0.15	0.21	0.10	0.12	−0.05	0.16	0.28
(3) Joint Structured IGOs (Socialization)	−0.23	0.87	1.00	0.48	−0.17	0.17	0.16	0.18	−0.05	0.25	0.46
(4) Joint Security HSIGOs (Information)	−0.07	0.45	0.48	1.00	−0.20	0.16	0.08	−0.01	−0.15	0.15	0.05
(5) Existential threat	0.40	−0.15	−0.17	−0.20	1.00	−0.49	−0.00	−0.06	0.24	−0.24	−0.10
(6) Territorial dispute	−0.14	0.21	0.17	0.16	−0.49	1.00	0.09	0.24	−0.29	0.11	−0.01
(7) Joint democracy	−0.03	0.10	0.16	0.08	−0.00	0.09	1.00	0.11	−0.09	0.07	0.11
(8) Enduring rivalry	−0.16	0.12	0.18	−0.01	−0.06	0.24	0.11	1.00	−0.19	−0.00	0.12
(9) Power differential	0.15	−0.05	−0.05	−0.15	0.24	−0.29	−0.09	−0.19	1.00	−0.04	0.19
(10) Trade dependence (low)	−0.28	0.16	0.25	0.15	−0.24	0.11	0.07	−0.00	−0.04	1.00	0.26
(11) GDPpc (low)	−0.27	0.28	0.46	0.05	−0.10	−0.01	0.11	0.12	0.19	0.26	1.00

Cell entries: Spearman correlation coefficients based on complete pairs of observations on the respective variables.

Table B.3: Pairwise correlation matrix for analyses of enduring rivalries (chapter 6).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Enduring rivalry	1.00	−0.04	−0.04	−0.01	0.83	−0.30	−0.08	0.00	0.06	0.07	−0.03
(2) Joint High-Leverage IGOs	−0.04	1.00	0.78	0.44	0.11	−0.12	0.16	−0.23	0.17	0.11	0.05
(3) Joint Structured IGOs (Socialization)	−0.04	0.78	1.00	0.39	0.10	−0.09	0.24	−0.14	0.39	0.34	0.32
(4) Joint Security HSIGOs (Information)	−0.01	0.44	0.39	1.00	0.06	−0.26	0.12	−0.30	0.25	0.03	−0.12
(5) Total disputes during rivalry	0.83	0.11	0.10	0.06	1.00	−0.29	−0.07	−0.02	0.10	0.10	0.03
(6) Contiguity	−0.30	−0.12	−0.09	−0.26	−0.29	1.00	−0.01	0.30	−0.31	−0.22	0.11
(7) Joint democracy	−0.08	0.16	0.24	0.12	−0.07	−0.01	1.00	0.05	0.07	0.19	0.30
(8) Power differential	0.00	−0.23	−0.14	−0.30	−0.02	0.30	0.05	1.00	−0.03	0.02	0.16
(9) Alliance	0.06	0.17	0.39	0.25	0.10	−0.31	0.07	−0.03	1.00	0.38	0.27
(10) Trade dependence (low)	0.07	0.11	0.34	0.03	0.10	−0.22	0.19	0.02	0.38	1.00	0.31
(11) GDPpc (low)	−0.03	0.05	0.32	−0.12	0.03	0.11	0.30	0.16	0.27	0.31	1.00

Cell entries: Spearman correlation coefficients based on complete pairs of observations on the respective variables.

Table B.4: Pairwise correlation matrix for analyses of joint HLIGO memberships (chapter 7).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Joint High-Leverage IGOs	1.00	−0.02	−0.02	0.12	−0.05	0.10	0.17	0.20
(2) Any MID (last 10 years)	−0.02	1.00	0.89	0.10	0.02	0.09	−0.01	−0.03
(3) MID with use of force (last 10 years)	−0.02	0.89	1.00	0.08	0.01	0.08	−0.01	−0.02
(4) Trade dependence (lower)	0.12	0.10	0.08	1.00	0.34	0.26	0.26	−0.13
(5) GDPpc (low)	−0.05	0.02	0.01	0.34	1.00	0.23	0.31	−0.08
(6) Alliance	0.10	0.09	0.08	0.26	0.23	1.00	0.19	0.20
(7) Joint democracy	0.17	−0.01	−0.01	0.26	0.31	0.19	1.00	0.03
(8) UNGA affinity	0.20	−0.03	−0.02	−0.13	−0.08	0.20	0.03	1.00

Cell entries: Spearman correlation coefficients based on complete pairs of observations on the respective variables.

Appendix C

List of Cited Online Resources

The following list provides the full citations for all references of online material mentioned in the main document. Permanent copies of each of the listed documents are stored on multiple hard drives in the author's possession.

W.1 Official records of the British House of Lords, from a sitting on March 30, 1995. Source: ⟨`http://hansard.millbanksystems.com/lords/1995/mar/30/fishing-in-irish-box-waters`⟩, accessed October 15, 2012.

W.2 "Helping Countries Combat Corruption: The Role of the World Bank." Report by the unit for Poverty Reduction and Economic Management. Source: ⟨`http://www1.worldbank.org/publicsector/anticorrupt/corruptn/corrptn.pdf`⟩, accessed February 14, 2014.

W.3 "About the World Development Report." World Bank website. ⟨`http://wdronline.worldbank.org/worldbank/p/aboutwdr`⟩, accessed February 14, 2014.

W.4 "Center on Conflict, Security and Development." World Bank website. ⟨`http://go.worldbank.org/XMNHY9CM70`⟩, accessed February 14, 2014.

W.5 "The Hive." ⟨`https://worldbankhive.logicaladvantage.com/_layouts/WBHive/Buzz.aspx`⟩ , accessed February 14, 2014.

W.6 "Economic Stability, Economic Cooperation, and Peace—the Role of the IMF." Speech by Dominique Strauss-Kahn. Oslo, October 23, 2009. ⟨http://www.imf.org/external/np/speeches/2009/102309.htm⟩, accessed July 27, 2013.

W.7 "Excerpts from Speeches by Governors at the 1991 Annual Meetings." IMF archives. ⟨http://adlib.imf.org/digital_assets/wwwopac.ashx?command=getcontent&server=webdocs&value=EB/1991/EBD/88320.PDF⟩, accessed July 27, 2013.

W.8 Gupta, Sanjeev, Benedict Clements, Rina Bhattacharya, and Shamit Chakravarti. "Fiscal Consequences of Armed Conflict and Terrorism in Low- and Middle-Income Countries." IMF Working Paper WP/02/142. ⟨http://adlib.imf.org/digital_assets/wwwopac.ashx?command=getcontent&server=webdocs&value=EB/2002/WP/156067.PDF⟩, accessed July 27, 2013.

W.9 "Minutes of Executive Board Meeting 98/48." IMF archives. ⟨http://adlib.imf.org/digital_assets/wwwopac.ashx?command=getcontent&server=webdocs&value=EB/1998/EBM/28830.PDF⟩, accessed July 27, 2013.

W.10 "IMF Country Report No. 06/159. Staff Report for the 2005 Article IV Consultation with the Federal Democratic Republic of Ethiopia." May 2006. IMF archives.⟨http://www.imf.org/external/pubs/ft/scr/2006/cr06159.pdf⟩,

accessed July 27, 2013.

W.11 "IMF Country Report No. 05/25. Staff Report for the 2004 Article IV Consultation with the Federal Democratic Republic of Ethiopia." January 2005. IMF archives. ⟨http://www.imf.org/external/pubs/ft/scr/2005/cr0525.pdf⟩, accessed July 27, 2013.

W.12 "IMF Approves In Principle US$112 Million PRGF Arrangement for Ethiopia." IMF Press Release No. 01/11. March 20, 2001. ⟨http://www.imf.org/external/np/

sec/pr/2001/pr0111.htm⟩, accessed July 27, 2013.

W.13 "World economy can't afford China-Japan dispute, says Lagarde." South China Morning Post. October 4, 2012. ⟨http://www.scmp.com/news/china/article/1053342/world-economy-cant-afford-china-japan-dispute-says-lagarde⟩, accessed August 13, 2013.

W.14 "World Bank Safeguard Policies: Disputed Areas." World Bank website. ⟨http://go.worldbank.org/1RNK0P9WG0⟩, accessed February 14, 2014.

W.15 "World Bank Safeguard Policies: International Waterways." World Bank website. ⟨http://go.worldbank.org/RKU8MDSGV0⟩, accessed February 14, 2014.

W.16 "I.M.F. Agrees to Resume Pakistan Aid, Cut Off After Atom Tests." New York Times. November 26, 1998. ⟨http://www.nytimes.com/1998/11/26/world/imf-agrees-to-resume-pakistan-aid-cut-off-after-atom-tests.html⟩, accessed August 15, 2013.

W.17 "Eritrea Overview." World Bank website. ⟨http://www.worldbank.org/en/country/eritrea/overview⟩, accessed February 14, 2014.

W.18 "Coalition for Rainforest Nations: Coalition Nations." Coalition for Rainforest Nations website. ⟨http://www.rainforestcoalition.org/nations.aspx⟩, accessed February 14, 2014.

W.19 "Bolivia and Chile: Trickle-down diplomacy." The Economist. November 17, 2012. ⟨http://www.economist.com/news/americas/21566673-evo-morales-tries-swap-stream-piece-chilean-seafront-trickle-down-diplomacy⟩, accessed January 30, 2014.

W.20 "Cameroon: Pipeline to Prosperity? What happened to the project promoters called a 'cargo of hope' for Africans." PBS Frontline. June 7, 2010. ⟨http://www.pbs.org/frontlineworld/stories/bribe/2010/06/ten-years-ago-this-month.html⟩, accessed February 14, 2014.

W.21 "Guatemala suspends referendum on Belize territorial dispute." Global Post. April 23, 2013. ⟨http://www.globalpost.com/dispatch/news/agencia-efe/130423/guatemala-suspends-referendum-belize-territorial-dispute⟩, accessed January 30, 2014.

Appendix D

ISO-3 Country Codes

Table D.1: ISO-3 abbreviations of countries represented in Figures 4.6-4.10. Source: United Nations Statistics Division, ⟨`http://unstats.un.org/unsd/tradekb/Knowledgebase/Country-Code`⟩.

AFG	Afghanistan	DZA	Algeria	KWT	Kuwait	PRK	North Korea
AGO	Angola	ECU	Ecuador	LAO	Laos	PRT	Portugal
ALB	Albania	EGY	Egypt	LBN	Lebanon	PRY	Paraguay
AND	Andorra	ERI	Eritrea	LBR	Liberia	QAT	Qatar
ARE	United Arab Emirates	ESH	Western Sahara	LBY	Libya	ROU	Romania
ARG	Argentina	ESP	Spain	LIE	Liechtenstein	RUS	Russian Federation
ARM	Armenia	EST	Estonia	LKA	Sri Lanka	RWA	Rwanda
ATA	Antarctica	ETH	Ethiopia	LSO	Lesotho	SAU	Saudi Arabia
AUS	Australia	FIN	Finland	LTU	Lithuania	SDN	Sudan
AUT	Austria	FRA	France	LUX	Luxembourg	SEN	Senegal
AZE	Azerbaijan	GAB	Gabon	LVA	Latvia	SGP	Singapore
BDI	Burundi	GBR	United Kingdom	MAR	Morocco	SLE	Sierra Leone
BEL	Belgium	GEO	Georgia	MCO	Monaco	SLV	El Salvador
BEN	Benin	GHA	Ghana	MDA	Moldova, Republic of	SMR	San Marino
BFA	Burkina Faso	GIN	Guinea	MDG	Madagascar	SOM	Somalia
BGD	Bangladesh	GMB	Gambia	MDV	Maldives	SRB	Serbia
BGR	Bulgaria	GNB	Guinea-Bissau	MEX	Mexico	SUR	Suriname
BHR	Bahrain	GNQ	Equatorial Guinea	MKD	Macedonia	SVK	Slovakia
BIH	Bosnia & Herzegovina	GRC	Greece	MLI	Mali	SVN	Slovenia
BLR	Belarus	GRD	Grenada	MLT	Malta	SWE	Sweden
BLZ	Belize	GTM	Guatemala	MMR	Myanmar	SWZ	Swaziland
BOL	Bolivia	GUF	French Guiana	MNE	Montenegro	SYR	Syria
BRA	Brazil	GUY	Guyana	MNG	Mongolia	TCD	Chad
BRN	Brunei Darussalam	HKG	Hong Kong	MOZ	Mozambique	TGO	Togo
BTN	Bhutan	HND	Honduras	MRT	Mauritania	THA	Thailand
BWA	Botswana	HRV	Croatia	MWI	Malawi	TJK	Tajikistan
CAF	Central African Republic	HTI	Haiti	MYS	Malaysia	TKM	Turkmenistan
CAN	Canada	HUN	Hungary	NAM	Namibia	TLS	Timor-Leste
CHE	Switzerland	IDN	Indonesia	NER	Niger	TUN	Tunisia
CHL	Chile	IND	India	NGA	Nigeria	TUR	Turkey
CHN	China	IRL	Ireland	NIC	Nicaragua	TWN	Taiwan
CIV	Côte d'Ivoire	IRN	Iran	NLD	Netherlands	TZA	Tanzania
CMR	Cameroon	IRQ	Iraq	NOR	Norway	UGA	Uganda
COD	Congo (DRC)	ISL	Iceland	NPL	Nepal	UKR	Ukraine
COG	Congo (RoC)	ISR	Israel	NZL	New Zealand	URY	Uruguay
COL	Colombia	ITA	Italy	OMN	Oman	USA	United States
CRI	Costa Rica	JOR	Jordan	PAK	Pakistan	UZB	Uzbekistan
CYM	Cayman Islands	JPN	Japan	PAN	Panama	VEN	Venezuela
CZE	Czech Republic	KAZ	Kazakhstan	PER	Peru	VNM	Viet Nam
DEU	Germany	KEN	Kenya	PHL	Philippines	YEM	Yemen
DJI	Djibouti	KGZ	Kyrgyzstan	PNG	Papua New Guinea	ZAF	South Africa
DNK	Denmark	KHM	Cambodia	POL	Poland	ZMB	Zambia
DOM	Dominican Republic	KOR	South Korea	PRI	Puerto Rico	ZWE	Zimbabwe

Appendix E

Convergence Diagnostics for Bayesian Models

The following pages report visually a number of convergence diagnostics for the main models fit using Bayesian estimation in chapters 5 and 6. These diagnostics are based on Bayesian estimation of the respective probit models with two chains, a burn-in period of 5000 iterations, and 2000 retained iterations after the burn-in period. The two chains differ in their starting values (all 0s versus frequentist GLM point estimates) and the seed set in R (0 versus 123).

(1) Histograms plot the posterior distribution of each parameter, combining both chains. In these plots, nonconvergence would be diagnosted by non-normal, "lumpy" distributions of the parameters.

(2) Density plots show the posterior distribution of each parameter, separating both chains. In these plots, nonconvergence would be diagnosted by non-normal, "lumpy" distributions of the parameters.

(3) Trace plots show the time series of each chain. In these plots, nonconvergence would be diagnosted by chains that separate and explore different regions of parameter values.

(4) Plots of running means show the running mean of each chain. In these plots, nonconvergence would be diagnosted by running means that continue to vary in later iterations.

(5) Partial chains plots compare the distribution of each whole chains with its last part. In these plots, nonconvergence would be indicated by non-overlapping density plots.

(6) Autocorrelation plots show the autocorrelation between iterations at different lags. In these plots, nonconvergence would be indicated by high degrees of autocorrelation even at higher lags and a lack of reduction in autocorrelation at higher lags.

(7) A plot of the Geweke diagnostics for each parameter. Nonconvergence would be indicated by z-values of the Geweke diagnostic (Geweke 1992) above 2 for any parameter — that is, statistically significant values for Geweke diagnostic would indicate "differences in means between the first and last sets of iterations and hence nonconvergence" (Ntzoufras 2009, 449).

All plots were produced using the R package ggmcmc (Fernández i Marín 2013).

E.1 Model 2, Table 5.1

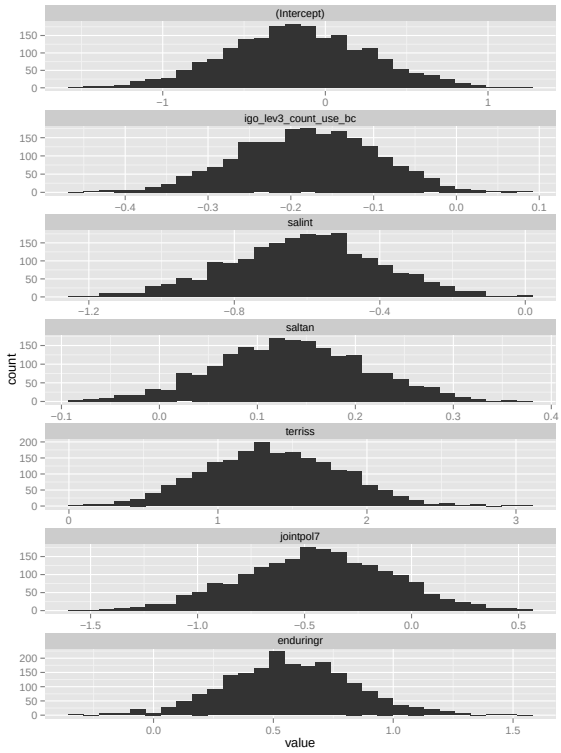

Figure E.1: Histogram of posterior distributions.

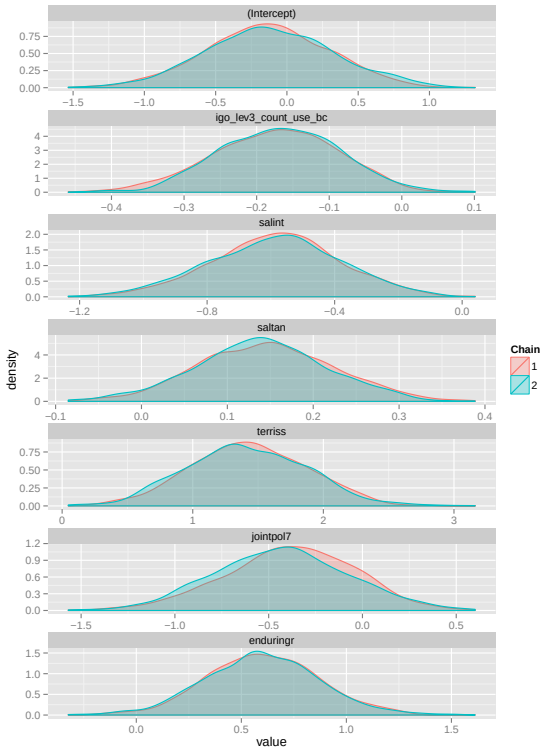

Figure E.2: Density plots of posterior distributions.

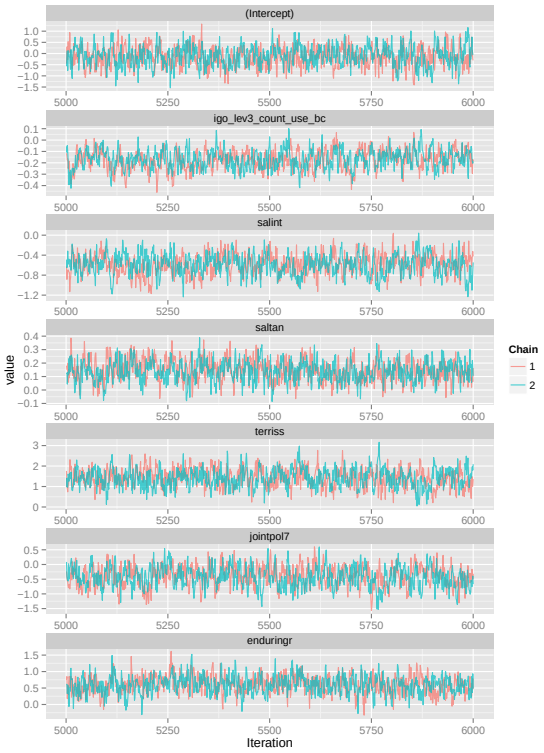

Figure E.3: Trace plots of posterior distributions.

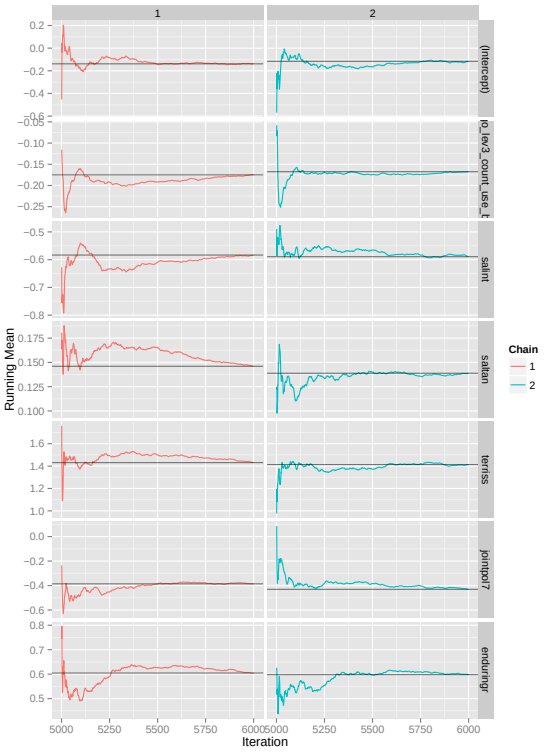

Figure E.4: Plots of running means of posterior distributions.

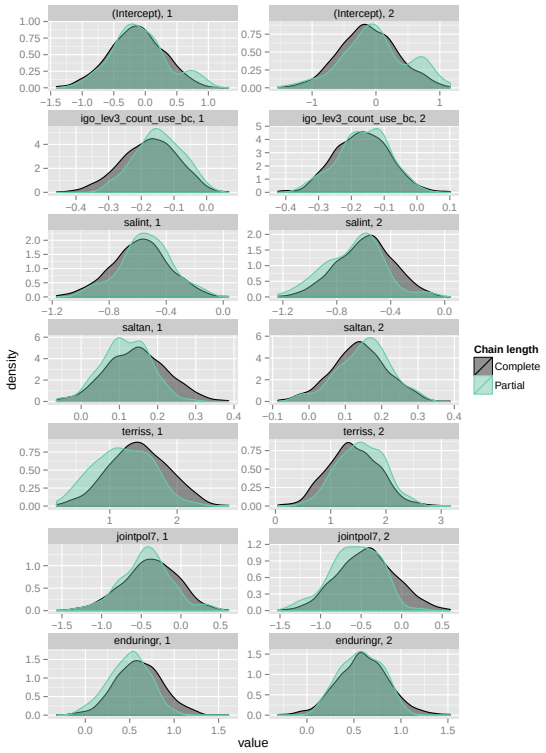

Figure E.5: Partial chains plots of posterior distributions.

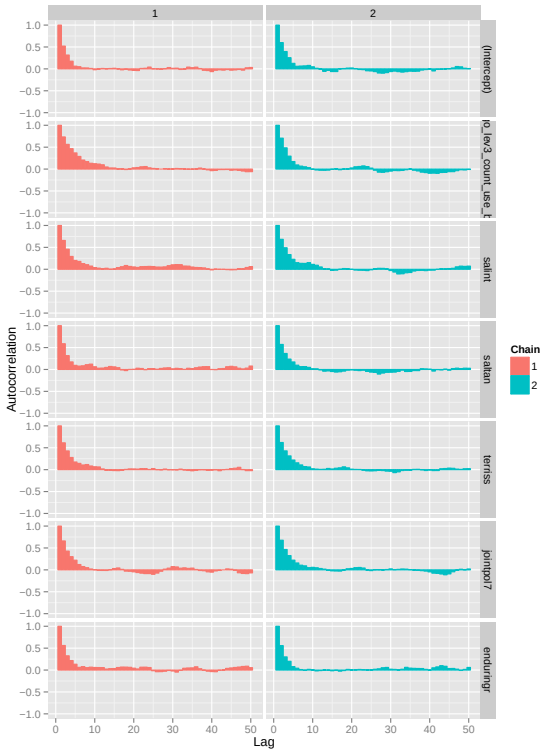

Figure E.6: Autocorrelation plots of posterior distributions.

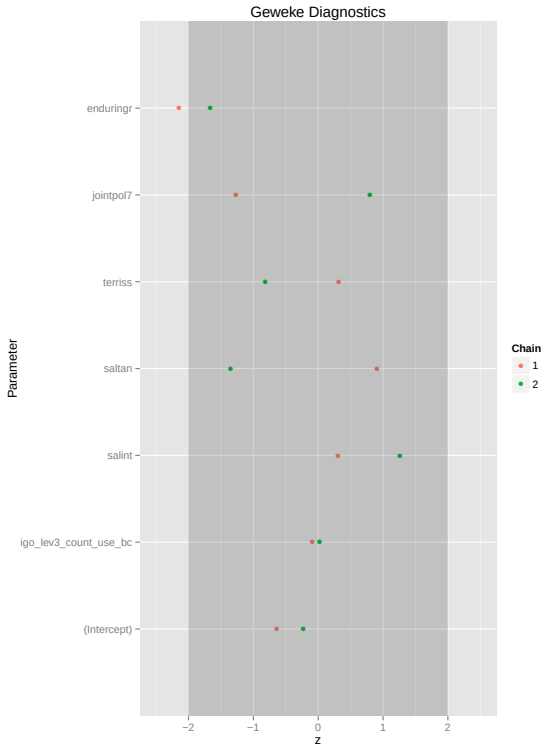

Figure E.7: Geweke diagnostics plots of posterior distributions.

E.2 Model 2, Table 5.3

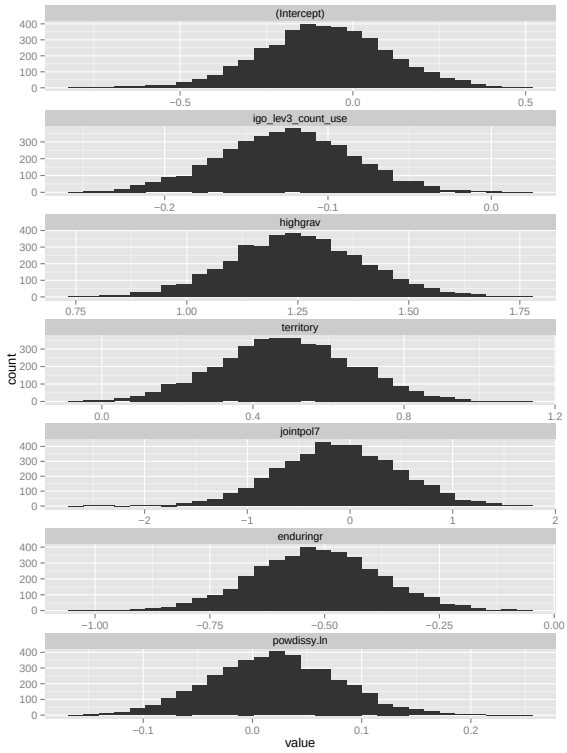

Figure E.8: Histogram of posterior distributions.

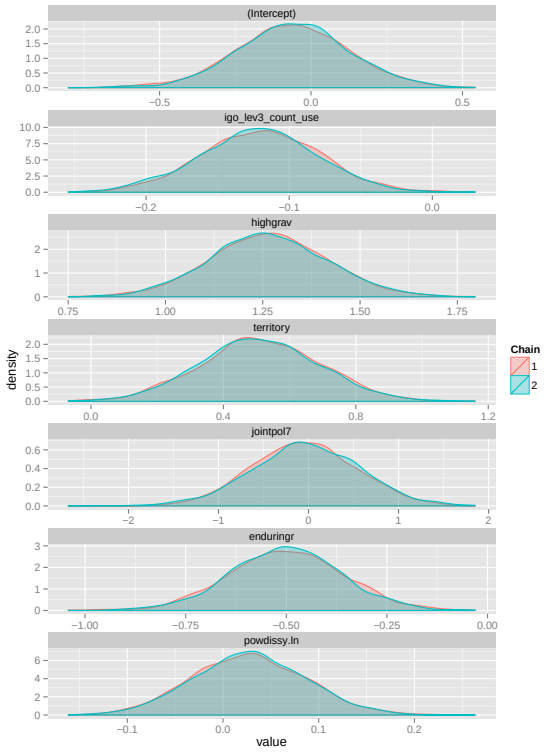

Figure E.9: Density plots of posterior distributions.

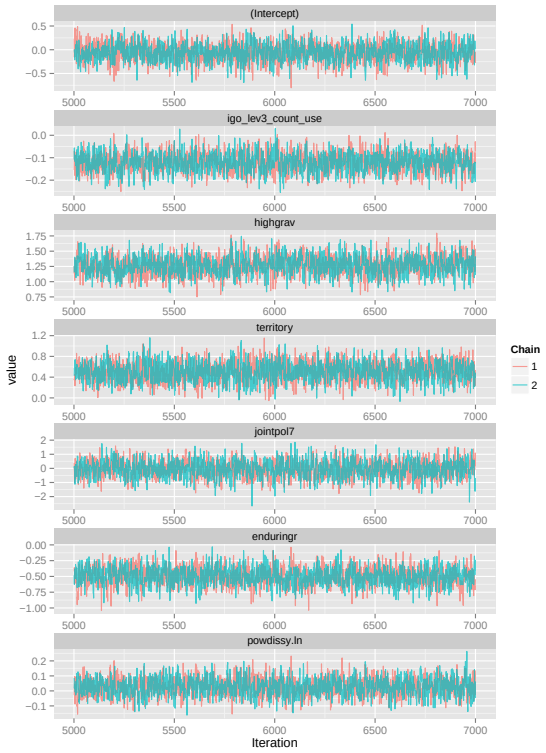

Figure E.10: Trace plots of posterior distributions.

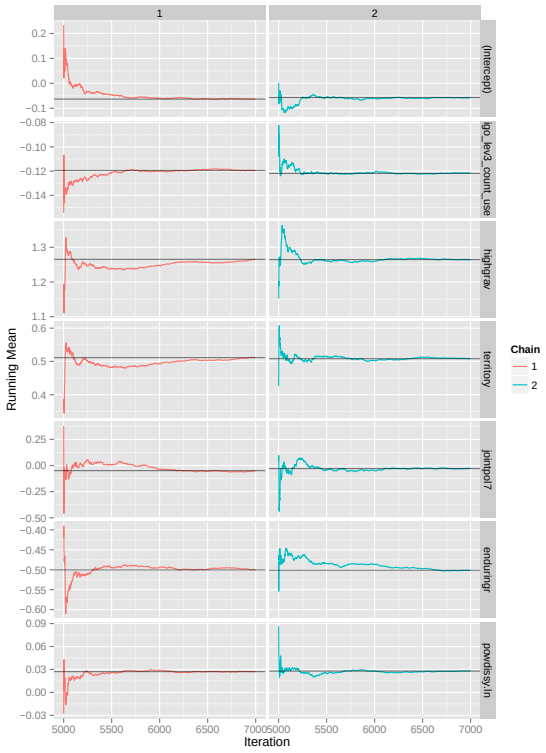

Figure E.11: Plots of running means of posterior distributions.

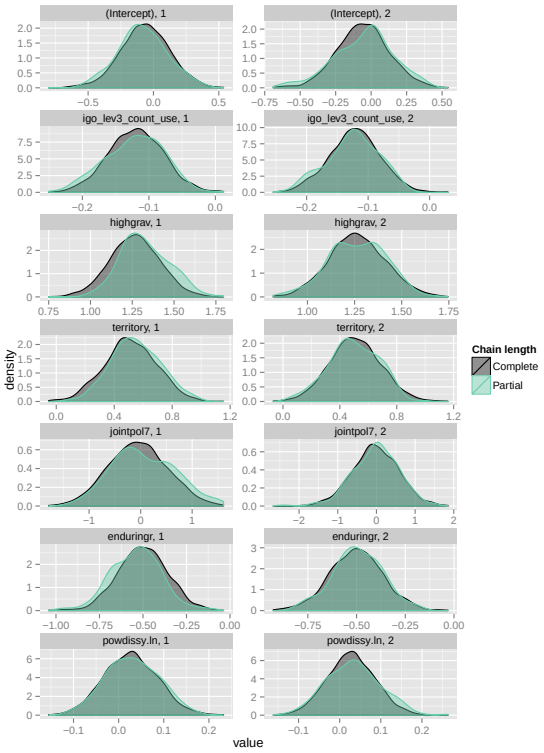

Figure E.12: Partial chains plots of posterior distributions.

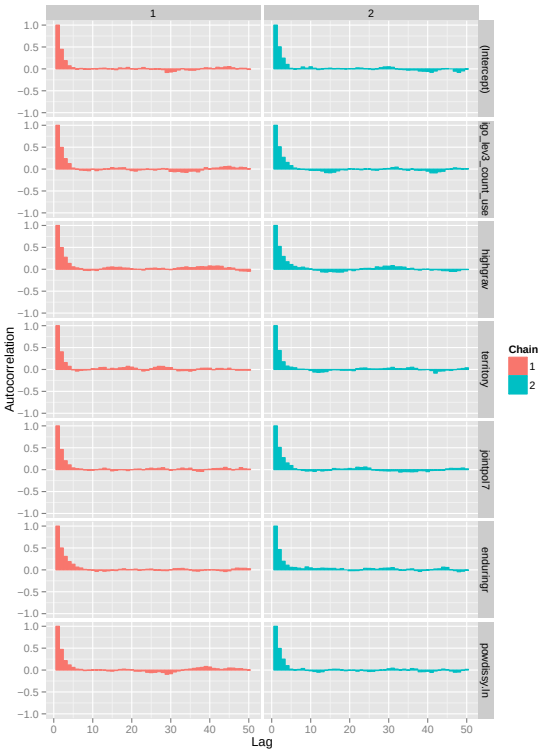

Figure E.13: Autocorrelation plots of posterior distributions.

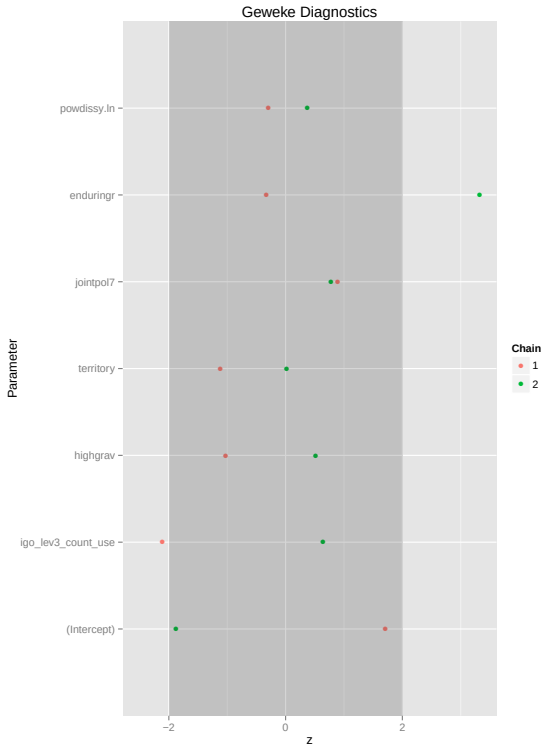

Figure E.14: Geweke diagnostics plots of posterior distributions.

E.3 Model 2, Table 5.4

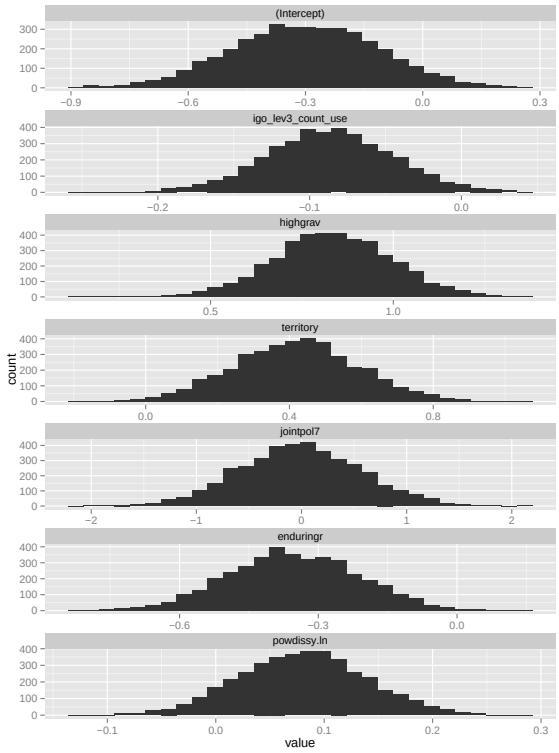

Figure E.15: Histogram of posterior distributions.

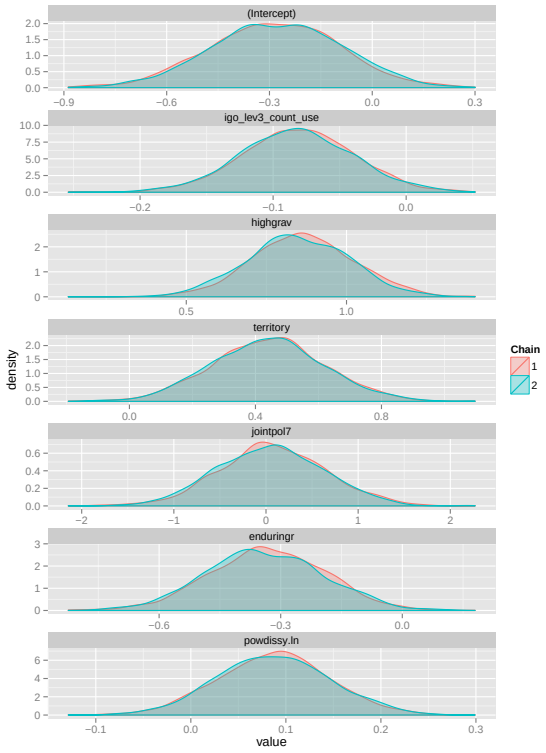

Figure E.16: Density plots of posterior distributions.

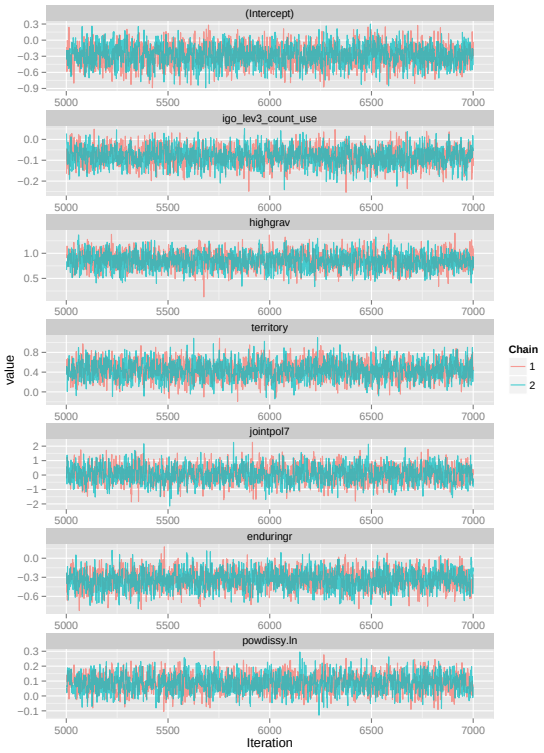

Figure E.17: Trace plots of posterior distributions.

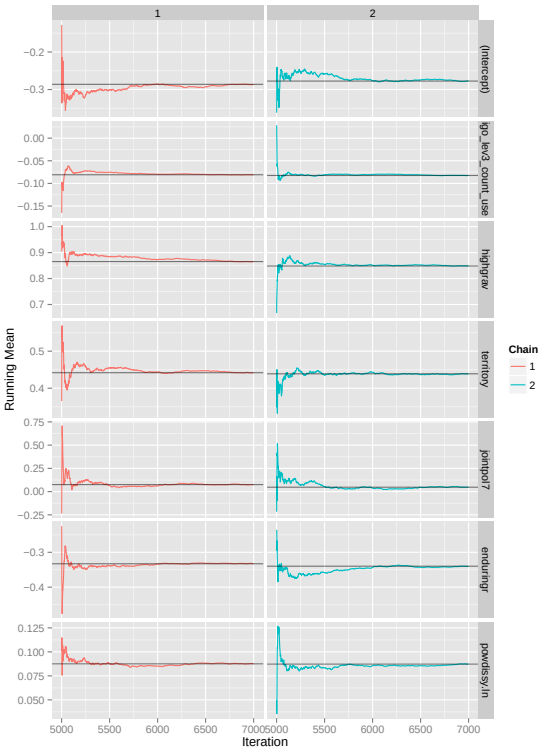

Figure E.18: Plots of running means of posterior distributions.

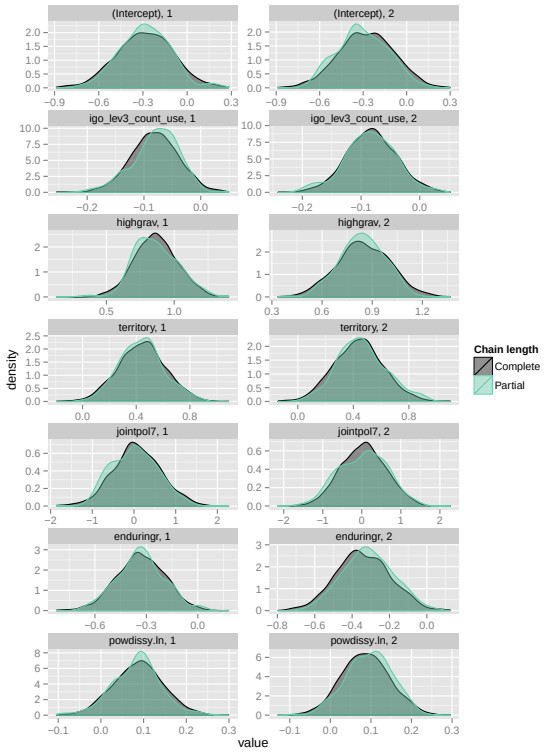

Figure E.19: Partial chains plots of posterior distributions.

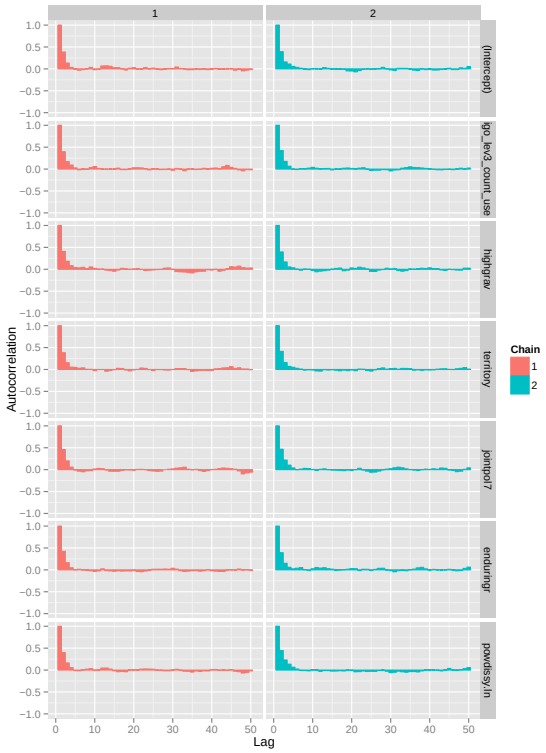

Figure E.20: Autocorrelation plots of posterior distributions.

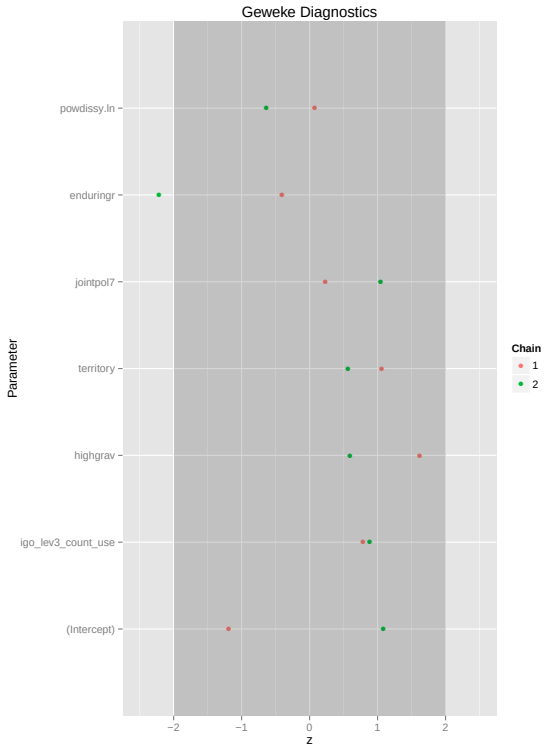

Figure E.21: Geweke diagnostics plots of posterior distributions.

E.4 Model 2, Table 6.1

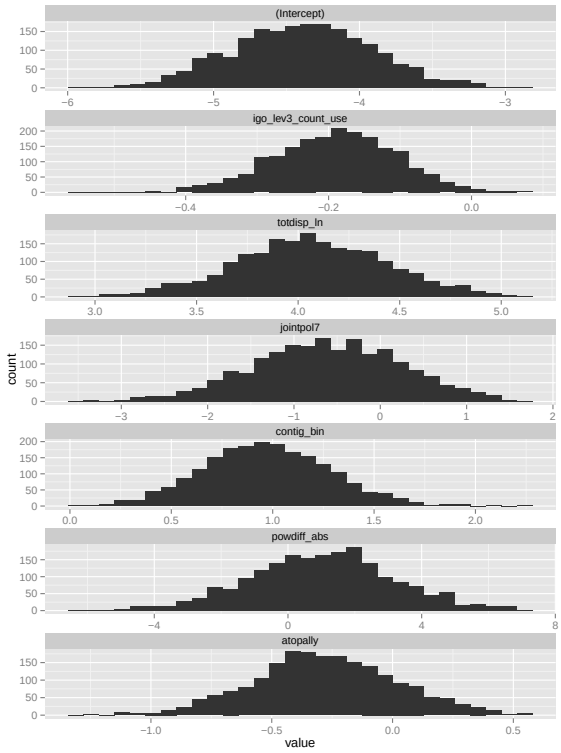

Figure E.22: Histogram of posterior distributions.

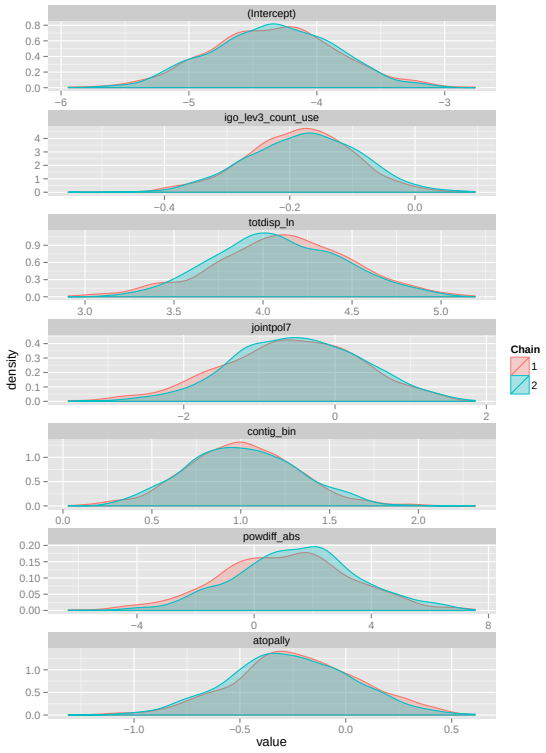

Figure E.23: Density plots of posterior distributions.

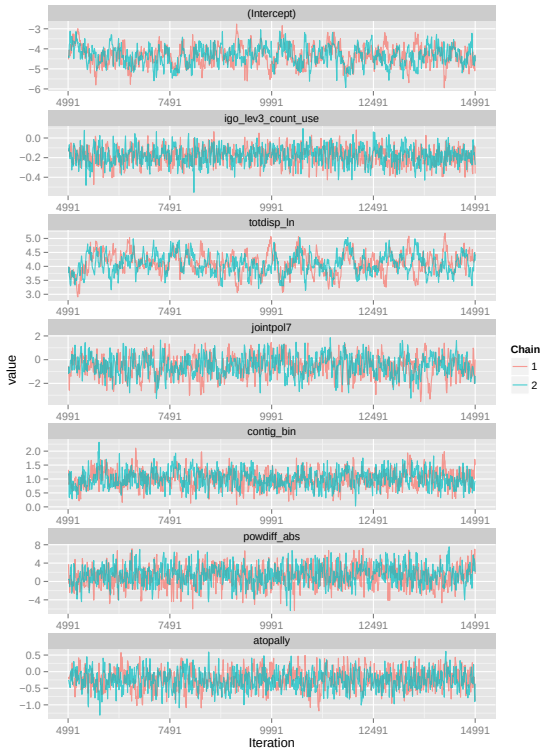

Figure E.24: Trace plots of posterior distributions.

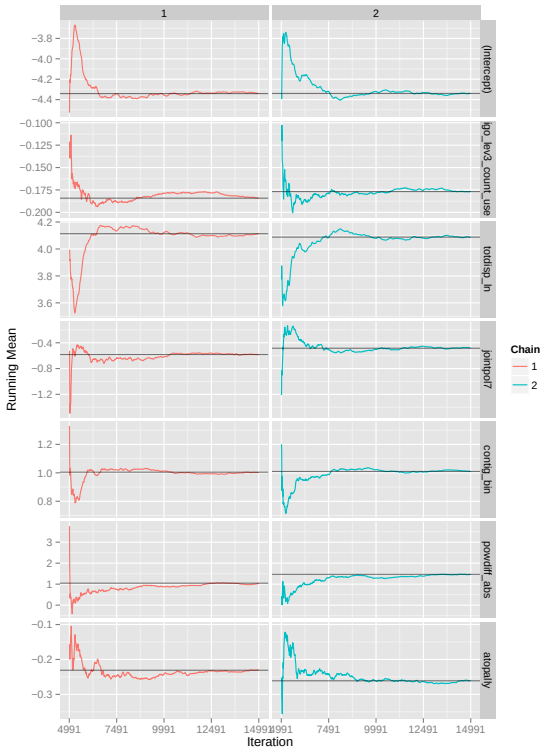

Figure E.25: Plots of running means of posterior distributions.

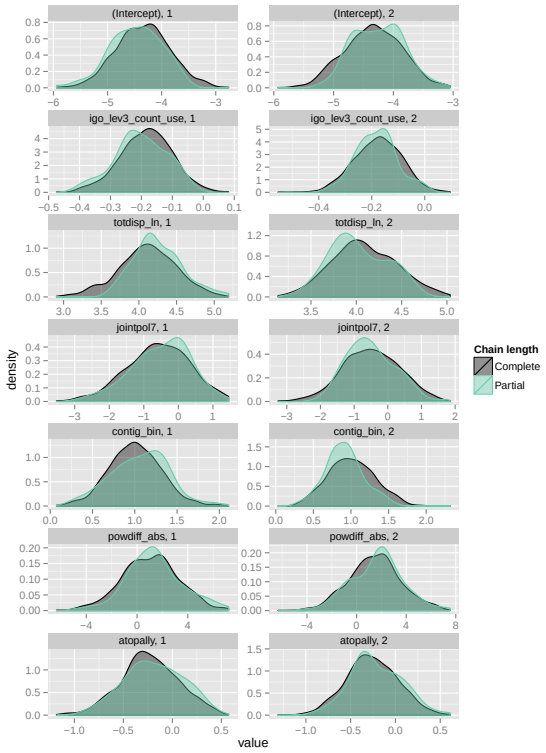

Figure E.26: Partial chains plots of posterior distributions.

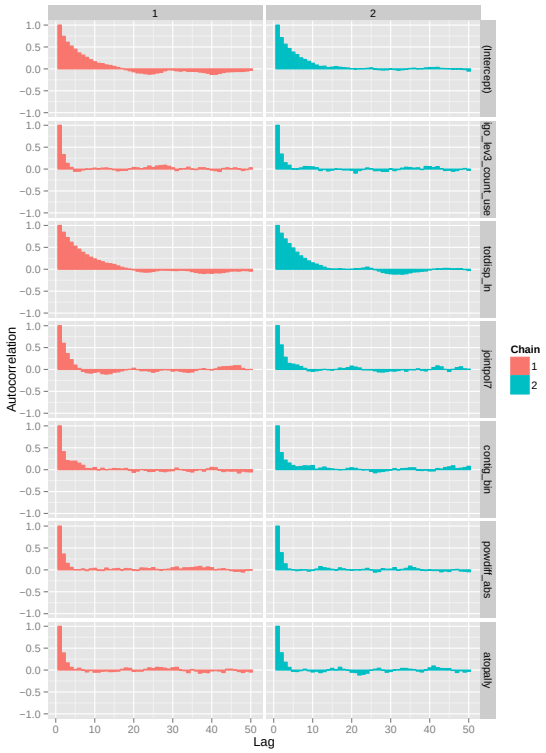

Figure E.27: Autocorrelation plots of posterior distributions.

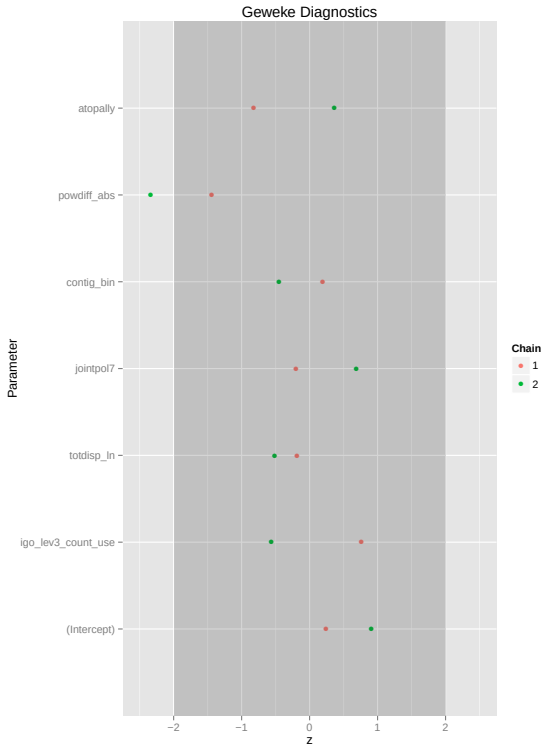

Figure E.28: Geweke diagnostics plots of posterior distributions.