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**United Nations Conventions for the Suppression of  
Transnational Terrorism and International Security  
Cooperation**

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**United Nations Conventions for the Suppression of  
Transnational Terrorism and International Security  
Cooperation**

by

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Dedicated to my grandmother, Jacquelyn Venable Baker.

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# **United Nations Conventions for the Suppression of Transnational Terrorism and International Security Cooperation**

by

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Transnational terrorism transcends international boundaries, making interstate cooperation important for its prevention. However, high sovereignty costs and preference heterogeneity between targets of and havens for terrorism make counterterrorism cooperation difficult to achieve. In this dissertation, I investigate whether and how the United Nations conventions for the suppression of transnational terrorism, which have neither formal enforcement provisions nor delegated authority, are successful in fostering international counterterrorism cooperation.

Using a game-theoretic model, I argue that multilateral agreements operate via an informal, decentralized, enforcement mechanism – foreign aid. Agreements improve the ability of donors of foreign aid to monitor counterterrorism efforts of aid recipients, which makes threats to withdraw aid more credible. I test implications of using data on treaty ratification, foreign aid, the survival of terrorist groups, and transnational attacks. I find empirical support for two key implications of the model.

Ratification: 1) increases receipts of foreign aid, 2) makes aid more effective at reducing transnational attacks, and 3) makes aid a more effective tool for destabilizing terrorist groups.

This dissertation contributes to the study of informal enforcement mechanisms in international institutions and illustrates the importance of international institutions for facilitating cooperation for counterterrorism. In conclusion, I discuss the implications of this project for the literature on international institutions as vehicles of information transmission and the relationship between capacity building and enforcement in international institutions.

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# Chapter 1

## Introduction

“For some, terrorism exists in the mind of the beholder, depending upon one’s political views and national origins. For others, terrorism consists of a criminal act or acts, according to the laws of any civilized society.”

-Robert A. Friedlander<sup>1</sup>

Transnational terrorism poses an acute threat to states and individuals worldwide. Weak states with limited resources provide a haven from which terrorists can launch attacks on foreign states. The inability of some states to control the transnational behavior of violent actors poses a severe threat to international security. Figure 1.1 shows a map of all transnational attacks locations between 1968 and 2008, showing these attacks to truly be a global phenomenon.

Transnational terrorism, and state responses to it, create transnational externalities and thus there is a severe need for international cooperation in order to suppress it. The actions of one state to curtail terrorist groups from attacking foreign targets generates consequences beyond that states borders (Enders and Sandler

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<sup>1</sup>(Friedlander 1986)

2011).<sup>2</sup> Furthermore, unilaterally implementing counterterrorism measures if other states do not do the same may not be effective because terrorist groups can simply move to states which are not implementing the measures (Peinhardt and Sandler 2015).

International cooperation to suppress transnational terrorism is essential yet challenging to achieve, since counterterrorism measures are costly and often unpopular domestically. This is especially true because they are frequently associated with reductions in civil liberties and alleged abuses of human rights (Ackerman 2006, Dragu 2011, Holmes 2007). Furthermore, the costs of transnational attacks are borne primarily by targeted foreign states. Such costs include loss of life, psychological trauma, as well as economic costs (Enders and Sandler 1991, Enders, Sandler and Parise 1992, Drakos and Kutan 2003). This leading many haven states<sup>3</sup> to prioritize other issues over transnational terrorism. The challenges to achieving international cooperation are well illustrated by the failure of over two decades of negotiations to draft a *Comprehensive Convention on International Terrorism* in the United Nations General Assembly (Saul 2015).

Terrorism shares some similarities with war and other forms of organized violence. It is violent and politically motivated. While terrorism, like war, “is a continuation of politics by other means,” (Clausewitz 1989) it is also a criminal act often perpetrated by non-state groups which are not controlled or supported by states. Be-

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<sup>2</sup>Enders gives the following definition for transnational externalities: “an externality arises when the action of one agent imposes consequences—costs or benefits—on another agent, and when these consequences are not accounted for by the transaction or its associated price... When an externality generating activity provides benefits or costs to agents in another country, a transnational externality occurs.” (Enders and Sandler 2011, p. 23)

<sup>3</sup>Haven states refer to states from which international terrorism is produced. Often, these states are “weak” states with limited ability to control non-state actors in their territory (Lai 2007).

cause transnational terrorism strikes a gray area outside of both the laws of war and criminal law achieving international cooperation requires international institutions distinct from those developed for these issues (Morrow 2014).

In response to this lacunae, the international community created a series of United Nations conventions for the suppression of transnational terrorism. Each of the United Nations Conventions for the Suppression of Transnational Terrorism define specific acts explicitly as transnational terrorism and set requirements for measures that ratifying states must take in order to prevent transnational attacks.<sup>4</sup>

However, it may seem doubtful that these conventions actually produce cooperation because they have no formal provisions for enforcement. This lack of formal enforcement is likely due to the concerns over sovereignty costs, preference heterogeneity among participants, and uncertainty in this issue area, which Abbott and Snidal suggest make formal provisions untenable in international institutions (2000). Unfortunately, these same factors: sovereignty concerns, preference heterogeneity, and uncertainty, suggest that without enforcement provisions these agreements would not successfully produce international cooperation (Koremenos 2013*b*). The multilateral nature of the agreements provide further reason for pessimism that they would work without formal enforcement provisions.<sup>5</sup>

These issues raise the central research question of this dissertation, the question of whether international agreements can be successful at preventing transnational

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<sup>4</sup>See Table 1 for a list of the United Nations Conventions for the Suppression of Transnational Terrorism.

<sup>5</sup>For instance, based on data from the Continent of International Law sample of international treaties (Koremenos 2013*a*), Koremenos identifies the United Nations Convention for the Suppression of the Financing of Terrorism as misclassified, without a formal punishment provision, yet predicted to include them, given the characteristics of this issue area with a probability greater than one-half (2013*b*, 149).

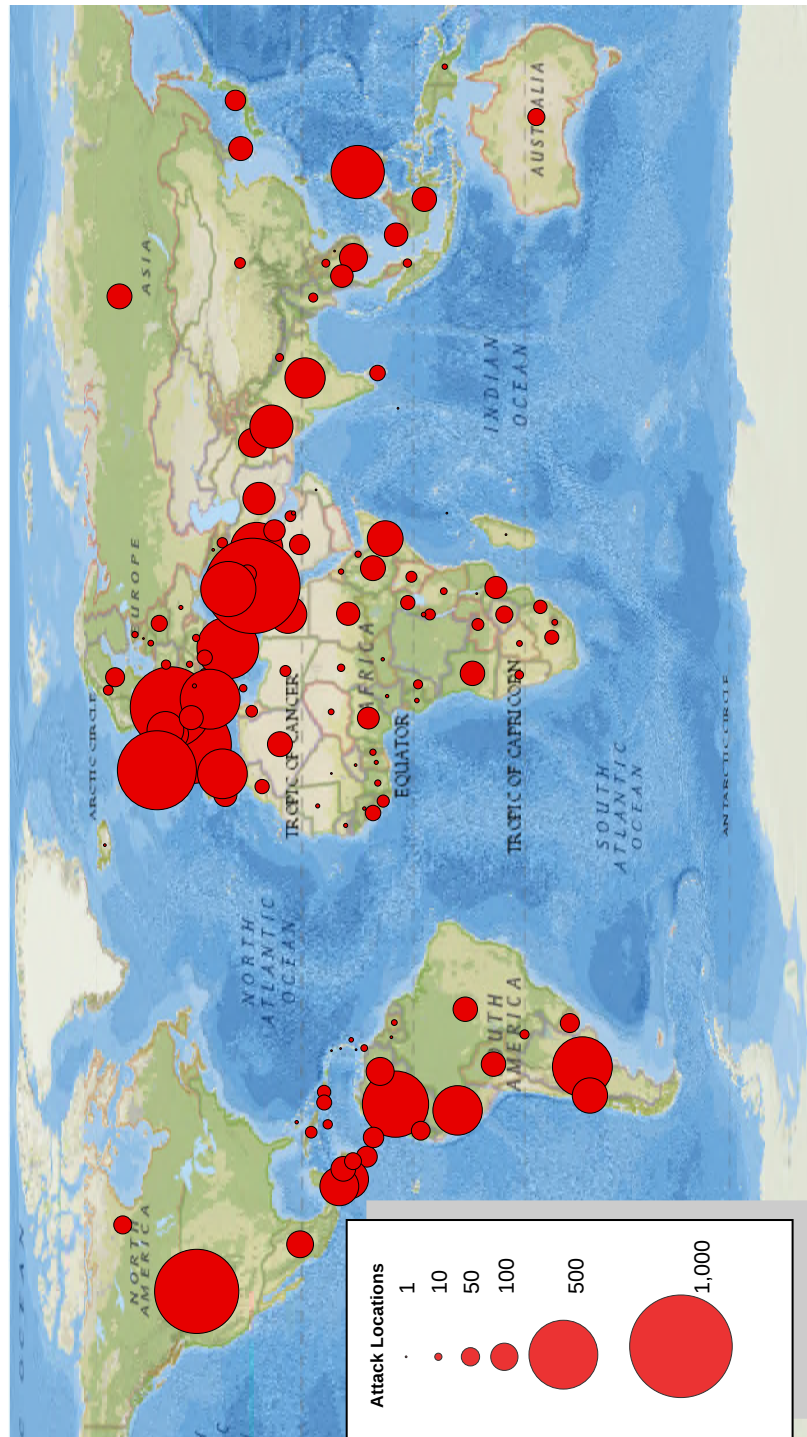


Figure 1.1: Transnational Attack Locations 1968-2013

terrorism in spite of these challenges. And if so, why?

Previous research on United Nations counterterrorism conventions has primarily focused on the determinants of ratification itself rather than the influence of ratification on levels of transnational terrorism or the mechanisms by which counterterrorism conventions may influence international politics (Stiles and Thayne 2006, Whitaker 2010). However, the literature that does consider the impacts of the United Nations counterterrorism conventions on international counterterrorism cooperation shares the pessimistic assessment outlined above. Without a formal enforcement mechanism, the conventions are thought to be toothless and unlikely to change state behavior (Enders and Sandler 2011, p. 88).

A study by Enders et al. of the influence of the United Nations counterterrorism regime on the number of transnational attacks perpetrated (1990) finds no reduction in transnational attacks due to the introduction of the counterterrorism conventions. This study performed a time-series intervention analysis of the worldwide aggregate levels of transnational terrorism. Using a simple indicator for when the first counterterrorism agreement was introduced in 1963, they found no statistically significant impact of the introduction of the international legal regime on the world total number of transnational attacks (Enders, Sandler and Cauley 1990).

However, the study (Enders, Sandler and Cauley 1990) and the subsequent discussions of it (Enders and Sandler 2011, p. 87-88, 189-194) do not take into account individual state ratification or other country specific factors. They also do not take into account the expansion of the international counterterrorism regime through the introduction of conventions after 1963. Indeed, a major impetus for the creation of the conventions was a recognition that the problem of transnational terrorism was

getting worse as globalization increased and terrorists adopted new attack modes.

Therefore, by choosing the break point of 1963 and not taking into account when countries actually ratified, they take into account the wrong counterfactual. Because the measures were introduced by powerful states due to expectations of increases in future attacks<sup>6</sup> and, as shown below, there is variation in when states actually ratified, there is reason to believe that the effects of the conventions would not be felt immediately and would not be felt until there was sufficient by through member state ratification and implementation of the conventions. To understand whether the conventions are effective, country ratification of them must be taken into account.

Moreover, the existing literature on the United Nations counterterrorism conventions overlooks a key feature of counterterrorism cooperation, foreign aid. The pages that follow argue that the key to the effectiveness of the conventions lies in the ability of international agreements to improve the monitoring of recipients of foreign aid for counterterrorism. Aid provides both the incentive to ratify counterterrorism conventions and their informal enforcement mechanism. By providing a theoretic model and empirical analysis which takes this informal mechanism into account, this dissertation provides an answer to the research question of whether and how the United Nations counterterrorism conventions produce counter terrorism cooperation based on their influence on foreign aid relationships.

In this dissertation, I construct and test the implications of an argument that international agreements help mitigate the misappropriation of foreign aid by creat-

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<sup>6</sup>For a similar argument on counterfactuals and the analysis of policies which are implemented due to pessimistic expectations see McCormack and Pascoe (Forthcoming).

ing clear standards for what ratifying states must do to prevent their nationals from attacking foreign states. By providing information to donors about recipients' counterterrorism activities, agreements increase the credibility of threats to withdraw aid if it is misappropriated. This threat constrains the ability of recipients to misappropriate aid and induces them to invest in ways that reduce transnational terrorism. By improving monitoring which makes threats to withdraw aid credible, international agreements, even in this highly sensitive and politically delicate area of counterterrorism, can foster international cooperation.

In Chapter 2, I discuss the role of foreign aid as a counterterrorism tool in more detail. Before doing so, I provide an example of the role of counterterrorism conventions drawing on the case of terrorist kidnapping of foreigners in Colombia and discuss the content and common anatomy of the United Nations counterterrorism.

## **1.1 Example: Terrorist Kidnappings of Foreigners in Colombia and Foreign Aid from the United States**

The case of terrorist kidnappings in Colombia illustrates the role of counterterrorism agreements well. Throughout the 1990's and early 2000's Colombia had more terrorist kidnappings of foreigners than any other country in the world (United Nations Human Rights Council 2013). Kidnapping foreigners was a popular terrorist strategy used to raise funds for the Revolutionary Armed Forces of Colombia or *Fuerzas Armadas Revolucionarias de Colombia* (FARC) and other militant groups. Additionally, witnesses claim that Colombian military personnel engaged in kidnapping disguised as paramilitaries (United Nations Human Rights Council 2008, Amnesty International

2015, p. 16).

However, despite the resources its adversaries gained due to kidnapping foreigners for ransom, Colombia was reluctant to ratify the 1979 *International Convention against the Taking of Hostages*. This was because it would introduce potential liability for kidnappings by its military personnel and due to concerns that commitments to international law would derail the peace process with the FARC. The Government of the United States was particularly concerned that amnesty for kidnappings of foreigners would be a condition of the peace in Colombia, meaning hostages would remain in captivity and terrorist kidnappers would not be brought to justice (United States Drug Enforcement Agency 2009, Washington Office on Latin America 2015).

However, in 2005 Colombia ratified the convention against hostage taking, committing to criminalize, police, prosecute and extradite in cases of kidnapping of foreigners even in the context of a peace agreement (Cortright and Lopez 2007). The United States understood this to be a signal that policy in Colombia had shifted, and it drastically increased foreign aid to assist Colombia in suppressing transnational kidnappings as a consequence. The Colombian government used this aid to take aggressive measures to prevent and prosecute terrorist kidnappings. They also complied with extradition requests by the United States and others to bring kidnappers to justice and continue to prosecute terrorist kidnappings (United States Department of Justice 2015). As a result, terrorist kidnappings decreased substantially, leading U.S. Ambassador William Brownfield to call the practice of giving aid to Colombia “the most successful exercise in nation-building by the United States in this century” (Boot and Bennet 2009).

The success of foreign aid here when it had failed previously in Colombia and elsewhere is puzzling. Why was aid successful after Colombia ratified the convention? The example of terrorist kidnapping of foreigners in Colombia illustrates the mechanism which this dissertation proposes which provides an answer to this question.

The United Nations Hostages Convention created clear standards for what the Colombian government was required to do in response to kidnappings of foreigners by its nationals. Colombia received an increase in aid to accomplish these tasks, but they also opened themselves up to greater transparency about how they used aid. Donors could observe whether the agreed upon standards of the convention were met by the Colombian government, and this observation made threats to withdraw aid more credible. Capacity building through foreign aid was successful because the threat to withdraw foreign aid operated as an informal enforcement mechanism for the United Nations Hostage Taking Convention.

## 1.2 Roadmap

The remainder of this chapter provides context and discussion of the United Nations Conventions for the Suppression of Transnational Terrorism on which this dissertation focuses. Chapter Two discusses the forms that interstate counterterrorism cooperation takes, the challenges it faces, and how international agreements<sup>7</sup> help achieve international cooperation.

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<sup>7</sup>To ease exposition, this dissertation uses the term “counterterrorism agreements” and “counterterrorism conventions” to refer to the United Nations Conventions for the Suppression of Transnational Terrorism. There are also a number of bilateral and regional counterterrorism agreements. Due to the diversity of design of and participants in these regional agreements these promise to be a fruitful area of future research on how international counterterrorism agreements and international institutions more broadly, operate. However, the focus of this dissertation is the United Nations counterterrorism conventions.

Chapter Three presents a formal theory of international counterterrorism agreements using a game theoretic model and illustrates the dynamics of the equilibrium with a series of qualitative cases. The chapter establishes two key implications of the model tested in this dissertation: 1) States which ratify counterterrorism conventions receive more foreign aid, and 2) Foreign aid is more effective at suppressing transnational terrorism in states which ratify.

Chapter Four tests the first implication of the model using a variety of measures of foreign aid. Chapter Five tests the second implication using data on transnational attacks. Chapter Six considers the role of treaty ratification for terrorist group duration. Chapter Seven concludes with a discussion of the role of informal enforcement mechanisms in international agreements and the importance of international regimes for facilitating international cooperation for counterterrorism.

### **1.3 The United Nations Conventions for the Suppression of Transnational Terrorism**

Transnational terrorism can take many forms, and this variety is reflected in conventions designed to curtail it. Table 1.1 lists each of the United Nations counterterrorism agreements, which span a diverse set of issue areas including aircraft safety, the protection of diplomatic agents, the taking of hostages, terrorist bombings, the financing of terrorism, nuclear attacks, and maritime safety.<sup>8</sup> The development of the international counterterrorism regime has been in progress for decades, and treaties have

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<sup>8</sup>While negotiations for a comprehensive treaty for the suppression of transnational terrorism have been unsuccessful, the separation of different types of terrorism into separate treaties may actually be beneficial for establishing “firewalls” similar to the laws of war so that defection in one issue area does not lead to the breakdown of cooperation in other issue areas (Morrow 2014).

tended to be reactionary after terrorist outrages.<sup>9</sup>

| Short Name                     | Full Name                                                                                       | Year Introduced |
|--------------------------------|-------------------------------------------------------------------------------------------------|-----------------|
| Aircraft Convention            | Convention on Offences and Certain Other Acts Committed On Board Aircraft                       | 1963            |
| Unlawful Seizure Convention    | Convention for the Suppression of Unlawful Seizure of Aircraft                                  | 1970            |
| Civil Aviation Convention      | Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation            | 1971            |
| Diplomatic Agents Convention   | Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons | 1973            |
| Hostages Convention            | International Convention against the Taking of Hostages                                         | 1979            |
| Nuclear Materials Convention   | Convention on the Physical Protection of Nuclear Material                                       | 1980            |
| Maritime Convention            | Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation       | 1988            |
| Plastic Explosives Convention  | Convention on the Marking of Plastic Explosives for the Purpose of Detection                    | 1991            |
| Terrorist Bombing Convention   | International Convention for the Suppression of Terrorist Bombings                              | 1997            |
| Terrorist Financing Convention | International Convention for the Suppression of the Financing of Terrorism                      | 1999            |
| Nuclear Terrorism Convention   | International Convention for the Suppression of Acts of Nuclear Terrorism                       | 2005            |

Table 1.1: United Nations Conventions for the Suppression of Transnational Terrorism

As the quote by R. A. Friedlander at the opening of this chapter suggests, one of the major challenges for international counterterrorism cooperation is the lack of a

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<sup>9</sup>For more on the importance of focusing events for influencing counterterrorism policy see (Crenshaw 2001).

common definition for what constitutes transnational terrorism. For example, in the 1970's the United Nations formed an *ad hoc* committee on international terrorism, however this committee was mired in definitional debates and thus was therefore not able to accomplish very much (Perera 2004, p.568).

After this failure, the international community instead decided to introduce conventions on a piecemeal basis, defining terrorism *in a particular issue area* rather than generally. Below, I briefly discuss each of the sectoral areas that the conventions address before turning to the common anatomy of their design in the next section. For each of the conventions, I provide a figure of the number of states ratifying the agreement per year.

As these figures show, there is significant heterogeneity in when states ratify the agreements, with many states ratifying long after the agreements were originally introduced. Therefore, to understand the influence of these agreements on levels of transnational terrorism, simply using the date the agreements were introduced is inappropriate. This motivates the analysis in Chapter Four, Five, and Six which use data on state ratification to test implications of the model presented in Chapter Three for aid allocation, transnational attacks, and the survival of terrorist groups, respectively. The conventions fall into seven primary issue areas: 1) air safety, 2) the protection of diplomatic agents, 3) terrorist hostage taking, 4) terrorist bombings, 5) terrorist financing, 6) nuclear terrorism, and 7) maritime terrorism. I discuss the contents that make up each below.

### 1.3.1 Aircraft Safety Conventions

The 1963 *Convention on Offences and Certain other Acts Committed On Board Aircraft* (Aircraft Convention), the 1970 *Convention for the Suppression of Unlawful Seizure of Aircraft* (Unlawful Seizure Convention), and the 1971 *Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation* (Civil Aviation Convention) were the first United Nations conventions introduced by the international community.

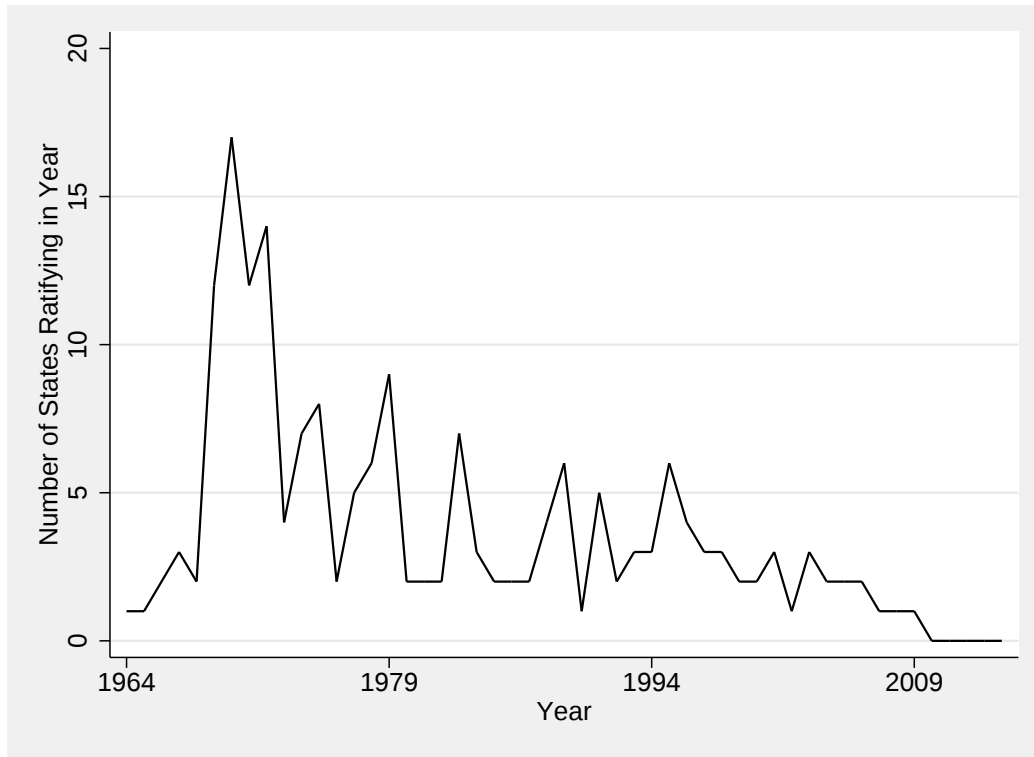


Figure 1.2: Ratification of 1963 Aircraft Convention

The 1963 convention applied to acts affecting in-flight safety and enhanced the legal rights of aircraft commanders to impose measures, including restraint, in order to protect the safety of aircraft. It also required that ratifying states take offenders

into custody. This provided a legal framework to combat the hijacking of aircraft by attempting to limit the number of haven states in which hijackers could land without punishment or interdiction. Figure 1.2 shows the number of states ratifying this convention since it was introduced in 1963. While there was a spike shortly after the introduction of the agreement with seventeen ratifications 1970, there is also significant temporal variation in when states ratified, with many ratifying in the 1990's and 2000's.

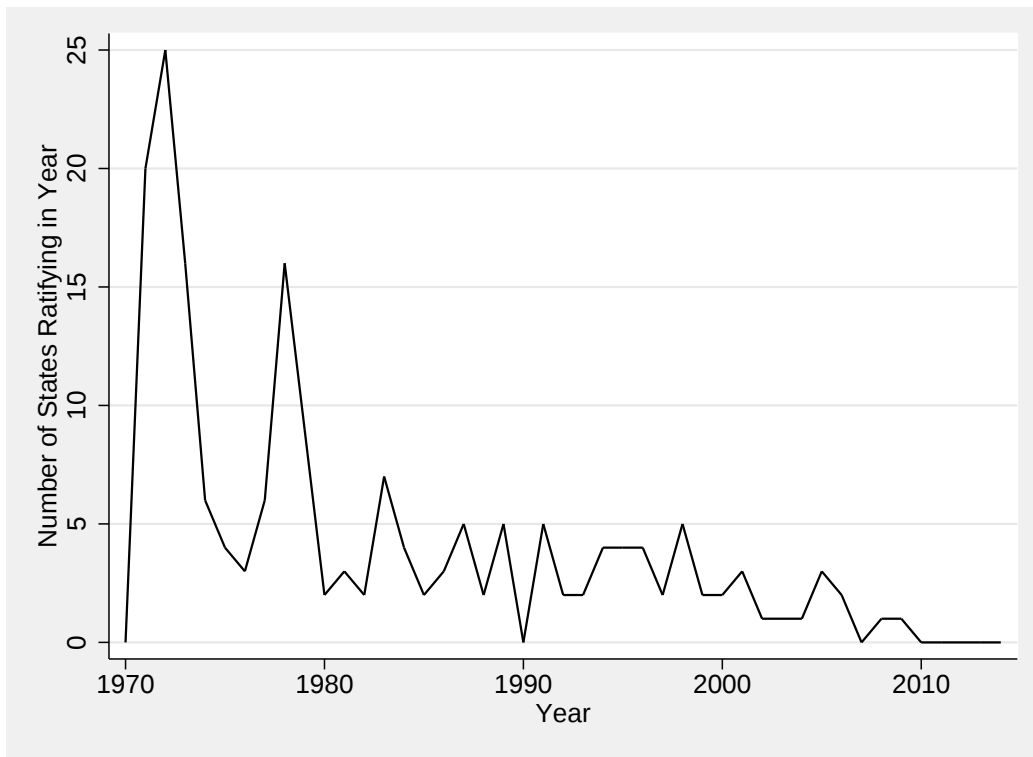


Figure 1.3: Ratification of 1970 Unlawful Seizure Convention

The 1970 Unlawful Seizure Convention built on this by requiring ratifying states to criminalize and establish severe penalties for the seizure of aircraft. It also requires that ratifying states either extradite or prosecute offenders as well as provide assistance to other nations in connection with criminal proceedings. Figure 1.3

shows the ratification of this convention since it was introduced. For this convention there was a greater spike in ratification than there was after the 1963 convention, however many countries ratified will after the introduction, as shown by the spike in ratifications in the late 1970's.

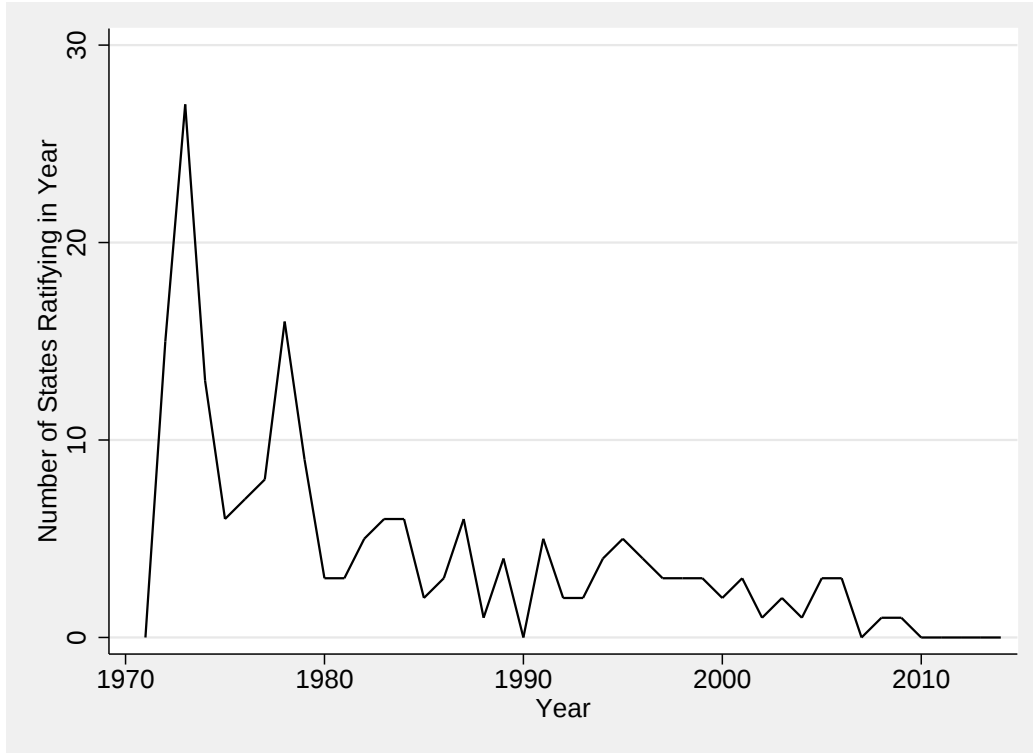


Figure 1.4: Ratification of 1971 Civil Aviation Convention

The third convention on suppressing aerial terrorism, the 1971 Civil Aviation Convention, broadened the scope from hijacking to *any* action on board an aircraft that threatens the safety of air travel. Similarly, the convention required states criminalize and establish severe penalties for such acts and to prosecute or extradite those suspected of committing them. These measures are important because the more severe penalties or the more likely hijackers are to be apprehended, the longer the time

between hijackings (Landes 1978). As Figure 1.4 shows, the pattern of ratification of this convention closely followed the 1970 Unlawful Seizure Convention.

These conventions are also important more generally because of the interdependence of security measures taken at each nations airports (Arce and Sandler 2005, Sandler and Lapan 1988, Sandler and Siqueira 2006). For instance, as Enders and Sandler point out, “actions by a country to secure its own airports may merely transfer the attack to a less-secure foreign airport, where the diverters own citizens are murdered” (Enders and Sandler 2011, p. 23-24). International security cooperation is necessary for counterterrorism policies to work due to such strategic interdependence.

### 1.3.2 Diplomatic Agents Convention

In response to transnational terrorist attacks on political figures in the 1960’s and 1970’s, the international community introduced the 1973 *Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons* (Diplomatic Agents Convention), which was notable in that it created a special class of “Internationally Protected Persons.” These include Heads of State, Foreign Ministers, and representatives of states abroad. It also includes attacks on their official premises, such as embassies. The convention establishes certain duties of ratifying states to criminalize, establish severe penalties, and prosecute attacks against such persons.

This convention is far-reaching and was controversial. Prosecuting attacks on foreign rivals domestically is often unpopular with a nations constituents, so states were reluctant to agree to do so, as Figure 1.5 illustrates. Ratification spiked in the early 2000’s due to pressure from the United States.

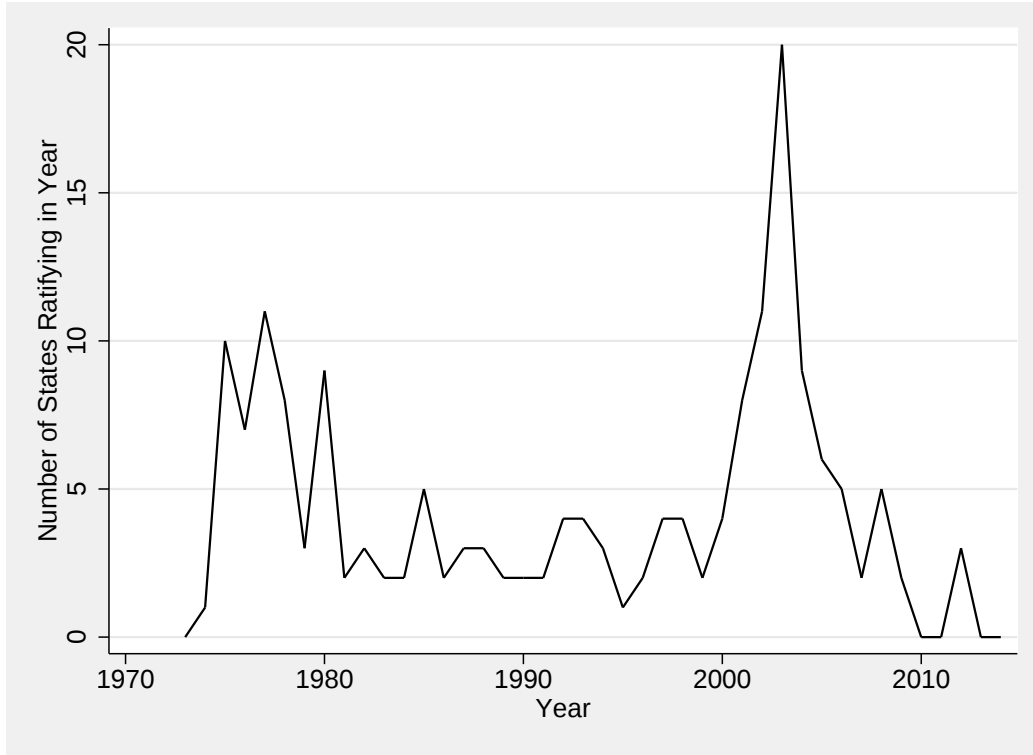


Figure 1.5: Ratification of 1973 Diplomatic Agents Convention

### 1.3.3 Hostage Taking Convention

While the Diplomatic Agents Convention included kidnappings of diplomatic agents by terrorist groups, the 1979 *International Convention against the Taking of Hostages* (Hostages Convention) went a step further. It requires ratifying governments take steps to prosecute and prevent hostage taking as an act of international terrorism against *any* foreign victims, not just a protected class of diplomats. This extension to private parties is important because terrorists often target unprotected non-government targets in order to cultivate a feeling of fear among the general population (Brandt and Sandler 2010).

Cooperation in this issue area is important due to the fact that concessions by

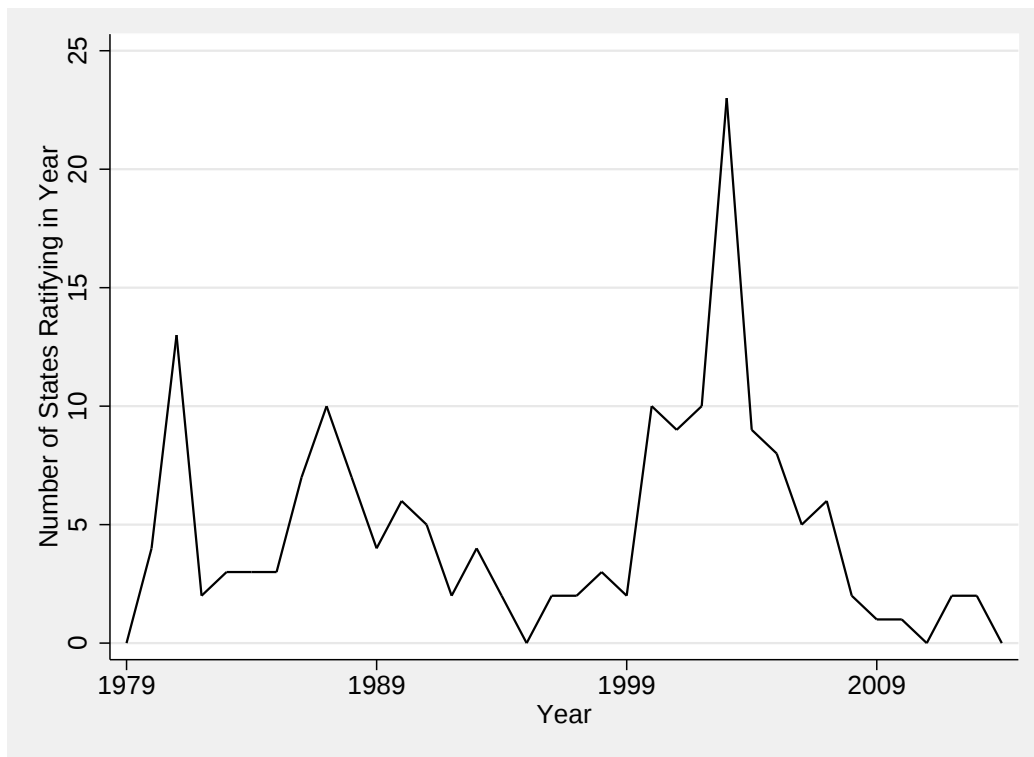


Figure 1.6: Ratification of 1979 Hostages Convention

a government to hostage taking terrorist organizations influence terrorist expectations about the likelihood of future concessions, which makes hostage taking a more attractive attack mode (Sandler, Tschirhart and Cauley 1983, Brandt and Sandler 2009). As Figure 1.6 shows, states were similarly hesitant to ratify the Hostages Convention. Because drawing a hard line on hostage-taking is often unpopular because it limits the ability of states to negotiate with terrorist groups who employ hostage taking as a strategy, as seen in the discussion of the Colombian case above, many states were slow to ratify the convention.

### 1.3.4 Terrorist Bombing Conventions

While the Diplomatic Agents Convention and the Civil Aviation Convention have provisions regarding bombings of diplomatic personnel and aircraft, respectively, it was not until the 1990's with the 1991 *Convention on the Marking of Plastic Explosives for the Purposes of Detection* (Plastic Explosives Convention) and the 1997 *International Convention for the Suppression of Terrorist Bombings* (Terrorist Bombing Convention) that there was a United Nations convention aimed at suppressing terrorist bombings *in general*. This is notable because bombings are used in over half of all transnational attacks (Sandler and Enders 2004). The first of the conventions

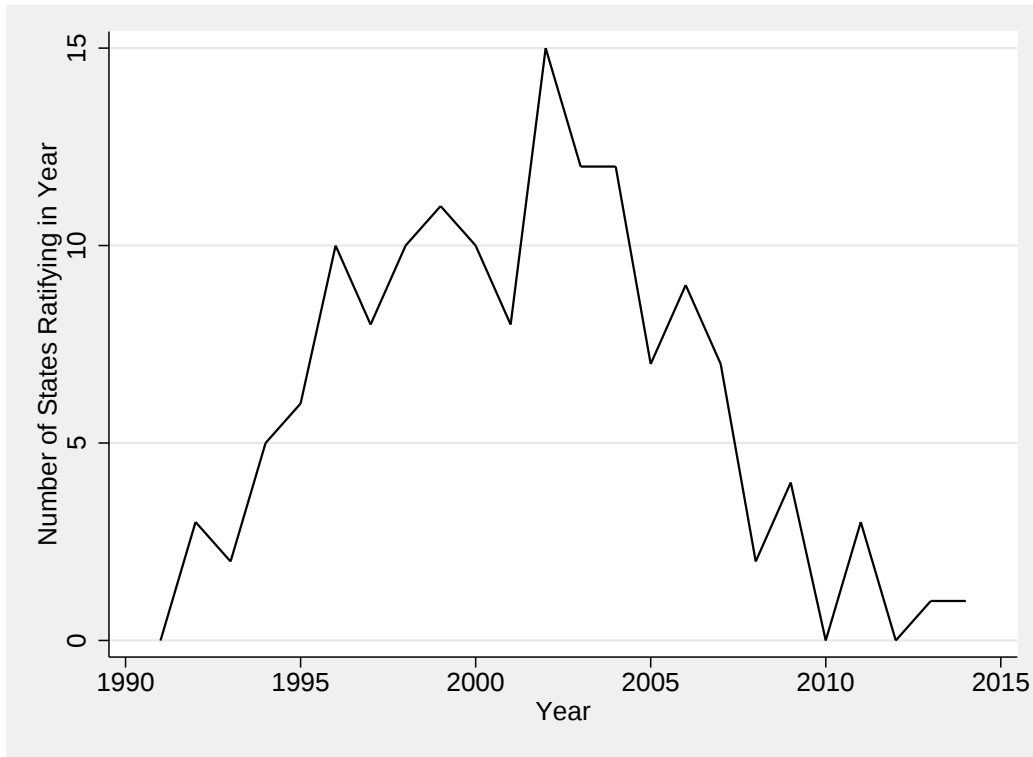


Figure 1.7: Ratification of 1991 Plastic Explosives Convention

specifically aimed at bombing required the marking of plastic explosives so that they

could be detected chemically. *The 1991 Convention on the Marking of Plastic Explosives* requires state parties to prohibit and prevent the manufacture and trafficking of unmarked plastic explosives. Because the agreement requires significant technological investment and regulation, ratification of this convention did not pick up significantly until a decade after it was introduced. Figure 1.7 plots ratification of the Plastic Explosives Convention by year.

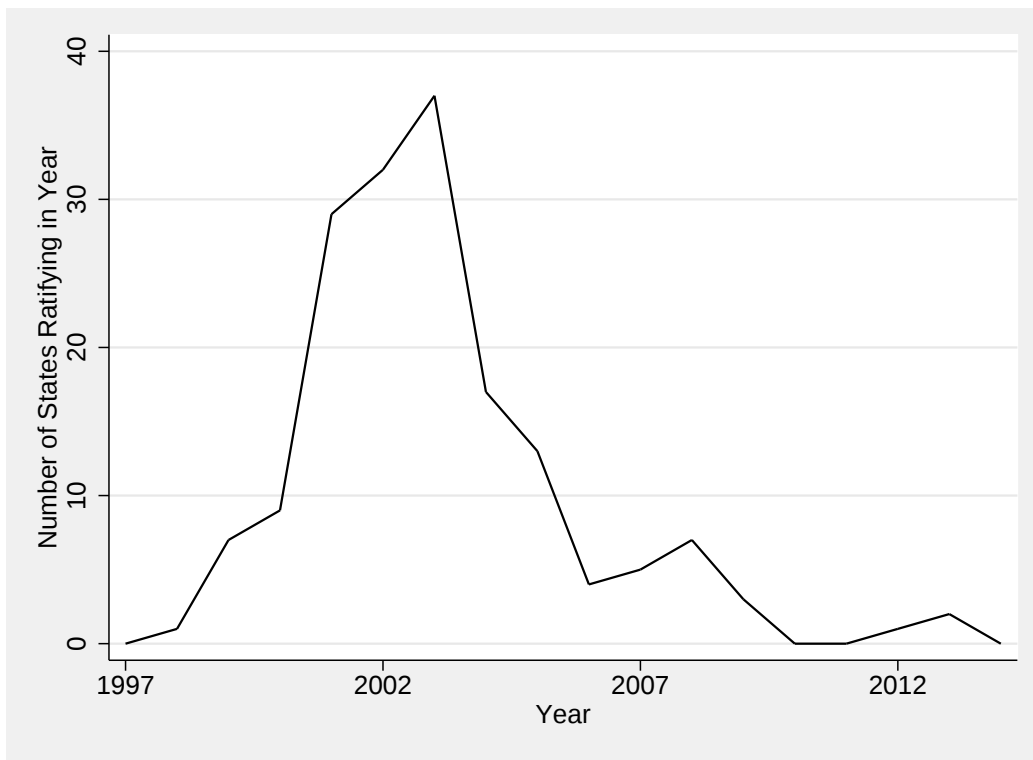


Figure 1.8: Ratification of 1997 Terrorist Bombing Convention

Introduced later in the 1990's, the *1997 International Convention for the Suppression of Terrorist Bombings* requires that state parties punish terrorist bombings with an international element under their domestic law, to assist other states with criminal prosecutions, and to extradite those suspected of terrorist bombings. As shown by Figure 1.8, ratification of this agreement is mostly concentrated in the late

1990's and early 2000's.

### 1.3.5 Terrorist Financing Convention

International cooperation for the freezing of assets has been an important and difficult area in the fight against transnational terrorism (Levitt 2003, Sandler 2005). *The 1999 International Convention for the Suppression of the Financing of Terrorism* requires state parties to take measures for the freezing or seizure of funds used to promote terrorism. The logic of this convention is that reducing terrorists abilities to finance operations should result in a general reduction in terror events. Most states ratified the financing convention shortly after it was introduced, as shown by Figure 1.9.

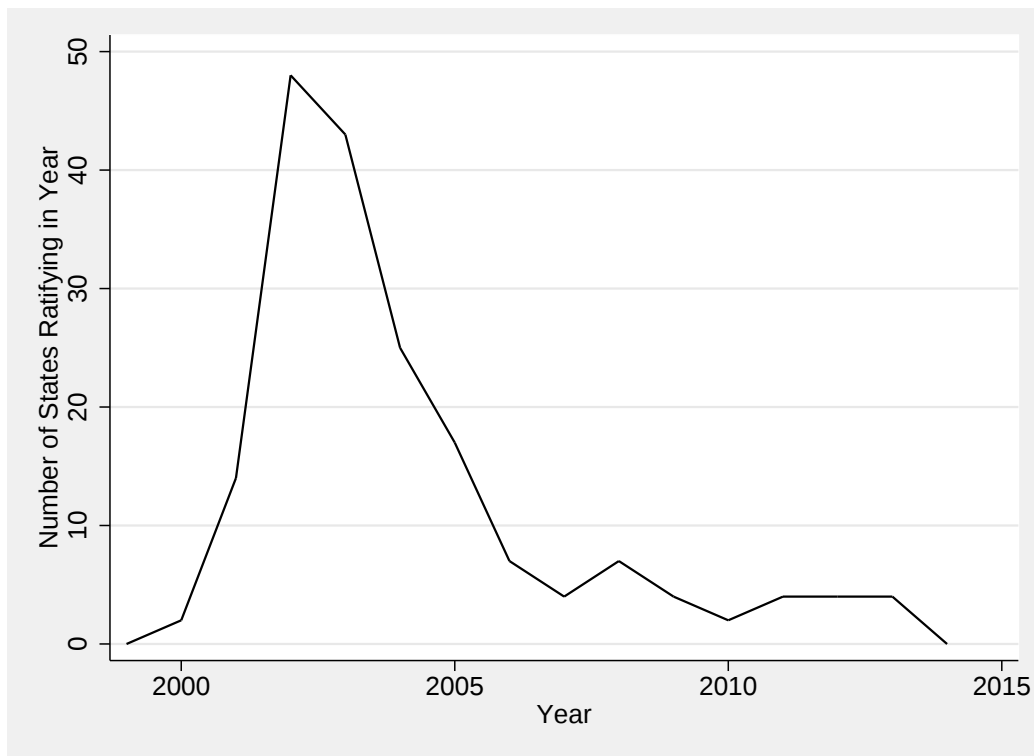


Figure 1.9: Ratification of 1999 Financing Convention

### 1.3.6 Nuclear and Maritime Conventions

There are three conventions who regard terrorist activity that very rarely occurs, and as such these conventions will not be considered in depth in this dissertation. These conventions regard nuclear and maritime terrorism.

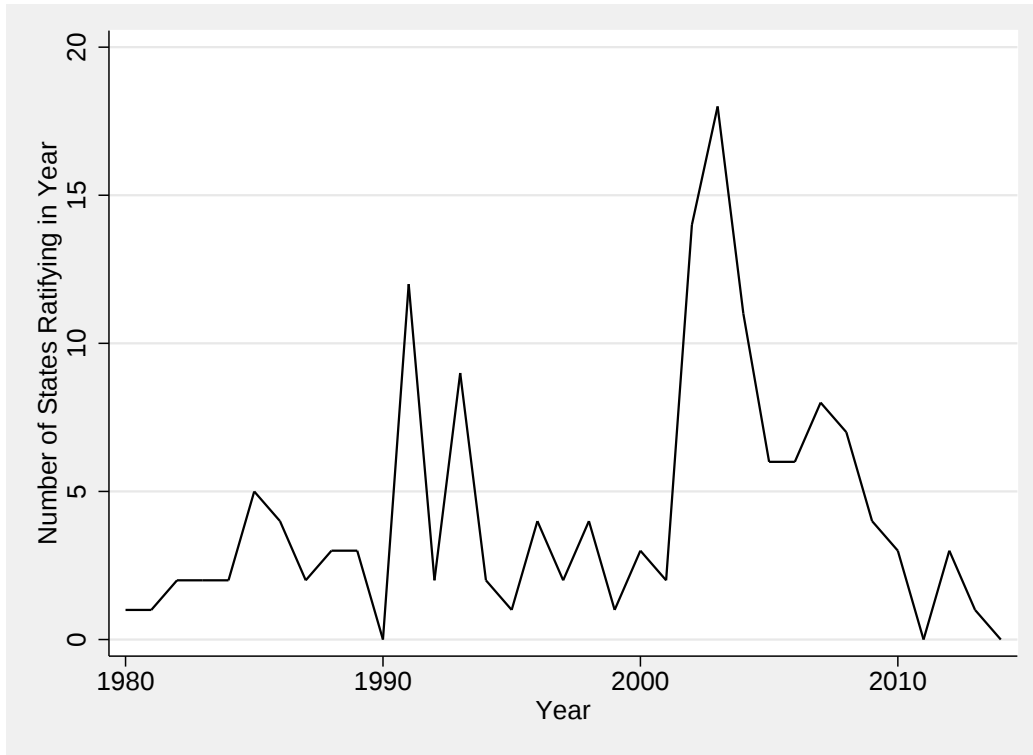


Figure 1.10: Ratification of 1980 Nuclear Materials Convention

The first of these conventions, the 1980 *Convention on the Physical Protection of Nuclear Material* (Nuclear Materials Convention) requires that states criminalize the possession, use, and theft of nuclear material outside of strict requirements. It also criminalize the making of terrorist threats involving nuclear material. Currently 144 states have ratified the convention. However, only 47 states have ratified a 2005 amendment to the convention which requires states protect nuclear material that is

used for peaceful purposes. Figure 1.10 shows the ratification of the 1980 convention for each year. As the figure illustrates, many states were slow to ratify the agreement until the 2000's.

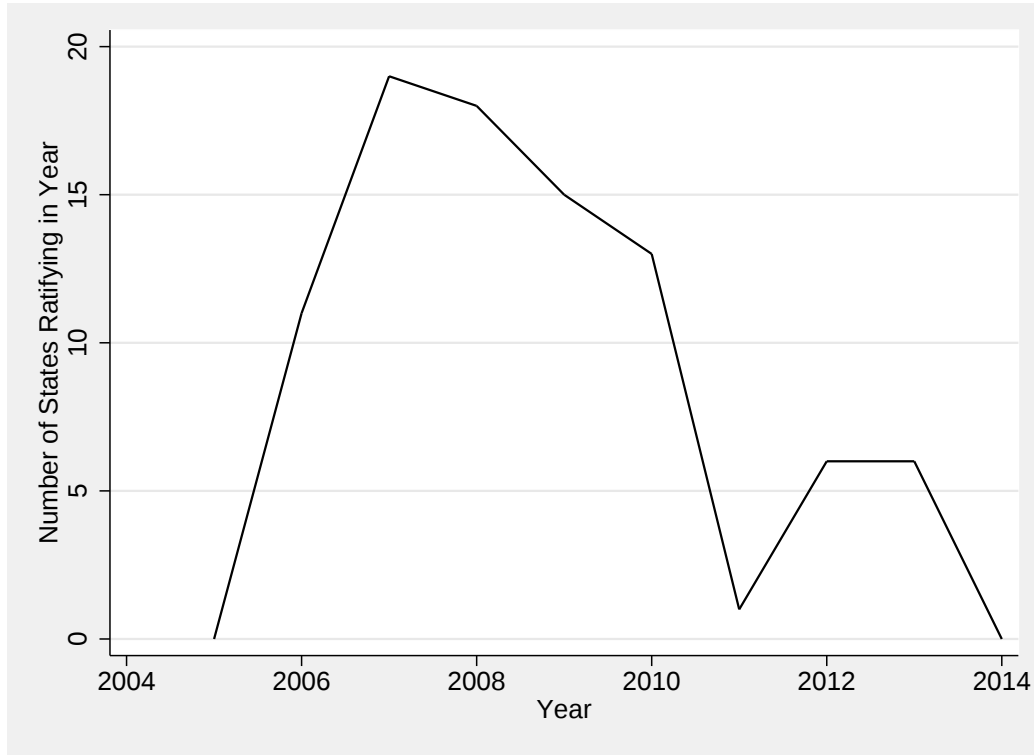


Figure 1.11: Ratification of 2005 Nuclear Terrorism Convention

The second convention on nuclear terrorism was the 2005 *International Convention for the Suppression of Acts of Nuclear Terrorism* (Nuclear Terrorism Convention). To date, only 77 states have ratified this controversial convention. Figure 1.11 shows the ratification of the convention by year. The convention, like the amendment to the earlier Nuclear Materials Convention, covers peaceful targets, but broadens the jurisdiction to also include a wide range of other nuclear targets. Notably, this convention has explicit provisions for information sharing, unlike many of the other conventions.

In the maritime issue area, the 1988 *Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation* (Maritime Convention) requires ratifying states criminalize and prosecute terrorists attacks on maritime targets. A 2005 amendment to this convention which to date has only 20 state parties criminalizes the use of a ship as a means of terrorist attack or the transport of persons or materials engaging in terrorist activity.

Having summarized each of the counterterrorism conventions, I now turn to an analysis of their design. As I discuss in the next section, while the issue areas the conventions pertain to is diverse, they share a common anatomy. These common elements in their design inform the theoretic model presented in Chapter 3.

## **1.4 Anatomy of the United Nations Counterterrorism Conventions**

Each of the treaties define particular actions as transnational terrorism and establish written down and publicly agreed to standards for what constitutes transnational terrorism and what measures states are expected to accomplish for counterterrorism. As I discuss below, these include requirements for ratifying states to criminalize, investigate, share information regarding, and to take steps to prevent and prosecute transnational attacks.

Each of these measures is directly observable by outsiders. Because they are formally written down and publicly agreed to, these agreements create shared strategic expectations about what states must do regarding counterterrorism measures. If these goals are not achieved, outside observers may update their beliefs about counterterrorism investments by that state because the benchmarks provide information

about how much effort was devoted to counterterrorism measures.

For instance, the passage of a domestic law, whether terrorists are prosecuted, and whether states regulate banks to prevent terrorist financing, are each directly observable. Because they cannot be attained without significant investments in counterterrorism, they are not cheap talk. Because ratification exposes states to increased transparency, Boulden and Weiss argue that "One preliminary indication of government's readiness to clamp down on terrorists is ratification of or accession to the multilateral conventions criminalizing violent action or outlining preventive measures." 2004, p. 192. Below, I discuss and provide details on each of these common elements of the conventions.

### **1.4.1 Defining Transnational Terrorism**

Each treaty defines what constitutes a terrorist offense in a particular issue area. For example the Terrorist Bombing Convention defines terrorism as:

"Any person commits an offense within the meaning of this Convention if that person unlawfully or intentionally delivers ... an explosive ... against a place of public use..."

(Terrorist Bombing Convention, art. 2)

Each of the conventions follows this template in its own discrete issue area. For example see: Maritime Convention, art. 3 (1988); Plastic Explosives Convention, art. 1 (1991); Terrorist Bombing Convention art. 2 (1997); and Nuclear Terrorism Convention art. 2 (2005). These definitions provide a common standard for what should be considered a terrorist attack, helping to coordinate interstate cooperation

in this issue area. The definitions provide a concrete common basis from which negotiations regarding collective counterterrorism responsibilities can be built upon.

#### **1.4.2 Domestic Criminalization of Transnational Terrorism**

Each treaty requires signatories to incorporate legislation into the corpus of their domestic law, criminalizing the conduct or support of terrorist offenses and making them punishable by severe penalties.

"Each State Party shall adopt such measures as may be necessary:

(a) To establish as criminal offenses under its domestic law the offenses set forth in article 2;

(b) To make those offenses punishable by appropriate penalties which take into account the grave nature of the offenses."

(Terrorist Financing Convention, art. 4)

For additional examples see: Aircraft Convention, art. 3 (1963); Unlawful Seizure Convention art. 2 & 5 (1970); Civil Aviation Convention, art. 2 & 5 (1971); Diplomatic Agents Convention, art. 3 (1973); Hostages Convention, art. 2 (1979); Nuclear Materials Convention, art. 4 & 7 (1980); Maritime Convention, art. 5, art. 7 & art. (1988); Plastics Explosives Convention art. (1991); Terrorist Bombing Convention art. 4 & art. 5 (1997); Terrorist Financing Convention art. 4, art. 5 & art. 18 (1999); Nuclear Terrorism Convention art. 5 & art. 6 (2005).

For instance, On March 26, 2002, India passed a new counterterrorism law, The Prevention of Terrorism Act which established severe penalties for the material support of terrorism or transnational attacks and enhanced policing measures (Task Force on International Terrorism 2003, p. 43-44).

### 1.4.3 Measures to Prevent Transnational Attacks

Additionally, many agreements require measures for the prevention of terrorist activity.

"For purposes of preventing offenses ... States ... shall make every effort to adopt appropriate measures to ensure the protection of radioactive material..."

(Nuclear Terrorism Convention, art. 8)

For further examples see: Civil Aviation Convention art. 10 (1971); Diplomatic Agents Convention, art. 4 & art. 5 (1973); Hostages Convention art. 4 (1979); Maritime Convention, art. 12 (1988); Nuclear Materials Convention art. 3, art. 4 & art. 5 (1980); Maritime Convention, art. 12 & art. 13 (1988); Plastics Explosive Convention art. 2, art. 3 & art. 4 (1991); Terrorist Bombing Convention art. 15 (1997); Terrorist Financing Convention, art. 18 (1999); Nuclear Terrorism Convention art. 7 & art. 8 (2005).

The most prominent examples of such preventive measures are The Plastic Explosives Convention and The Terrorist Financing Convention. The Plastic Explosives Conventions requires states include chemicals which make plastic explosives detectable in order to prevent terrorist bombings. The financing convention requires regulation of banking and monetary transfers in order to prevent the financing of terrorist organizations.

#### 1.4.4 Investigation of Transnational Terrorism

In each of the agreements, states agree to investigate terrorist incidents and to take suspected terrorists into custody.

"any contracting state ... shall take him (the alleged terrorist) into custody..."

(Unlawful Seizure Convention, art. 6)

For further examples see the: Aircraft Convention, art. 13 (1963); Unlawful Seizure Convention, art. 6 (1970); Civil Aviation Convention, art. 6 (1971); Hostages Convention, art. 6 (1979); Nuclear Materials Convention art. 9 (1980); Maritime Convention, art. 7 (1988); Terrorist Bombing Convention art. 7 (1997); Terrorist Financing Convention, art. 9 (1999); Nuclear Terrorism Convention art. 10 (2005). These provisions establish policing responsibilities for ratifying states.

#### 1.4.5 Prosecute or Extradite Suspected Terrorists

Following the extradite or prosecute principle or *Aut Dedere Aut Judicare* so that terrorists would be denied a safe haven,<sup>10</sup> Each agreement includes provisions requiring signatories to either prosecute or extradite terrorist offenders residing in their territory. For example see: Unlawful Seizure Convention, art. 7 & 8 (1970); Civil Aviation Convention, art. 7 (1971); Diplomatic Agents Convention, art. 7 (1973); Nuclear Materials Convention, art. 10 (1980); Maritime Convention art. 10 (1988); Terrorist Bombing Convention art. 8 (1997); Terrorist Financing Convention, art. 10 (1999); Nuclear Terrorism Convention art. 11 (2005).

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<sup>10</sup>For more on this legal principle see (Perera 1997, p. 174) and also (Bassiouni and Wise 1995).

“The State ...shall, if it does not extradite him (the offender), submit, without exception whatsoever and without undue delay, the case to its competent authorities for the purpose of prosecution...”

(Diplomatic Agents Convention, art. 7)

The language of the conventions explicitly states that there are not to be exceptions on the basis of ethnicity or amnesty given for other considerations, such as peace agreements in the context of civil war.

In support of bringing perpetrators of terrorist acts to justice, the agreements also make provisions for transferring prisoners or evidence between states for the purposes of extradition, investigation, or prosecution are also made in these agreements. For examples see: Diplomatic Agents Convention, art. 8 (1973); Nuclear Materials Convention, art. 13 (1980); Terrorist Bombing Convention art. 9 (1997); Nuclear Terrorism Convention art. 13 (2005). Given the transnational nature of these crimes such provisions are key to developing effective judicial responses to terrorist activity.

#### **1.4.6 Reporting**

In addition, many of these agreements also have requirements ratifying states to self-report the measures they have taken to reduce transnational terrorism by their nationals. For instance the Plastic Explosives Convention states that:

"State Parties shall keep the Council (the Council of International Civil Aviation Organization) informed of measures they have taken to implement the provisions of this Convention. The Council shall communicate such information to all States Parties and the international organizations concerned."

(Plastic Explosives Convention, art. 8).

For further example of provisions that require self-reporting, see: Unlawful Seizure Convention, art. 11 (1970); Civil Aviation Convention, art. 13 (1971); Diplomatic Agents Convention, art. 6 & 11 (1973); Hostages Convention, art. 7 (1979); Nuclear Materials Convention, art. 14 (1980); Maritime Convention, art. 15 (1988); Plastic Explosives Convention, art. 8 (1991); Terrorist Bombing Convention art. 16 (1997); Terrorist Financing Convention, art. 19 (1999); and Nuclear Terrorism Convention art. 18 (2005).

However, self-reporting is not informative to donors without reference to these costly benchmarks required by these agreements. Indeed, in self-reports, states focus on how they obtained these costly benchmarks. Without the costs of implementing these measures, reporting would not be informative; because benchmarks are directly observable; reporting is not central to how these agreements work.

## 1.5 Conclusion

These elements establish a common standard for what constitutes terrorism and what states are required to do in order to suppress their nationals from engaging in it. As I argue below, donors of foreign aid can observe whether or not recipient states meet these common standards and use that observation as a benchmark for how much counterterrorism investment recipient states make.

In the next chapter, I turn to a discussion of how these international agreements, by defining certain acts as transnational terrorism and requiring states to criminalize, prevent, investigate, and prosecute those acts, the agreements provide a multilateral standard upon which donors of foreign aid can condition its allocation.

As discussed below, this overlooked function of the counterterrorism conventions provides an informal enforcement mechanism by which they produce counterterrorism cooperation.

## Chapter 2

# Foreign Aid, Counterterrorism, and International Institutions

“Together with international unity and resolve we can meet the challenge of this global scourge and work to bring about an international law of zero tolerance for terrorism.”

-Manmohan Singh<sup>1</sup>

In this chapter, I discuss the challenges posed by transnational terrorism, the use of foreign aid as an attempt to suppress it. Terrorist groups often base their operations in states with low capacity to prevent their activities (Lai 2007), and military intervention and other forms of direct coercive intervention often are counterproductive and unpopular (Azam and Thelen 2010). Therefore cooperative relationships, in which target states offer aid to haven states with the expectation that it will be used to reduce attacks, are particularly important for suppressing transnational terrorism.

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<sup>1</sup>(Baruah 2005)

I also discuss why foreign aid often fails at its goal of reducing transnational terrorism due to misappropriation by recipient states. Essentially, this failure of cooperation is due to a principal agent problem between donors and recipients of foreign aid. I draw upon research on international institutions and aid conditionality to discuss how the United Nations conventions make the threat to withdraw foreign aid more credible which helps ameliorate the principal agent problem between donors and recipients of foreign aid.

## 2.1 Transnational Terrorism

The United Nations conventions for the suppression of transnational terrorism do not address domestic terrorism, only transnational terrorism. Terrorism is transnational when the nationality of the target and perpetrator are heterogeneous. Because the costs of attacks are mainly borne by foreign targets but require the cooperation of haven states to successfully prevent, transnational terrorism presents unique challenges to international security and is likely driven by different processes than domestic terrorism (Young and Findley 2011*b*, Enders, Sandler and Gaibullov 2011). While there is no universally accepted definition for what constitutes transnational terrorism, for the purposes of this dissertation I adopt the inclusive definition used by the ITERATE dataset which defines transnational terrorism as:

"The use, or threat of use, of anxiety-inducing, extra-normal violence for political purposes by any individual or group... when such action is intended to influence the attitudes and behavior of a target group wider than the immediate victims and when... its ramifications transcend national boundaries" (Mickolus et al. 2011).

For an interesting discussion of the definition of terrorism in international law, see Young (2006). For a recent discussion of the importance and challenges of defining terrorism for quantitative research see Young and Findley (2011*b*). As discussed in the previous chapter, one of the major functions of counterterrorism agreements may be to create common expectations for what constitutes terrorist activity.

Terrorism is transnational when it involves attacks by a subnational group of one nationality upon victims of another. To be considered terrorism the act must be aimed at intimidating an audience wider than its direct victims and it must have a political or social motive (Enders and Sandler 2012, p213). This does not include state terrorism, in which a government uses terrorist tactics on its own citizens.

Because the costs of transnational attacks are paid primarily by foreign states rather than the haven states in which terrorist groups are based, states targeted by transnational attacks often have a greater interest in preventing transnational attacks than haven states. This preference heterogeneity suggests that there is a substantial adjustment of policy on the part of haven states if cooperation occurs rather than simply what scholars have identified as "harmony" in which states engage in policies that they would have anyway without an agreement (Keohane 1984). Because transnational terrorism is a highly salient issue and one of international security, we should expect cooperation to be especially difficult to achieve (Mitchell and Hensel 2007).

Recent research suggests that cooperation in this issue area may be particularly difficult because it may invite attacks by terrorist groups wishing to spoil it (Conrad and Walsh 2014). This finding points to the need for information about actual counterterrorism activities of haven states, rather than observation of attacks alone,

in order to achieve sustainable cooperation for counterterrorism. One of the major elements of international cooperation is foreign aid. In the next section, I discuss the role of foreign aid in international counterterrorism cooperation.

## **2.2 Foreign Aid as Counterterrorism Cooperation**

Terrorist groups strategically base themselves in states that have a limited capacity to prevent their attacks (Hendrix and Young 2014, Huepel 2007, Lai 2007, Piazza 2008). By doing so, they limit the potential barriers to launching attacks on foreign targets. States that are havens for transnational terrorism often do not have the institutional and material resources necessary to suppress terrorism within their territory.

Because of this, a major strategy in the fight against transnational terrorism has been the provision of foreign aid to the states from which terrorist groups base their attacks. The logic for giving aid is that aid will provide resources to recipient governments which they can use to reduce incentives for terrorism and build capacity to suppress terrorism (Azam and Delacroix 2006, Azam and Thelen 2008, 2010, 2014, Bandyopadhyay, Sandler and Younas 2011, Young and Findley 2011*a*). Aid is intended to build the capacity of the recipient state to combat terrorism and to improve humanitarian conditions in the recipient state, and through these avenues aid is supposed to reduce transnational attacks emanating from haven states by making it more likely terrorist groups are interdicted in haven states before they reach their foreign targets and by improving conditions and reducing the networks of support in the local population of haven states which terrorist groups depend upon.

For example, in 2002, then President of the United States George W. Bush tied foreign aid for poverty reduction to counterterrorism stating in a speech at the

Inter-American Development Bank:

“Poverty doesn’t cause terrorism... being poor doesn’t make you a murderer. Most of the plotters of September the 11th were raised in comfort. Yet persistent poverty and oppression can lead to hopelessness and despair. And when governments fail to meet the most basic needs of their people, these failed states can become havens for terror.”<sup>2</sup>

As an example of the capacity building avenue in 2015 United States Secretary of State John Kerry stated in a speech in Nairobi, Kenya that:

“We are deeply engaged in trying to help Kenya to be able to push back and deal with terrorism... we’re working together in terms of law enforcement and capacity building.”<sup>3</sup>

The provision of aid with the expectation that it will be used by the recipient state in ways that suppress transnational terrorism is a cooperative relationship. Cooperative relationships in which targeted states give aid to haven states are a prominent part of the global fight against transnational terrorism. Such aid provision has major advantages over other possible options. For instance, it raises fewer concerns about the impingement of haven state sovereignty and is cheaper than military intervention.

However, haven states have different preferences regarding transnational attacks than targeted states, which may lead to its misappropriation (Bapat 2011). For instance, counterterrorism aid recipients may siphon aid funds into military spending for arming against a rival (Boutton 2014, Collier and Hoeffler 2007) or into patronage spending in order to bolster their political power (Steinwand 2015).

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<sup>2</sup>(Bumiller 2002)

<sup>3</sup>(Kerry 2015)

It is difficult for donors to observe how foreign aid is used by recipients. For instance, reports suggest that the majority of United States Foreign Aid to Pakistan goes unaccounted for (Rohde et al. 2007, Walsh 2008). Because it is difficult to observe how aid is used by recipients which may misappropriate it, donors face a dilemma: If aid is being used faithfully, withdrawing aid may further destabilize an already weak state, possibly leading to state collapse and an increase in terrorism. However, if aid is not being used faithfully, donors are simply wasting foreign aid funds that could be more productively used elsewhere. A large literature suggests that fungibility increases the severity of the donors dilemma because it allows recipients to divert aid from its intended purpose (Hagen 2006, Pack and Pack 1993, Feyzioglu, Swaroop and Zhu 1998, Devarajan and Swaroop 2000).

These studies suggest reason for pessimism about the ability of foreign aid to work as a counterterrorism tool. They would lead us to expect that aid has no effect on transnational terrorism, or may even increase the frequency of attacks. However, this raises the following question: if such pervasive problems exist in the use of foreign aid for counterterrorism, why does it continue to be used as an instrument to reduce transnational terrorism? Next, I attempt to address this question by drawing upon the literature on the misappropriation of foreign aid as a principal agent problem.

### **2.2.1 Constraining Misappropriation**

Principal agent theory, also known as the theory of agency, is a large literature. Seminal examples include (Spence and Zeckhauser 1971, Jensen and Meckling 1976, Hart and Holmstrom 1987, Holmstrom 1979, Shavell 1979). In principal-agent there is a principal who pays a agent to do some task. The principal and agent may

have different preferences so slippage can occur if the principal cannot discipline the agent. Prominent examples of this approach in applied to Political Science include Wood (1988), Weingast (1984), North and Weingast (1989) and Gailmard and Patty (2012).

A major finding of the foreign aid literature which adopts this approach to the subject is that threats to withdraw aid may help curb principal-agent problems between donors and recipients of foreign aid, however such threats are often not possible when noncompliance is not observable to the donor (Gibson et al. 2005, Svensson 1999, Montinola 2010). Another key condition for successful aid conditionality is credibility of the donor's threats to withdraw foreign aid (Dunning 2004, Bearce and Tirone 2010, Stone 2008).

Recent research has argued that effectiveness of aid can be bolstered by certain donor strategies such as directing aid through non-governmental organizations (Savun and Hays 2011) and to specific sectors (Young and Findley 2011*a*). Recent work on foreign aid finds that aid agencies may help mitigate principal-agent problems (Martens 2005), building on work that suggests institutions may be used to improve an agent's incentives to use aid in concordance with the preferences of the principal (Paul 2006).

In the next section, I discuss how the United Nations counterterrorism treaties improve the ability of donors to monitor recipients of foreign aid, and how this increase in transparency helps mitigate principal-agent problems between donors and recipients of foreign aid by making threats to withdraw aid credible. The model presented in the third chapter formalizes this argument.

## 2.3 International Agreements

While early literature on international agreements focused on whether or not international institutions are effective for encouraging international cooperation,<sup>4</sup> later scholarship has moved from asking simply if international organizations work toward examining the mechanisms by which they operate (Martin and Simmons 1998). The question of why the UN counterterrorism agreements help facilitate international cooperation is particularly puzzling because there are no formal enforcement mechanisms in any of the conventions.

The theory I present below builds on the burgeoning literature on the role of international institutions for aid allocation (Urpelainen 2010, Vreeland 2011), contributing to the debate about the relationship between capacity building, enforcement, and the effectiveness of international agreements. How international institutions may help mitigate principal-agent problems in foreign aid relationships have not been explored by scholars. See Nielson and Tierney (2003), Copelovitch (2010), and Stone (2011) for examples of agency problems and international organizations. While these studies consider how international organizations as an agent may be controlled by states as principals, more research is needed on how international organizations may be useful in addressing problems of incomplete contracting in principal-agent relations *between* states.

However, scholars have long recognized the role of international institutions in increasing transparency (Keohane 1984). See Abbott (1993), Mitchell (1994, 1998), and Dai (2002) for prominent examples of international institutions in increasing

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<sup>4</sup>See Downs, Rocke and Barsoom (1996) and Chayes and Chayes (1993) for prominent examples of each side of this debate.

transparency. International institutions may provide valuable information to third parties, influencing political relationships (Dai 2005, Fang 2008, Chapman 2011, Chapman and Pascoe 2015, Thompson 2006). A key condition for information to matter identified by these studies is the presences of some kind of enforcement mechanism. The information must empower an actor to punish noncompliance, otherwise it will not affect state behavior. Because the counterterrorism conventions have no provision for formal enforcement, we must look elsewhere for such a mechanism, to informal enforcement mechanisms.

While the importance of informal enforcement is increasingly recognized, whether international agreements operate by informal enforcement and what mechanisms they operate through are unknown (Koremenos 2013*b*). In addition to the challenges of incorporating formal enforcement measures or other elements of "hard law" into counterterrorism treaties identified above, informal enforcement favors major powers by giving them discretion over enforcement (Stone 2011), and may therefore be particularly appealing in this issue area. Scholars have as of yet done little to explore the connections between international institutions and transnational terrorism.

In this dissertation I suggest that the threat of the withdrawal of foreign aid is an important informal enforcement mechanism for counterterrorism treaties which previous literature has overlooked. Donors use the common standards that the counterterrorism agreements establish as benchmarks upon which donors can condition the provision of foreign aid. The promise of future aid is an inducement for states to ratify. For haven states, agreements provide a way to get more foreign aid in exchange for policy concessions. However, the threat of the withdrawal of aid if the benchmarks of the conventions are not met means that foreign aid is also

the informal enforcement mechanism of the conventions. Some states do not ratify because they fear not complying, which could result in receiving less aid than under the non-ratification status quo.

In this way, I contribute to the “new wave of research on informalism in international law” (Koremenos 2013*b*). The argument presented below that foreign aid for counterterrorism is often bilateral, but forms the basis for informal enforcement of multilateral agreements, builds on recent arguments that bilateral diplomacy is often an efficient component of multilateral agreements, rather than a substitute for multilateralism (Verdier 2008). In doing so, this dissertation shows a novel way in which donors of foreign aid can provide informal enforcement mechanisms for international institutions. Next, in Chapter 3, I present a game theoretic model that formalizes the argument that counterterrorism agreements operate through this informal enforcement mechanism.

# Chapter 3

## Theory

“This is the United Nations from which we have suffered greatly. Under no circumstances should any Muslim or sane person resort to the United Nations. The United Nations is nothing but a tool of crime.” -Osama Bin Ladin, 2001<sup>1</sup>

This chapter presents an argument that counterterrorism agreements help mitigate principal agent problems in the delivery of foreign aid for counterterrorism. I use a game-theoretic model to analyze the impact that these agreements have on foreign aid for counterterrorism. I find two distinct avenues by which they have an effect.

The first is that states which ratify are induced to invest a larger portion of the foreign aid they receive in counterterrorism than if they had not ratified. They do this as a hedge against the risk of aid being withdrawn if they do not meet the benchmarks established by counterterrorism agreements.

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<sup>1</sup>(BBC News 2001)

The second mechanism is screening, types more interested in counterterrorism are more likely to ratify. However, I show that the second mechanism, screening, is completely dependent on the first. When agreements do not induce states to invest marginally more in counterterrorism, no screening occurs.

The model presented below assumes that ratification of a United Nations Convention for the Suppression of Transnational Terrorism establishes benchmarks upon which donors of foreign aid can observe whether or not it is met. The observation comes through direct observation by the donor state, and that this benchmark is an informative (although noisy) signal about the amount of effort aid recipients put toward counterterrorism. I then analyze the effects of this information on the principal agent relationship between donors and recipients of foreign aid.

Because there is a lack of consensus in the international community about what actions should be considered “terrorist” and what actions states are expected to take in response to transnational terrorism within their state, these agreements create a valuable signal by establishing a common set of strategic expectations about what constitutes a terrorist event and what states are to do about terrorism.

For instance, The International Convention for the Suppression of the Financing of Terrorism defines specific financial activities as transnational terrorism:

“Any person commits an offence within the meaning of this Convention if that person by any means, directly or indirectly, unlawfully and willfully, provides or collects funds with the intention that they should be used or in the knowledge that they are to be used, in full or in part, in order to carry out: (a) An act which constitutes an offence within the scope of and as defined in one of the treaties listed in the annex; or (b) Any other act

intended to cause death or serious bodily injury to a civilian, or to any other person not taking an active part in the hostilities in a situation of armed conflict, when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organisation to do or to abstain from doing any act."

Terrorist Financing Convention, art. 2 (1999)

This common standard, and the common standards for what states are required to do regarding the criminalization, prosecution, prevention and investigation of transnational terrorism create a signal which donor states can observe. Here, this signal is an assumption of the model rather than a result that emerges endogenously in as part of an equilibrium. Future research should unpack this assumption to consider when information transmission endogenously arises in equilibrium. However, in the analysis of the model I establish the influence of agreements when they do provide such information. In the following chapters, I test empirical implications of the model regarding the influence of ratification on aid allocation and whether aid reduces transnational attacks and terrorist group survival.

### 3.1 Model

Consider a model with two actors: a potential aid recipient, *Home*, and a potential aid donor, *Foreign*. The game has three parts. First, there is a Ratification Stage in which *Home* decides whether or not to ratify a counterterrorism agreement. Second, there is an Aid Stage in which *Foreign* provides a level of aid,  $a$ , to *Home*. *Home* invests some portion of this aid in counterterrorism, which influences the probability that a terror event occurs. Third, there is a Conditionality Stage in which *Foreign*

decides to either sustain the amount of aid provided in the Aid Stage or reduce the level of aid provided by  $c$ .

At the outset of the game in the Ratification Stage, *Home* decides whether to ratify an international counterterrorism agreement. This decision selects between two structures of play. The first is if *Home* chooses ratify, they will either meet or not meet the common and publicly agreed to benchmark of that agreement. In the second, in which *Home* does not ratify there is no benchmark established and *Foreign* only observes whether a terrorist event occurs or not.

*Home* and *Foreign* have a finite amount of resources,  $r_F > 0$  and  $r_H > 0$ , respectively. Terrorist attacks cause negative externalities  $\beta_F$  to *Foreign* and  $\beta_H$  to *Home*, where  $\beta_F \in [1, \infty)$  and  $\beta_H \in [1, \theta)$ , where  $\theta \leq \beta_F$ . This constrains types such that *Home* faces less severe negative externalities from transnational terrorism than *Foreign*, capturing the preference divergence central to principal-agent models. Let  $t_1$  serve as an indicator for whether a terror event happens in the Aid Stage and let  $t_2$  serve as an indicator for whether a terror event happens in the Conditionality Stage.

In the Aid Stage, *Foreign* decides whether to provide a level of aid,  $a$ , to *Home*. After this aid decision is made, *Home* may then invest some resources, denoted by  $\varepsilon_1$ , in counterterrorism. The maximum amount *Home* can invest are its resources ( $r_H$ ) plus any aid received. The severity of terrorist activity is stochastically related to the level of investments made in counterterrorism by *Home*. This relationship is given by the conditional density function  $f(\varepsilon_1) = e^{-\varepsilon_1}$ . If *Home* ratified the agreement, then a noisy signal of how much effort *Home* put into counterterrorism by whether or not it met the benchmarks set out by the agreement,  $m \in \{\text{Benchmark}, \neg\text{Benchmark}\}$  is observed, where  $Pr(m = \text{Benchmark}) = 1 - e^{-\varepsilon_1}$ . If  $m = \neg\text{Benchmark}$  then *Home*

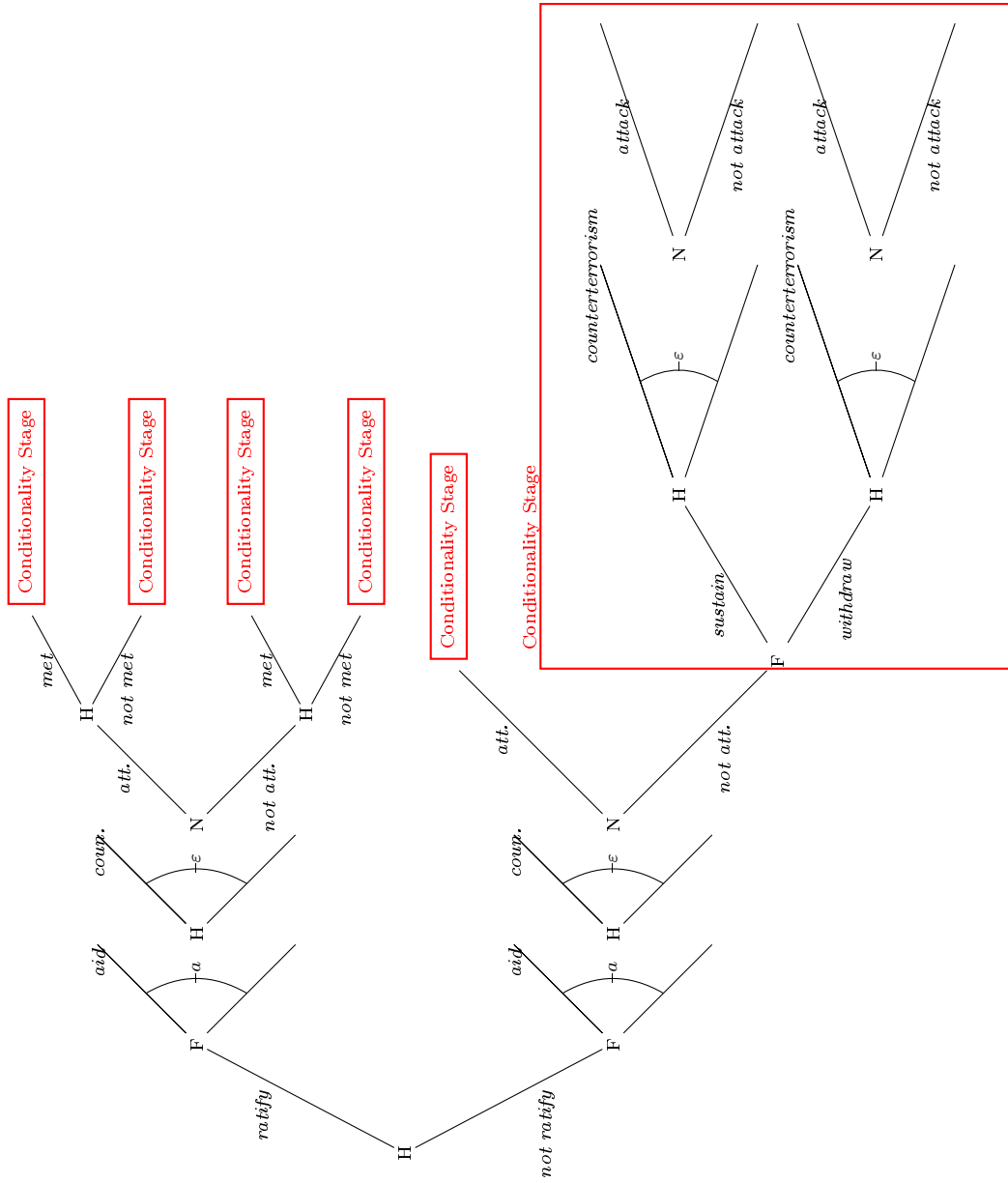


Figure 3.1: Full Game Tree

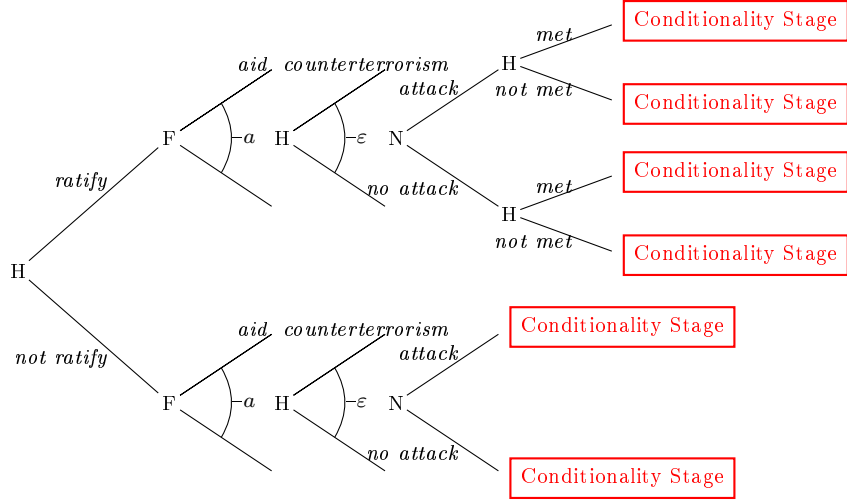


Figure 3.2: Partial Game Tree: Ratification and Aid Stage

did not meet the benchmarks outlined by the agreement; if  $m = \text{Benchmark}$ , then *Home* did meet the agreement benchmark.<sup>2</sup>

In the Conditionality Stage, *Foreign* has the opportunity to either sustain aid at level  $a$  or reduce the level of aid provided by amount  $c \leq a$ , which I refer to below as enacting aid conditionality. *Home* may then again invest some of its resources in counterterrorism denoted by  $\varepsilon_2 \in [0, r_H + a_2]$  where  $a_2 = a$  if *Foreign* sustains aid and  $a - c$  if *Foreign* reduced the level of aid. As in the Aid Stage, the severity of terrorist activity in the conditionality stage is stochastically related to the level of investments made in counterterrorism by *Home*. This relationship is given by the conditional density function  $f(\varepsilon_2) = e^{-\varepsilon_2}$ . Figure 3.4 provides a timeline of the game.

<sup>2</sup>The similarity with the conditional density function for the probability of a terrorist event occurring is incidental and chosen to ease exposition. The substantive results presented here are robust to other functional forms without major complication for functions which are continuous and monotonically increasing in *Home* counterterrorism investment.

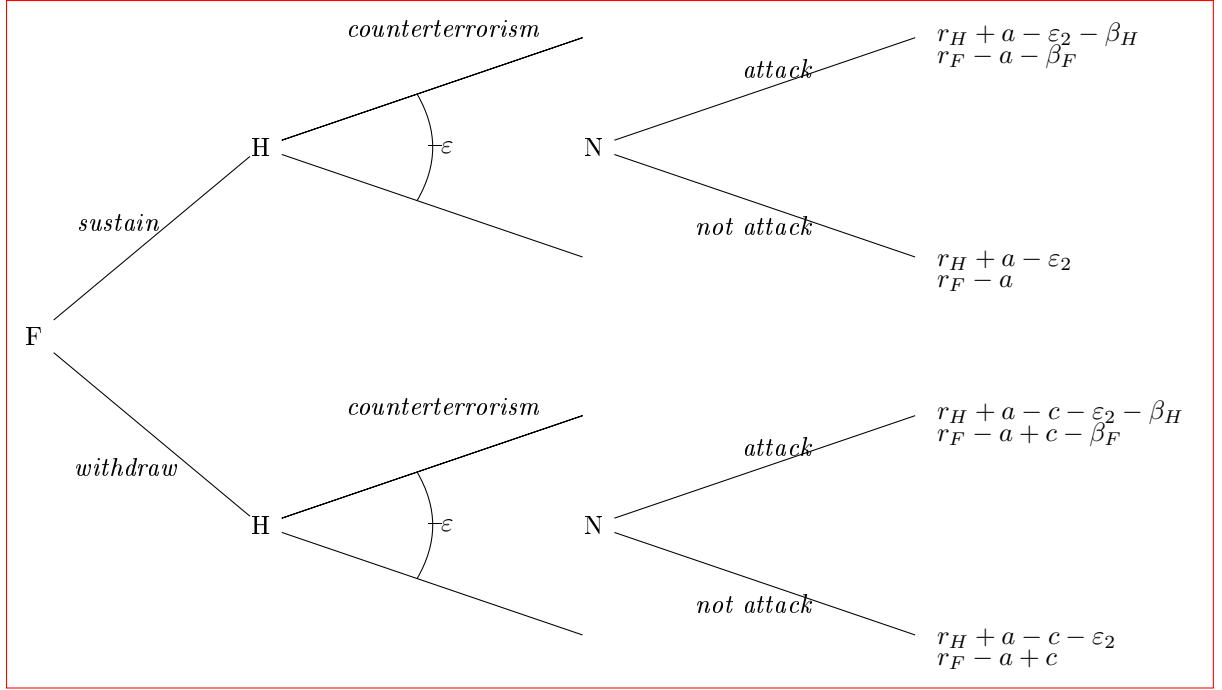


Figure 3.3: Partial Game Tree: Conditionality Stage

Neither *Home*'s type,  $\beta_H$ , nor *Home*'s actions,  $\varepsilon_1$ , are observed or known with certainty by *Foreign* in either contingency because both the occurrence of terror events and the agreement benchmarks are only probabilistic indicators of *Home*'s level of counterterrorism effort. Assume *Home*'s type,  $\beta_H$ , is drawn randomly from a  $\text{Unif}(1, \theta)$  distribution, where  $\theta$  is common knowledge to all players. Table 3.1 provides the utility functions for *Home* and *Foreign* as the top and bottom row, respectively. The left column presents the utility functions if *Foreign* does not enact conditionality and the right column presents the utility functions if *Foreign* does enact conditionality. *Home* receives utility from resources ( $r_H$ ), aid received in the Aid and Conditionality Stages ( $a$ ), less any investments in counterterrorism ( $\varepsilon_1$  in the Aid Stage,  $\varepsilon_2$  in the Conditionality Stage) and utility of  $-\beta_H$  should a terror event occur (indicated by  $t_1$  in the Aid Stage and  $t_2$  in the Conditionality stage). If conditionality is enacted,  $c$  is

1. Ratification Stage:
  - (a) *Home* Choose  $\{\text{Ratify}, \neg\text{Ratify}\}$
2. Aid Stage
  - (a) *Foreign* Choose  $a \geq 0$
  - (b) *Home* Choose  $\varepsilon_1$
  - (c) *Nature* Choose  $\{\text{Terror}, \neg\text{Terror}\}$
  - (d) If and only if *Home* Chose Ratify, *Nature* Choose  $m \in \{\text{Favorable}, \text{Unfavorable}\}$
3. Conditionality Stage
  - (a) *Foreign* Choose  $\{\text{Sustain}, \text{Reduce}\}$
  - (b) *Home* Choose  $\varepsilon_2$
  - (c) *Nature* Choose  $\{\text{Terror}, \neg\text{Terror}\}$

Figure 3.4: Model Timeline

subtracted from the utility *Home* receives from aid in the Conditionality Stage.

|         | No Conditionality                                                               | Conditionality                                                                      |
|---------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Home    | $r_H + a - \varepsilon_1 - \beta_H t_1 + r_H + a - \varepsilon_2 - \beta_H t_2$ | $r_H + a - \varepsilon_1 - \beta_H t_1 + r_H + a - c - \varepsilon_2 - \beta_H t_2$ |
| Foreign | $r_F - a - \beta_F t_1 + r_F - a - \beta_F t_2$                                 | $r_F - a - \beta_F t_1 + r_F - a + c - \beta_F t_2$                                 |

Table 3.1: Utility Functions

### 3.1.1 Equilibrium

For the game described above, there exists the following Perfect Bayesian Equilibrium described by Proposition 1.

**Proposition 3.1.1.** *The strategy profiles,  $\sigma_H \equiv \{\beta_R, \varepsilon_1^*, \varepsilon_2^*\}$  for Home and  $\sigma_F \equiv \{a^*, \bar{\beta}_F\}$  for Foreign, and the belief system  $\omega$  form a Perfect Bayesian Equilibrium.*

Where  $\beta_R$  and  $\bar{\beta}_F$  are cut-point strategies defined in the appendix. See the appendix to this chapter for proof. Below, I discuss the belief system  $\omega$  in the context of the information structure of the model described above before turning to equilibrium quantities  $\varepsilon_1^*$ ,  $\varepsilon_2^*$  and  $a^*$ .

The level of *Home's* investment in counterterrorism is not perfectly revealed in equilibrium if *Home* ratifies. The problem of false positives and negatives still exists because whether or not *Home* meets the benchmarks established by the counterterrorism agreement is itself a probabilistic function of the amount of *Home's* counterterrorism investment. *Foreign* updates its beliefs according to Bayes rule based on whether or not a terror event occurred. If *Home* ratifies *Foreign* has an additional point of information on which to condition their beliefs, whether or not *Home* met the counterterrorism agreement benchmark. *Foreign* cares about *Home's* type because

the level of investment *Home* makes in counterterrorism is a simple one to one and onto mapping from type, thus learning about type allows *Foreign* to better match the level of aid provided to the amount *Home* will faithfully invest. The next section considers the role of this information structure.

### 3.1.2 Information Structure: learning about recipient counterterrorism effort

*Foreign* begins the game believing all possible types of *Home* are equally likely. The first opportunity for *Foreign* to learn about *Home's* type is by observing whether or not *Home* ratifies. As I derive in the appendix to this chapter, in equilibrium types  $\beta_H \geq \beta_R$  ratify while types below this threshold do not ratify. Thus the ratification decision truncates the support of *Foreign's* beliefs. Given that cutpoint  $\beta_R$  determines *Home's* ratification decision and *Foreign's* uniform prior, beliefs after observing ratification are simply uniform with bounds  $\beta_R$  and  $\theta$  and uniform with bounds 1 and  $\beta_R$  if no ratification is observed.

First, consider the information environment if *Home* does not ratify. The only opportunity for learning about *Home's* type without a ratified agreement is observing whether or not a terrorist event occurred in the Aid Stage. This is a noisy indicator of *Home's* counterterrorism effort because the probability there is a terror event is a mapping from equilibrium counterterrorism investment,  $\varepsilon_1^*$ , such that  $Pr(\text{Terror}|\varepsilon_1^*) = e^{-\varepsilon_1^*}$ . where  $\varepsilon_1^*$  is the equilibrium level of counterterror investment that *Home* expends.

Second, consider the information environment if *Home* ratifies. When *Home* ratifies, *Foreign* observes an additional piece of information about the level of coun-

terterrorism investment that *Home* made, whether or not *Home* met the benchmark laid out by the agreement. Whether or not *Home* meets the benchmark is a function of their equilibrium counterterrorism investment,  $\varepsilon_1^*$ , such that  $Pr(\text{Benchmark}|\varepsilon_1^*) = 1 - e^{-\varepsilon_1^*}$ . *Foreign* observes whether *Home* met the benchmark in addition to whether a terror event occurs.

### 3.1.3 Deciding to Ratify

As I show below, ratification increases the amount of aid *Home* receives, but it also increases the risk of conditionality because *Foreign* is better informed. Therefore, when deciding to ratify or not, *Home* balances potential aid increases due to ratification with the increased risk of conditionality that counterterrorism agreements elicit. Formally, *Home* ratifies if  $\beta_H \geq \beta_R$ , a cutpoint defined in the appendix to this chapter.

This shows that ratification does have some screening properties, only types greater than cutpoint  $\beta_R$  ratify. However, this screening only occurs when agreements increase the risk of conditionality. In this way, the agreements ability to screen is dependent on its ability to constrain. The screening that does occur is dependent on the higher risk of aid conditionality due to increased transparency that counterterrorism agreements introduce. Ratification creates an expectation of high political will, however it also allows donors to better observe whether ratifiers fulfill that promise. Therefore it is not in the low type's interest to pool due to the increased risk of conditionality that ratification introduces.

### 3.1.4 Aid Levels, Aid Conditionality, and Counterterrorism Spending

Note that counterterrorism spending is a mapping from *Home's* type,  $\beta_H$ , resource constraint  $r_H$ , and the level of aid which *Foreign* provides in equilibrium,  $a^*$ . *Home's* type determines how much *Home* would like to spend and the amounts of aid and resources determine the upper bound on what *Home* can spend.

$$\varepsilon_2^* \equiv \min\{\ln(\beta_H), r_H + a - 1_{\text{withdraw}}(c)\} \quad (3.1)$$

Thus in the last period when there is no threat of the withdrawal of aid, *Home* expends its preferred amount,  $\ln(\beta_H)$  if it has sufficient resources to do so, (if the its total resources plus aid less any amount withdrawn are greater than its preferred amount. If its preferred amount is greater than the resources it has, it expends all of its resources,  $r_H + a - 1_{\text{withdraw}}(c)$ . Thus *Home* spends their entire budget if there is a corner solution and spends their optimal amount if there is an interior solution.

The black line in Figure 3.5 shows the equilibrium mapping from type ( $\beta_H$ ) on the horizontal axis to counterterrorism investment ( $\varepsilon$ ) on the vertical axis. Types to the left of the vertical dashed line invest less than their resource constraint ( $r_H + a$ ). The dotted area thus represents the loss from giving more aid than *Home* actually invests in counterterrorism. The types to the right of the dashed line invest less than they would if more aid was received; this loss is represented by the cross-hatched area to the right of the dashed line.

Let  $f(\varepsilon_2^c)$  denote the probability of a terrorist event if *Foreign* reduces aid and  $f(\varepsilon_2^{-c})$  denote the probability of a terrorist event if it does not. *Foreign's* choice is

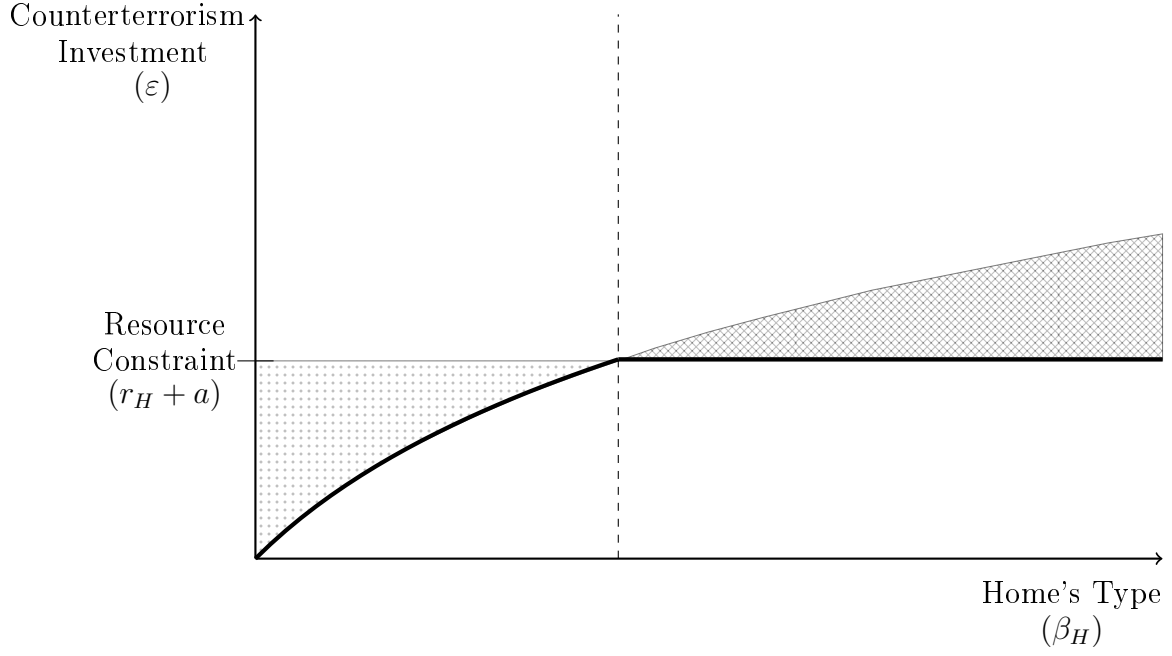


Figure 3.5: Equilibrium Enforcement

between reducing aid, which reaps a savings of  $c$  but may increase the likelihood of a terror event occurring because it tightens the budget constraint on *Home*. Given this equilibrium investment in the Conditionality Phase from equation 1 and balancing these two types of loss, *Foreign* withdraws aid if:

$$\beta_F < \bar{\beta}_F \equiv E_F \left[ \frac{c}{f(\varepsilon_2^c) - f(\varepsilon^{-c})} \right] \quad (3.2)$$

Equation 2 shows that *Foreign* withdraws aid if the level of negative externalities it experiences from terrorism in *Home* are less than the savings from reducing aid divided by its subjective expectation of the increased risk of a terrorist attack when aid levels are reduced.

*Foreign* balances the tradeoff between the risk of a terrorist event occurring if aid is withdrawn and the expected savings due to a reduction in aid given its now more

pessimistic beliefs about *Home's* type. There are a limited number of conditionality strategies that *Foreign* may pursue. If *Home* does not ratify the only possible strategy for conditionality is to withdraw aid if a terrorist event occurs. If *Home* ratifies, *Foreign* has an additional point of information to condition on, whether or not the benchmark of the agreement was met. This gives *Foreign* two possible conditionality strategies if *Home* ratifies: 1) strict conditionality, in which *Foreign* reduces the aid level if either a terrorist event occurs or *Home* does not meet the benchmarks of the agreement, and 2) weak conditionality, in which *Foreign* only reduces the level of aid if *both* a terrorist event occurs *and* the benchmark is not met. *Foreign's* level of interest in counterterrorism in *Home* ( $\beta_F$ ) determines the counterterrorism strategy it can credibly pursue in equilibrium. The more negative externalities it feels from transnational terrorism, the less it is able to credibly threaten to reduce aid provided to *Home*. Similarly, the less informed *Foreign* is, the less willing it is to reduce aid. Figure 3.6 shows equilibrium conditionality strategies.

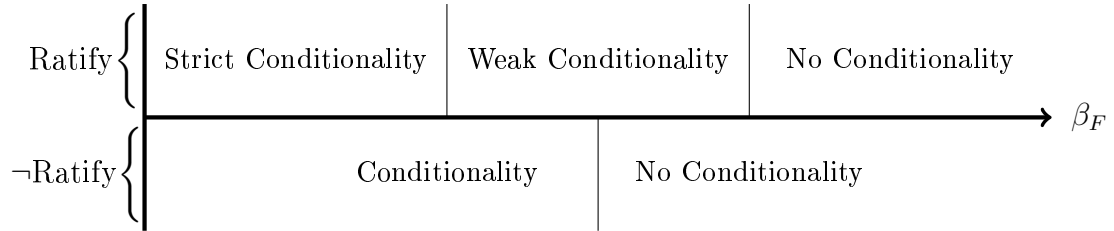


Figure 3.6: Equilibrium Behavior

*Foreign's* conditionality strategy influences how much *Home* is willing to invest in the Aid Stage. If aid is reduced when *Home* fails to meet the benchmarks of the agreement or a terrorist event occurs, *Home* invests more in counterterrorism in order to reduce the risk of aid being reduced. Let  $\varepsilon_1^*$ , defined in the appendix, denote the equilibrium counterterrorism investment in the Aid Stage.

Given this and that  $\beta_F > \theta$ , *Foreign* chooses a level of aid such that

$$a^* \equiv E[\varepsilon_1^*] - r_H \quad (3.3)$$

That is, the amount of aid they provide is a function of their expectation of what *Home* will spend on counterterrorism in the first period. They provide an amount of aid that balances the risk of aid being misappropriated with its potential to reduce the probability of terrorist attacks. The appendix defines these equilibrium values.

## 3.2 Implications

The first observable implication is that when *Home* ratifies it receives more aid in equilibrium than when it does not. Formally,

**Proposition 3.2.1.**  $a^{*|R} - a^{*|\neg R} > 0$

Where  $a^{*|R}$  is the equilibrium level of aid provided by *Foreign* given *Home* ratifies and  $a^{*|\neg R}$  is the equilibrium level of aid given by *Foreign* in equilibrium given *Home* does not ratify.

See appendix for proof, however the proposition is illustrated by Figure 3.6. Aid is provided for a wider range in equilibrium when *Home* ratifies. Additionally, *Foreign* is willing to pay a larger amount of aid,  $a$ , if *Home* ratifies. Below, I test the implication that states that ratify counterterrorism agreements receive more foreign aid than states that do not as Hypothesis 1:

Hypothesis 1: *States that ratify international counterterrorism agreements receive more aid than states that do not ratify them.*

There are many examples of this type of behavior by donors of aid. For instance, in early 2004, the Philippines ratified *The Convention for the Suppression of Terrorist Financing*. This ratification was associated with a twelve million dollar increase in average security and counterterrorism related aid per year from the United States. Similarly, when Pakistan acceded to the *Convention for the Suppression of Terrorist Bombings* in 2009, it saw an increase of almost 5.5 million average security and counterterrorism aid dollars per year from the United States.

The second implication I test is that agreement ratification makes foreign aid more effective at reducing transnational terrorism. This is because, as shown in the equilibrium levels of counterterrorism effort, the increased transparency counterterrorism agreements introduce causes aid recipients to hedge against the risk of conditionality in equilibrium by investing more of the aid in counterterrorism. This result is given formally by Proposition 3.2.2:

**Proposition 3.2.2.**  $\varepsilon_1^{*|R} - \varepsilon_1^{*|\neg R} \geq 0$  and therefore  $Pr(t|R) \leq Pr(t|\neg R)$ .

Where  $\varepsilon_1^{*|R}$  is the equilibrium investment in counterterrorism by *Home* if they ratify and  $\varepsilon_1^{*|\neg R}$  is the equilibrium investment if they do not ratify. Effectively, the risk of conditionality shifts the line in the left half of Figure 3.5 upwards, such that all types who ratify invest more of the aid they receive in counterterrorism. I test this implication as Hypothesis 2:

Hypothesis 2: *Foreign aid is marginally more effective at reducing transnational terrorism when states have ratified counterterrorism agreements.*

### 3.3 Illustrations

I illustrate the equilibrium dynamics by comparing Pakistan versus Colombia. Both states were late ratifiers to the agreements, ratifying well after the agreements were introduced. They both saw large increases in foreign aid after ratification. Colombia met the benchmarks of the agreement it ratified, but Pakistan did not. Consequently, aid to Colombia has not been reduced while it is in the process of being reduced for Pakistan.

#### 3.3.1 Pakistan

Pakistan ratified the 1997 Terrorist Bombing Convention in 2002 and the 1999 Terrorist financing convention in 2009. These ratifications made donors more optimistic about Pakistan's political will to curtail attacks and they saw an increase in foreign aid with the intent that it would increase their counterterrorism capacity.

In 1997 Pakistan passed counterterrorism legislation in the form of *The Antiterrorism Act*, which established enhanced policing measures and severe penalties for terrorist action. After ratifying the Terrorist Bombing Convention they passed an amendment to their domestic Anti-terrorism Act which enhanced policing powers and a terrorist watch list for those individuals suspected of plotting terrorist bombings which prohibits them from visiting certain areas that are likely targets for bombings, including public parks, airports, and railway stations. (Task Force on International Terrorism 2003, 45-46)

However, despite this *de jure* compliance with one element of the agreement, Pakistan failed to meet the other the benchmarks of these agreements *de facto*. Pakistan systematically failed to take the policing, investigation, and prevention measures

that these agreements require. Terror attacks by their nationals went uninvestigated by Pakistan and they did not take steps to capture and bring to justice terrorists. The most high profile of these failings, but indicative of a larger trend, is the fact that Osama Bin Ladin was in Pakistan and likely receiving support from member of Pakistan security forces that the us was subsidizing.

In response to this continued failure to meet counterterrorism agreement benchmarks the United States is currently taking steps to withdraw foreign aid. This is an example of the failure to meet benchmarks leading to the eventual withdrawal of foreign aid. Because of such high costs to the United States it took an extended amount of time for this to be executed.

### **3.3.2 Colombia**

Colombia, like Pakistan, was a late ratifier. They ratified the *1979 Convention against the Taking of Hostages* in 2005. This made donors more optimistic about their political will to crack down on violent groups in their territory that would often target foreigners with kidnapping.

This optimism translated into significant increases in foreign aid to increase their capacity to stop kidnappings. Colombia used these funds to invest in counterterrorism efforts, enhancing measures for policing, investigation and prosecution of terrorist kidnappings meeting the benchmarks of the UN agreement. As a result Colombia has continued to receive high levels of foreign aid. This is an example of a country meeting the benchmarks of a counterterrorism agreement, and continuing to receive high levels of aid as a result.

### 3.4 Conclusion

This chapter presented a model with two actors, a haven state and a targeted state. In the model the targeted state could provide aid to the haven state with the option to withdraw it in the future. This is similar to other principal agent models in which the principal pays an agent to take some action. Like many principal agent models, the principal (targeted state) could not observe the investment decision of the agent (haven state). In the face of heterogeneous preferences, captured here by the assumption that the targeted state feels greater costs from attacks than the haven state from which those attacks are launched ( $\beta_H < \beta_F$ ) the haven state has an incentive to invest less than the targeted state would like.

International agreements establish a benchmark in the model, which haven states either meet or not. The model shows how the observation of benchmark achievement provides valuable information to the targeted state. The primary insight here is that the agreement makes threats to withdraw aid more credible. This result has two primary implications, the targeted state is willing to provide more aid to states which ratify, and a greater proportion of aid received is invested in counterterrorism by ratifying states.

Ratifying states invest more as a hedge against the threat of the withdrawal of aid, leading them to meet the benchmarks of the agreement. Thus, while the promise of future aid is an inducement for states to ratify. For haven states, the agreements provide a way to get more foreign aid in exchange for policy concessions in the area of counterterrorism. However, the threat of the withdrawal of aid if the benchmarks of the conventions are not met means that foreign aid is also the informal enforcement mechanism of the conventions. Some states do not ratify because they

fear not complying, which could result in receiving less aid than under the non-ratification status quo.

In the chapters that follow I test the two hypotheses outlined above. Chapter 4 considers Hypothesis One, that states which ratify receive greater amounts of foreign aid. Chapter 5 and 6 consider the second hypothesis, that ratification increases the ability of foreign aid to reduce transnational terrorism. The difference between these chapters is that they use different measures of transnational terrorism. First, in Chapter 5, I use the number of transnational attacks by a country's nationals. Second, in Chapter 6, I consider the impact of ratification on how foreign aid influences the duration of terrorist groups within the recipient country.

## Chapter 4

# Empirics I: Convention Ratification and Foreign Aid Allocation

“You have to be kind to them and make room for compassion and for leniency. Try to win them over through the conveniences of life and by taking care of their daily needs like food, electricity and water.” -Abu Basir, Leader of al Qaeda in Yemen, May 2012<sup>1</sup>

This chapter considers the first implication of the model, that states which ratify counterterrorism conventions see an increase in the amount of foreign aid which they receive. To do so, I use country-year level data on ratification of the United Nations Conventions for the Suppression of Transnational Terrorism between 1968 and 2013.

I use a series of measures of foreign aid including data from all donors using the AidData dataset as well as data on United States foreign aid. I estimate a series of empirical models to consider whether ratification garners aid. Below, I detail the measurement of the key variables used in the analysis of this chapter.

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<sup>1</sup>(Lynch 2014)

## 4.1 Ratification

Ratification data was assembled based on the United Nations Office on Drugs and Crime Universal Counterterrorism Instruments Ratification Database (United Nations Office on Drugs and Crime 2016) for each of the United Nations Conventions for the Suppression of Transnational Terrorism listed in Table 1.1. Figures 1.2-11 in Chapter One show the patterns of ratification for each of the counterterrorism conventions. In this analysis, I focus on the Air Safety, Diplomatic Agents, Hostage Taking, and Bombing, and Terrorist Financing Conventions. I do not consider the Nuclear or Maritime Conventions here, because while potentially important for the future, these modes of terrorism are not currently or historically prevalent enough to facilitate empirical analysis. This leaves a total of eight conventions, the first of which was ratified in 1963.

Because there are eight separate conventions, to consider the joint influence to the agreements I employ three measurement strategies. The most basic measurement is simply the total number of conventions which each country has ratified. This count ranges from zero to eight. Secondly, I use the proportion of agreements ratified out of the total number available in that particular year. Finally, I create an index of "Counterterrorism Treaty Capital," which is the total number of agreements ratified by a state minus the worldwide average number ratified.<sup>2</sup> Formally, the Counterterrorism Treaty Capital Index, denoted by  $K_{it}$ , is:

$$K_{it} \equiv T_{it} - W_t \tag{4.1}$$

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<sup>2</sup>This approach is similar to recent index based measures of human rights treaty ratification (Magesan 2013).

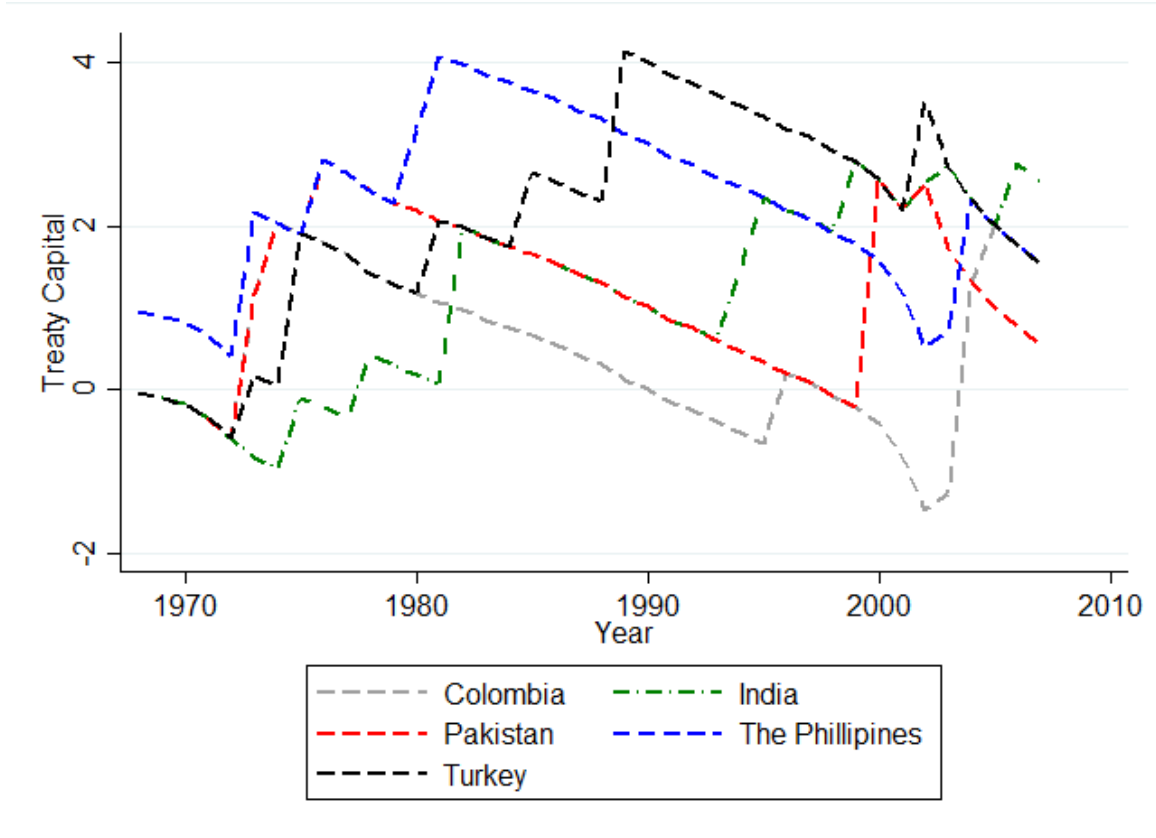


Figure 4.1: Counterterrorism Treaty Capital

where  $T_{it}$  is the total number of conventions ratified by state  $i$  at time  $t$  and  $W_t$  is the average number ratified worldwide at time  $t$ . This helps account for concerns of spurious inferences due to non-stationarity of the measure of treaty ratification because the average Treaty Capital is zero by construction. Figure 4.1 plots the Treaty Capital over time of some key haven states: Pakistan, The Philippines, Colombia, India, and Turkey. As the figure illustrates, Treaty Capital for these countries spiked in 1971 and after 2001.

This provides a wide range of compound measures of ratification. In addition, I consider the individual impact of the Terrorist Bombing Convention and Terrorist

Financing Convention on foreign aid allocations at the end of this chapter.

## 4.2 Foreign Aid

In the theoretical discussion above, aid is posited to affect terrorism broadly by building opportunity as well as bolstering the capacity of the state. Therefore, I measure foreign aid using the AidData recipient aggregates from state donors and international organizations (Tierney et al. 2011, AidData 2016). To ease interpretation, foreign aid is measured in tens of millions of dollars. In the 3.0 research release, this field is given as USD 2011 Constant amount. To address concerns that foreign aid from IOs may follow a different logic from the one laid out in the theoretical model I estimate models with both the combined total from state donors and international organizations as well as models with aid from only state donors.

I also test Hypothesis One using data on foreign aid from the United States only. (United States Agency for International Development 2014) This allows for the disaggregation of aid between economic aid, military aid and Nonproliferation, Anti-Terrorism, Demining and Related Programs (NADR). Table 4.2 shows the total amount of aid by year for both state and non-state donors. Figure 4.3 shows the total economic and military aid to state recipients for each year 1968-2013. Figure 4.4 shows the the total amount of US NADR aid give by the United States for each year.

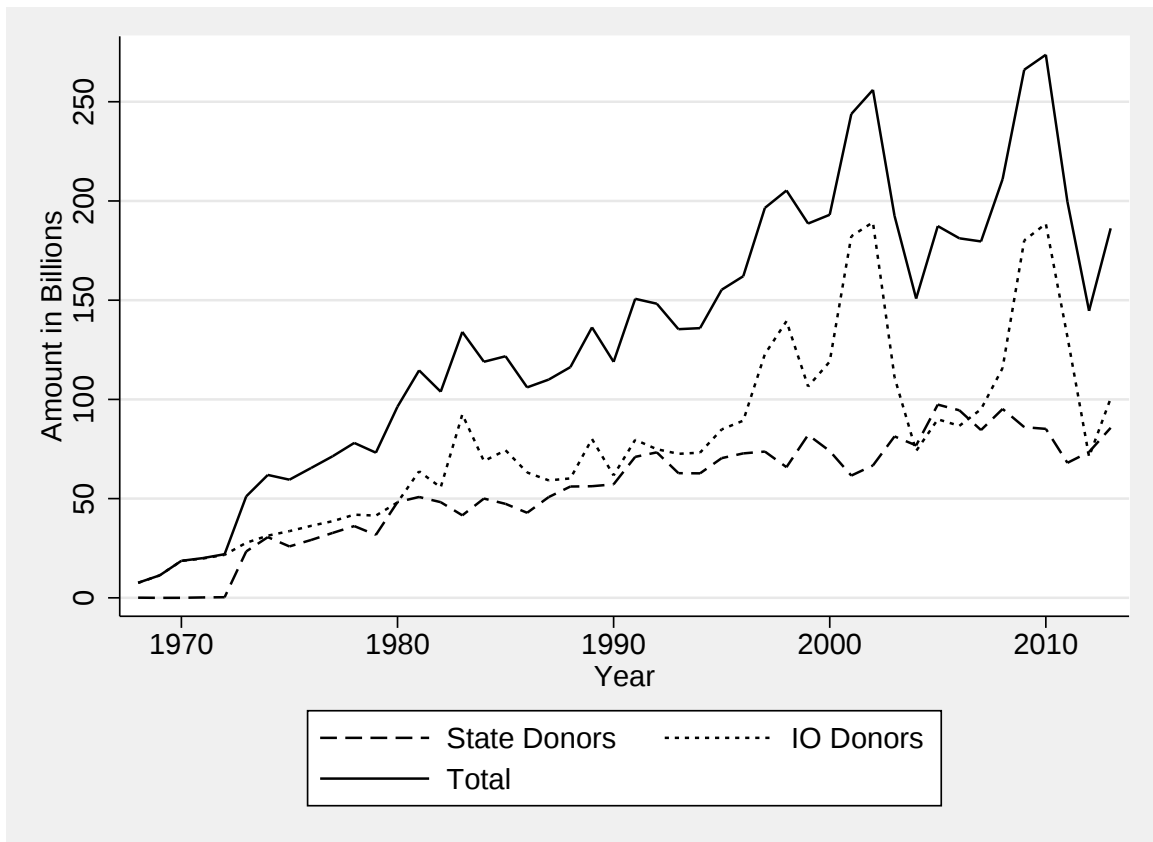


Figure 4.2: Total Aid by Year for State and IO Donors



Figure 4.3: Total US Economic and Military Aid by Year: Constant US Dollars

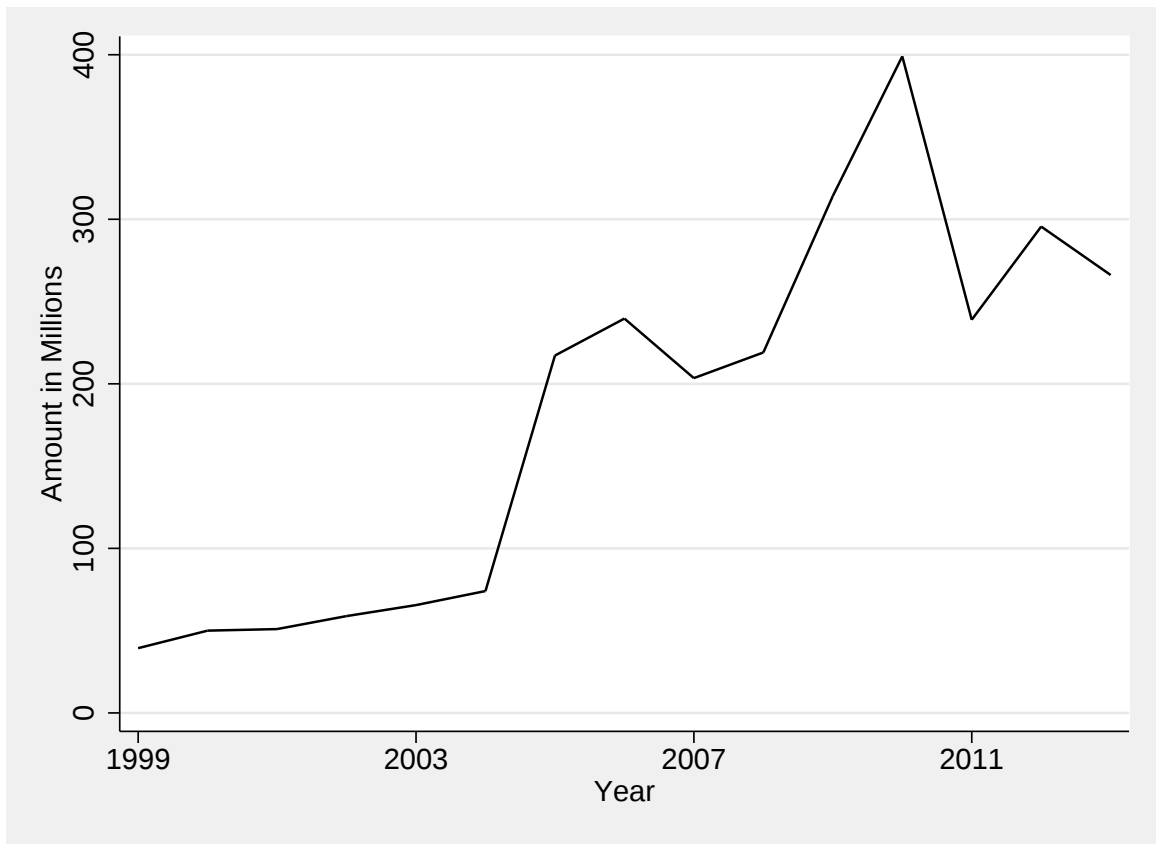


Figure 4.4: Total US NADR Aid: Constant US Dollars

### 4.3 Control Variables

I also include covariates that may induce bias if they were omitted. These variables are expected to be associated with the dependent variable of interest, transnational attacks as well as ratification and foreign aid, the principal independent variables. Furthermore, these variables reflect findings in the extant literature on foreign aid. I detail these below:

***Gross Domestic Product per Capita:*** I control for Gross Domestic Product per Capita, measured in constant 2011 United States Dollars, to account for the influence of country wealth on foreign aid receipts. To ease interpretation, this variable is measured in thousands. Wealthier countries may be better able to ratify, but countries with lower GDP are more likely to receive foreign aid. Terrorist groups may also be better able to establish bases in countries with lower GDP.

***Population:*** I also include a control for the population of the country in each country year (Bolt and van Zanden 2014). The greater the population of a country, the more likely it is to receive aid and population may have impacts on the number of transnational attacks. To ease interpretation, this variable is measured in millions.

***Civil Conflict:*** I control for whether the country is in a civil conflict using the UCDP/PRIO Armed Conflict Dataset (Pettersson and Wallensteen 2015, Gleditsch et al. 2002), as this may drastically influence rates of terrorism (Findley and Young 2012) and may also impact foreign aid receipts.

***Regime Type:*** To measure regime type, I use the Polity/Freedom House combined imputed regime type variable as a measure of regime type to account for the finding that democratic participation may reduce transnational terrorist incidents a country

(Hadenius and Teorell 2005)<sup>3</sup> and the impact of regime type on international cooperation. This variable is an average of Freedom House and Polity indexes. This imputed version allows for better coverage and fewer missing values than alternative measures. Hadenius & Teorell show that this average index performs better both in terms of validity and reliability than its constituent parts (2005).

***United Nations Ideal Point:*** To account for heterogeneous allocation of aid based on general similarity of preferences, I also include UN ideal point estimates (Voeten, Bailey and Strezhnev Forthcoming). This measure uses item response theory to estimate general preference similarity based on United Nations roll call voting.

## 4.4 Models

In tests of Hypothesis One, I estimate models that include the lagged dependent variable as a regressor to account for temporal effects, following the approach of Beck and Katz (2011). I also include temporal dummy variables for years post-2001, due to possible changes in state and terrorist strategy following the World Trade Center bombings (Enders and Sandler 2005), and for post-Cold War years, in order to account for possible changes in strategies of foreign aid after the fall of the Soviet Union. To take into account the panel structure of the data, I employ clustered standard errors (Beck and Katz 1995).

To address potential endogeneity I take into account the ratification process in three ways. First, in the results presented in the main text, I include fixed effects to control for unobserved unit heterogeneity (Wilson and Butler 2007). Second, I lag

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<sup>3</sup>For example, see Li (2005).

the measures of ratification by one year to ensure proper timing. Third, at the end of this chapter, I employ instrumental variable models to account for state selection into the convention as a robustness check.

I test Hypothesis 1 with a series of log-linear fixed-effects models. These models use logged foreign aid as the dependent variable to estimate the impact of ratification on foreign aid receipts. The models include country-level fixed effects to help account for unobserved differences between countries. I first regress the covariates described above on state donors using the AidData dataset. This is the most appropriate sample given the bilateral nature of my model. However I also estimate models using all donors, which includes foreign aid given by international organizations as a robustness check. The results of the models using aid from all donors are presented in the appendix.

Because transnational terrorism is a particularly salient issue for the United States, I also estimate models using Foreign Aid from the United States. To address concerns that the foreign aid captured by AidData may not be relevant to counterterrorism aims, I use United States anti-terrorism (NADR) aid in the main text. I also estimate models using US economic and military aid, the results of which are presented in the appendix to this chapter. In addition to the log linear models presented below, I estimate Tobit models as a robustness check, the results of these models are presented in the appendix to this chapter.

Below, I present the results for the total number of agreements ratified and the proportion of agreements ratified. Results for treaty capital are presented in the appendix to this chapter. I also estimate models for two recent and far reaching conventions, the Terrorist Bombing Convention and the Terrorist Financing Convention

to test whether ratification of these agreements led to an increase in anti-terrorism aid as Hypothesis One would lead us to suspect.

## 4.5 Results

Table 4.1 presents the results for models testing Hypothesis One using the number of counterterrorism conventions ratified as the measure of ratification and logged foreign aid from all state donors as the dependent variable. The positive and statistically significant coefficient on the lagged number of conventions ratified suggests that ratification does lead to increases in foreign aid from state donors as expected. The results for the control variables are as expected, the coefficient on gross domestic product per capita is negative and statistically significant, the coefficient on regime type is positive and significant, and UN ideal point is positive and significant. Interestingly, the coefficients on population and civil conflict are not statistically significant.

Table 4.2 presents the results from the same models using the lagged proportion of agreements ratified instead of the number of agreements ratified. The results are similar to those found when using the number ratified. The coefficient on the proportion of agreements ratified is positive and statistically significant for each of the models, providing support for Hypothesis One. The results for the control variables are similar to those found in Table 4.1.

The results for the models for aid from state donors using the treaty capital index are presented in Table B.1 in the appendix to this chapter. The coefficient on treaty capital is in the expected direction, and significant for the models without the lagged dependent variables, but are not statistically significant for the full model which includes the lagged dependent variable. The results for all donors are presented

| Fixed-Effects Models      |                      | Log Aid (State Donors) |                       |
|---------------------------|----------------------|------------------------|-----------------------|
| Num. Ratified<br>(Lagged) | 1.066***<br>(0.0689) | 0.558***<br>(0.0817)   | 0.118*<br>(0.0464)    |
| GDP per Cap.              |                      | -0.383***<br>(0.0764)  | -0.205***<br>(0.0414) |
| Population                |                      | 14.15<br>(11.52)       | 6.528<br>(6.126)      |
| Civil Conflict            |                      | 0.247<br>(0.711)       | -0.464<br>(0.595)     |
| Regime Type               |                      | 0.216**<br>(0.0661)    | 0.0866**<br>(0.0324)  |
| UN Ideal Point            |                      | 1.792***<br>(0.465)    | 1.109***<br>(0.228)   |
| Post Cold War             |                      | 1.665***<br>(0.329)    | 0.809***<br>(0.177)   |
| Post 2001                 |                      | -1.483***<br>(0.265)   | -0.518***<br>(0.137)  |
| Log Aid<br>(Lagged)       |                      |                        | 0.501***<br>(0.0230)  |
| Constant                  | 8.748***<br>(0.229)  | 13.03***<br>(0.799)    | 8.060***<br>(0.681)   |
| Observations              | 8595                 | 4660                   | 4660                  |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4.1: Total Ratified and Aid From State Donors

| Fixed-Effects Models       |                     | Log Aid (State Donors) |                       |
|----------------------------|---------------------|------------------------|-----------------------|
| Prop. Ratified<br>(lagged) | 9.184***<br>(0.526) | 3.334***<br>(0.502)    | 0.804**<br>(0.292)    |
| GDP per Cap.               |                     | -0.348***<br>(0.0724)  | -0.198***<br>(0.0406) |
| Population                 |                     | 14.39<br>(11.25)       | 6.504<br>(6.062)      |
| Civil Conflict             |                     | 0.329<br>(0.716)       | -0.442<br>(0.591)     |
| Regime Type                |                     | 0.236***<br>(0.0668)   | 0.0899**<br>(0.0325)  |
| UN Ideal Point             |                     | 1.791***<br>(0.472)    | 1.116***<br>(0.229)   |
| Post Cold War              |                     | 2.072***<br>(0.325)    | 0.891***<br>(0.175)   |
| Post 2001                  |                     | -0.769**<br>(0.244)    | -0.384**<br>(0.138)   |
| Log Aid<br>(lagged)        |                     |                        | 0.501***<br>(0.0227)  |
| Constant                   | 7.596***<br>(0.269) | 12.32***<br>(0.823)    | 7.876***<br>(0.676)   |
| Observations               | 8595                | 4660                   | 4660                  |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4.2: Proportion Ratified and Aid From State Donors

in Table B.3, Table B.4, and Table B.5 of the appendix to this chapter. The results for models using the number of conventions ratified in Table B.3 show a positive and statistically significant coefficient on the number agreements ratified. While the results for the proportion of agreements ratified in Table B.4 and treaty capital index in Table B.5 index are in the expected direction, they are not statistically significant for the full model with lagged dependent variable. Overall, these results provide measured support for the Hypothesis that states which ratify counterterrorism agreements see increases in foreign aid receipts from all donors.

#### **4.5.1 US Foreign Aid**

The results for the influence of ratification on foreign aid from the United States also provide support for Hypothesis One. The most narrowly focused type of aid considered here, United States Nonproliferation, Anti-Terrorism, Demining and Related Programs (NADR) is presented below in Table 4.3 for the number of agreements ratified and Table 4.4 for the proportion of agreements ratified. NADR aid has a special allocation process through the US Department of Defense and has largely focused on anti-terrorism. Because this type of anti-terrorism aid was not allocated before 1998, these models only cover the years between 1998 and 2013.

For both measures of ratification the coefficient is positive and statistically significant, suggesting that states which ratify counterterrorism conventions receive more NADR aid from the United States. This suggests that the United States takes into account ratification of counterterrorism conventions as the model predicts when allocating the aid most directly linked to counterterrorism. The results for treaty capital and NADR aid, presented in B.2 of the appendix are in the predicted direction,

| Fixed-Effects Models        | Log US NADR Aid     |                      |                      |
|-----------------------------|---------------------|----------------------|----------------------|
| Num. Ratified<br>(lagged)   | 0.887***<br>(0.116) | 0.729***<br>(0.163)  | 0.465***<br>(0.109)  |
| GDP per Cap.                |                     | 0.361<br>(0.214)     | 0.120<br>(0.143)     |
| Population                  |                     | 104.6**<br>(37.32)   | 69.85**<br>(25.76)   |
| Civil Conflict              |                     | 7.085***<br>(1.953)  | 7.485*<br>(2.915)    |
| Regime Type                 |                     | 0.610*<br>(0.297)    | 0.339<br>(0.239)     |
| UN Ideal Point              |                     | -0.450<br>(1.454)    | 0.281<br>(1.069)     |
| Post 2001                   |                     | 0.831*<br>(0.344)    | 0.306<br>(0.265)     |
| Log US NADR Aid<br>(lagged) |                     |                      | 0.378***<br>(0.0334) |
| Constant                    | -0.536<br>(0.694)   | -17.48***<br>(2.620) | -12.75***<br>(3.197) |
| Observations                | 2865                | 1514                 | 1379                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4.3: Total Ratification and United States NADR Aid

but are not statistically significant.

| Fixed-Effects Models        | Log US NADR Aid     |                      |                      |
|-----------------------------|---------------------|----------------------|----------------------|
| Prop. Ratified<br>(lagged)  | 7.026***<br>(0.947) | 5.628***<br>(1.278)  | 3.721***<br>(0.871)  |
| GDP per Cap.                |                     | 0.380<br>(0.213)     | 0.120<br>(0.143)     |
| Population                  |                     | 105.5**<br>(37.73)   | 69.85**<br>(25.76)   |
| Civil Conflict              |                     | 7.052***<br>(1.938)  | 7.485*<br>(2.915)    |
| Regime Type                 |                     | 0.619*<br>(0.297)    | 0.339<br>(0.239)     |
| UN Ideal Point              |                     | -0.457<br>(1.459)    | 0.281<br>(1.069)     |
| Post 2001                   |                     | 1.064**<br>(0.336)   | 0.306<br>(0.265)     |
| Log US NADR Aid<br>(lagged) |                     |                      | 0.378***<br>(0.0334) |
| Constant                    | -0.518<br>(0.714)   | -17.76***<br>(2.622) | -12.75***<br>(3.197) |
| Observations                | 2865                | 1514                 | 1379                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4.4: Proportion Ratified and United States NADR Aid

The results for US economic aid provide some support for the hypothesis that ratification leads to greater amounts of economic aid from the united states, however these results are not as robust as those for NADR aid<sup>4</sup>. Similarly, the models for US Military Aid provide some support for the hypothesis that ratification leads to greater amounts of military aid from the United States, but the results are not robust across all model specifications<sup>5</sup>.

<sup>4</sup>These results are presented in Table B.6, Table B.7, and TableB.8 of the appendix of this chapter.

<sup>5</sup>These results are presented in Table B.9, Table B.10, and TableB.11 of this chapter's appendix.

## 4.5.2 Individual Conventions: Terrorist Financing and Bombing Conventions

Next, I consider the influence of two particularly important conventions on the allocation of anti-terrorism NADR aid from the United States. The results of these models are presented in Table 4.5. The results support those found above using measures of ratification of all of the conventions.

| Ratification of:                 | Financing Conv.     |                      | Bombing Conv.       |                      |
|----------------------------------|---------------------|----------------------|---------------------|----------------------|
| Ratif. Finance Conv.<br>(lagged) | 2.422***<br>(0.578) | 1.747***<br>(0.456)  |                     |                      |
| Ratif. Bombing Conv.<br>(lagged) |                     |                      | 2.024***<br>(0.590) | 1.523**<br>(0.478)   |
| GDP per Cap.                     | 0.141<br>(0.217)    | -0.0375<br>(0.155)   | 0.213<br>(0.211)    | 0.0122<br>(0.152)    |
| Population                       | 98.62*<br>(40.13)   | 63.95*<br>(28.67)    | 110.0**<br>(38.70)  | 75.61**<br>(27.10)   |
| Civil Conflict                   | 0.510<br>(0.649)    | 0.245<br>(0.541)     | 0.615<br>(0.642)    | 0.324<br>(0.535)     |
| Regime Type                      | 0.605*<br>(0.298)   | 0.352<br>(0.236)     | 0.598*<br>(0.297)   | 0.337<br>(0.238)     |
| UN Ideal Point                   | -0.408<br>(1.399)   | 0.428<br>(1.036)     | -0.502<br>(1.465)   | 0.336<br>(1.075)     |
| Post 2001                        | 0.606<br>(0.362)    | 0.108<br>(0.276)     | 0.509<br>(0.373)    | 0.0537<br>(0.280)    |
| Num. Ratified                    | 0.296<br>(0.185)    | 0.181<br>(0.142)     | 0.367<br>(0.192)    | 0.217<br>(0.147)     |
| Lagged NADR Aid                  |                     | 0.364***<br>(0.0335) |                     | 0.370***<br>(0.0333) |
| Constant                         | -7.229*<br>(2.831)  | -3.019<br>(2.148)    | -8.463**<br>(2.614) | -3.964*<br>(1.993)   |
| Observations                     | 1514                | 1379                 | 1514                | 1379                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4.5: Terrorist Financing and Bombing Conventions and US NADR Aid

The left two columns presents the results for the financing convention. The coefficient on ratification of the Terrorist Financing Convention is positive and statistically significant for the model with and without the lagged dependent variable. This suggests that states see an increase in the amount of anti-terrorism aid from the United States if they ratify the Terrorist Financing Convention.

The results for ratification of the Terrorist Bombing Convention are presented in the right two columns of Table 4.5. The coefficient on ratification of the Terrorist Bombing Convention is positive and statistically significant for both models, suggesting that ratification of the convention leads to increases in receipts of anti-terrorism NADR aid from the United States.

### **4.5.3 Instrumental Variable Models**

Next, I take an instrumental variable approach to estimating the impact of ratification on foreign aid in an attempt to account for endogeneity concerns arising from strategic ratification of counterterrorism agreements. This approach requires an instrumental variable that is associated with ratification, but not associated with the errors of the second stage model. I use neighboring state ratification, measured as the average treaty capital of neighboring states, as an instrument for ratification. It is associated with ratification because the pressures driving ratification are at the regional level. However it is not likely associated with deviations in aid allocation or terror attacks from the predicted values in the second stage of each model.

Ratification by neighboring states is indicative of pressure for a state to ratify however, it is unlikely that ratification by neighboring states directly effects levels

of terrorism or that levels of terrorism influence neighboring ratification.<sup>6</sup> The t-statistics for the instrumental variable in the first stage are all highly significant and the F-statistics of excluding the instrument are highly significant suggesting high instrument strength (Sovey and Green 2011). This variable is lagged in order to correct for potential endogeneity.

| Instrumental Variable Models: Log Aid (State Donors) |                       |                       |
|------------------------------------------------------|-----------------------|-----------------------|
| Treaty Capital<br>(lagged)                           | 1.752**<br>(0.557)    | 0.831**<br>(0.321)    |
| GDP per Capita                                       | -0.363***<br>(0.0701) | -0.195***<br>(0.0374) |
| Population                                           | 0.00780<br>(0.0139)   | 0.00443<br>(0.00696)  |
| Civil Conflict                                       | -0.555<br>(0.355)     | -0.273<br>(0.197)     |
| Regime Type                                          | 0.0775<br>(0.0798)    | 0.0527<br>(0.0431)    |
| UN Ideal Point                                       | 2.145***<br>(0.532)   | 1.233***<br>(0.299)   |
| Post Cold War                                        | 2.154***<br>(0.354)   | 1.079***<br>(0.232)   |
| Post 2001                                            | 0.551<br>(0.298)      | 0.145<br>(0.159)      |
| Lag Foreign Aid<br>(logged)                          |                       | 0.463***<br>(0.0359)  |
| Observations                                         | 4693                  | 4693                  |
| Fixed Effects                                        | YES                   | YES                   |
| Instrumental Variable                                | YES                   | YES                   |

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4.6: Ratification and Foreign Aid: Instrumental Variable Models

<sup>6</sup>The use of neighboring state ratification as an instrumental variable due to diffusion and norms follows Buthe and Milner (2008).

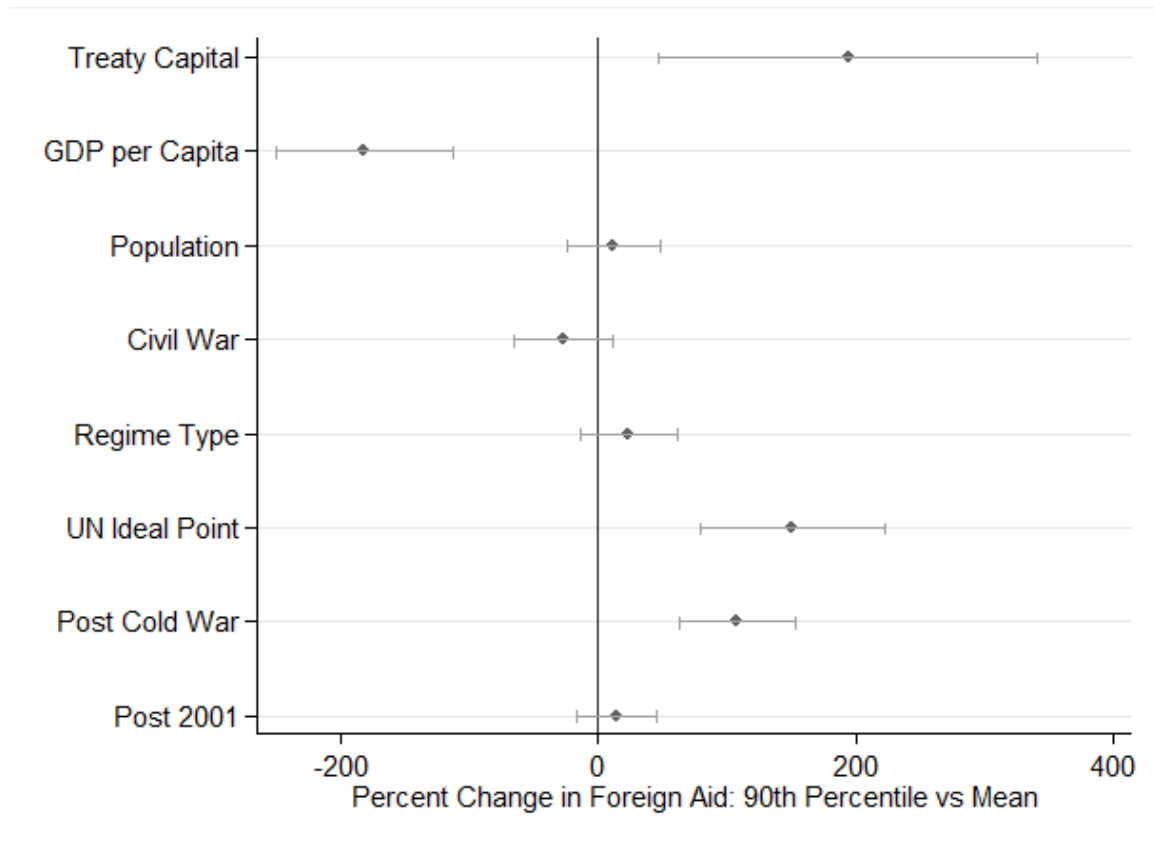


Figure 4.5: Ratification and Aid: Percent Change in Foreign Aid Moving from Mean to Ninetieth Percentile of Variable

Table 4.6 shows the results for the instrumental variable log-linear fixed-effects models. The coefficient on Treaty Capital is positive and significant. This suggests that ratification of counterterrorism conventions results in larger amounts of foreign aid as expected. The controls behave largely as expected. The coefficient on GDP per Capita is negative and significant. The coefficients on United Nations Ideal Point and post cold war are positive and significant.

Figure 4.5 presents the marginal effects at means as the percent change in the amount of foreign aid from state donors when moving from the mean to the 90th percentile of each variable in the full instrumental variable model on the right hand

side column of table 4.6. While the confidence intervals are large for treaty capital, the point estimate suggests an almost 200 percent increase in foreign aid when moving from being an average ratifier (mean treaty capital) to an extraordinary one (90th percentile treaty capital).

## 4.6 Conclusion

This chapter has investigated whether ratification of counterterrorism conventions leads to greater amounts of aid receipts as predicted by the theoretical model presented in Chapter Three. Across a wide array of model specifications and types of foreign aid ratification is associated with increased receipts of aid as expected. Donors are conditioning the amount of aid they allocate to countries based on whether they ratify the United Nations counterterrorism conventions. This is particularly the case for the case of the United States in its allocation of NADR anti-terrorism aid.

In the next chapter, I consider whether these increases in foreign aid receipts indeed lead to reductions in transnational terrorism as the theory presented above suggests.

## Chapter 5

# Empirics II: Ratification and the Suppression of Transnational Attacks

There are currently over 12,000 Standards and Recommended Practices contained in the 19 Annexes to the Chicago Convention, and it is through these provisions... that the global aviation system today is able to operate over 100,000 daily commercial flights, safely, securely and efficiently... Advocacy for increasing the level and sources of assistance support is yet another example of how UN counterterrorism bodies can aid the enhancement of civil aviation security

-Fang Liu, Secretary General of the International Civil Aviation Organization <sup>1</sup>

In this chapter I consider the second hypothesis, that aid is a more effective counterterrorism tool when a recipient state has ratified counterterrorism agreements. In other words, whether the agreements actually influence whether foreign aid suppresses transnational terrorism. I consider “effectiveness” in two main ways. The first

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<sup>1</sup>(Liu 2016)

measure is the number of transnational attacks perpetrated by a country's nationals in each year. If aid is effective as a counterterrorism tool, it should be associated with reductions in the number of transnational attacks perpetrated by a countries nationals.

The second is the duration of terrorist groups which is considered in Chapter 6. The more effective aid is, the more likely terrorist groups should be to fail. For both dependent variables I include an interaction term between treaty ratification and foreign aid as well as lower order terms for each to capture the proposition that aid is marginally more effective in states which ratify.

## 5.1 Transnational Attacks

The number of transnational attacks perpetrated by each state's nationals is drawn from the ITERATE dataset on transnational terrorism (Mickolus et al. 2011). This dataset only includes transnational attacks, making it the most appropriate for testing the theory. This data is available for years between 1968 and 2013. Table 5.1 presents the total number of attacks perpetrated by each countries national in this time period. Figure 5.1 presents the same information graphically as a map.

Some of the countries with the most attacks perpetrated by their nationals are: Colombia (438), Iran (360), Lebanon (353), Turkey (317), Cuba (242), Philippines (234), Iraq (222), Greece (280), Argentina (202), Peru (202), Pakistan (161), El Salvador (141), and Egypt (124). These countries closely fit what we typically consider haven states for counterterrorism, each has experienced periods of low state capacity during the time period covered which provide a space for terrorist groups to operate.

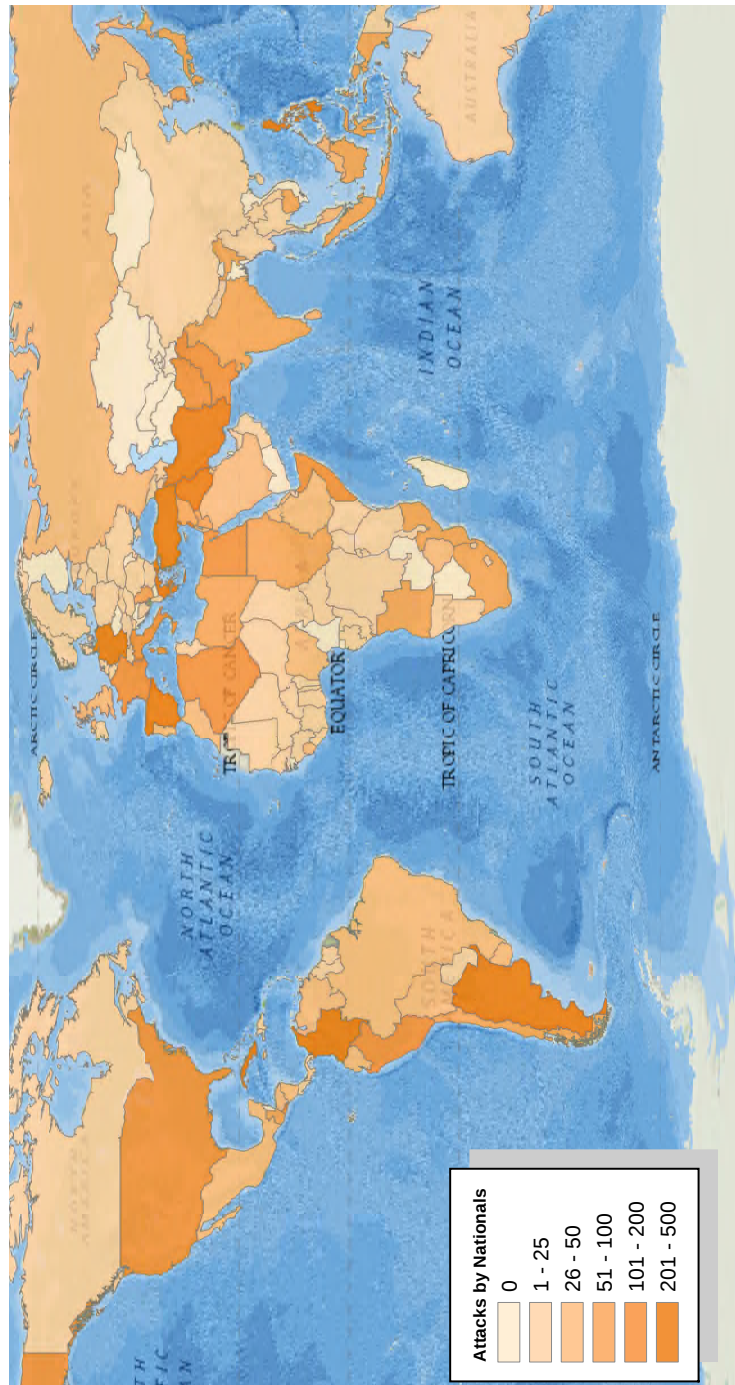


Figure 5.1: Transnational Attacks Perpetrated by Nationals 1968-2013

| Total Number of Transnational Attacks Perpetrated by Nationals 1968-2013 |     |             |     |                      |     |
|--------------------------------------------------------------------------|-----|-------------|-----|----------------------|-----|
| Afghanistan                                                              | 186 | France      | 244 | Pakistan             | 161 |
| Albania                                                                  | 19  | Gabon       | 4   | Panama               | 23  |
| Algeria                                                                  | 124 | Georgia     | 11  | Papua New Guinea     | 4   |
| Angola                                                                   | 81  | Germany     | 280 | Peru                 | 185 |
| Argentina                                                                | 202 | Greece      | 220 | Philippines          | 234 |
| Armenia                                                                  | 7   | Guatemala   | 88  | Poland               | 12  |
| Australia                                                                | 9   | Haiti       | 23  | Portugal             | 50  |
| Austria                                                                  | 9   | Honduras    | 48  | Romania              | 4   |
| Bahrain                                                                  | 10  | India       | 86  | Russia               | 50  |
| Bangladesh                                                               | 11  | Indonesia   | 69  | Rwanda               | 11  |
| Belarus                                                                  | 17  | Iran        | 360 | Saudi Arabia         | 63  |
| Belgium                                                                  | 23  | Iraq        | 222 | Sierra Leone         | 38  |
| Bolivia                                                                  | 41  | Ireland     | 18  | Singapore            | 5   |
| Bosnia                                                                   | 31  | Israel      | 44  | South Africa         | 52  |
| Brazil                                                                   | 26  | Italy       | 144 | South Korea          | 66  |
| Burundi                                                                  | 10  | Japan       | 72  | Spain                | 259 |
| Cambodia                                                                 | 79  | Jordan      | 92  | Sri Lanka            | 39  |
| Canada                                                                   | 18  | Kuwait      | 30  | Sudan                | 63  |
| Central African Rep.                                                     | 4   | Laos        | 4   | Suriname             | 5   |
| Chad                                                                     | 17  | Lebanon     | 353 | Sweden               | 13  |
| Chile                                                                    | 66  | Lesotho     | 4   | Switzerland          | 11  |
| China                                                                    | 37  | Liberia     | 26  | Syria                | 79  |
| Colombia                                                                 | 438 | Libya       | 97  | Thailand             | 12  |
| Congo                                                                    | 8   | Lithuania   | 25  | Togo                 | 4   |
| Costa Rica                                                               | 15  | Malaysia    | 48  | Tunisia              | 26  |
| Cuba                                                                     | 242 | Mali        | 11  | Turkey               | 317 |
| Cyprus                                                                   | 13  | Mexico      | 45  | Uganda               | 18  |
| Dem. Rep. of Congo                                                       | 9   | Morocco     | 33  | Ukraine              | 6   |
| Denmark                                                                  | 9   | Mozambique  | 59  | United Arab Emirates | 4   |
| Djibouti                                                                 | 5   | Myanmar     | 18  | United Kingdom       | 636 |
| Dominican Rep.                                                           | 18  | Nepal       | 7   | United States        | 351 |
| Ecuador                                                                  | 27  | Netherlands | 13  | Uruguay              | 35  |
| Egypt                                                                    | 124 | Nicaragua   | 45  | Venezuela            | 33  |
| El Salvador                                                              | 141 | Niger       | 9   | Yemen                | 107 |
| Eritrea                                                                  | 37  | Nigeria     | 98  | Zimbabwe             | 30  |
| Estonia                                                                  | 6   | North Korea | 5   |                      |     |
| Ethiopia                                                                 | 50  | Norway      | 4   |                      |     |

States with less than 4 attacks perpetrated by their nationals between 1968-2013 omitted.

Table 5.1: Total Number of Transnational Attacks by Perpetrator Nationality

However, there are also great powers included among the countries with the most attacks perpetrated by their nationals, including the United Kingdom (636), the United States (351), Germany (280), and France (244). These states are usually thought of as targets of transnational attacks, rather than states whose nationals perpetrate transnational attacks.

The high number of attacks perpetrated by nationals of these states is likely explained by the fact that nationals of targeted states are often recruited by foreign terrorists to provide “boots on the ground” for attacks in these countries. When such attacks have victims beyond the primary targeted states nationality, which is likely due to the cosmopolitan nature of these targets, then they are considered transnational attacks perpetrated by that countries nationals.

For instance, the attacks in Paris on November 13, 2015 coordinated by the Islamic State included not only Syrian nationals, but also French and Belgian nationals among its perpetrators (BBC News 2016). Victims of the attacks included French, Belgian, Bulgarian, and Portuguese nationals, among others (BBC News 2015). Therefore, this would be considered not only a transnational attack perpetrated by Syrian nationals, but also one perpetrated by French and Belgian nationals.

This 2015 Paris attacks illustrate a key reason why the counterterrorism conventions use informal enforcement based on the threat of foreign aid withdrawal rather than formal enforcement provisions. Informal enforcement allows powerful states to avoid potential consequences perpetration of attacks by their nationals while granting them leverage of less powerful states. While this obviously limits their ability to facilitate cooperation among developed states, it provides a political solution to the hesitance of great powers to subject themselves to the risk of enforcement in the

international security issue area.

The ITERATE dataset is based on media reports, therefore one potential issue with this dataset is non-reporting bias. Estimates may be biased if both the likelihood of an event being reported and the perpetrator nationality being known correlates with the independent variables of interest. This is unlikely to be the case, and if anything the enhanced transparency brought about by the ratification of treaties should bias estimates of the impact of treaty membership against the predicted relationship, because events in ratifying states will be more likely to be included.

For the terrorist attack models, I consider aid from state donors as well as Military and Economic foreign aid from the United States. I take two approaches to measure ratification in these models. First, I use the treaty capital index introduced in Chapter 4. This index is the number of agreements ratified minus the worldwide average number ratified. Therefore, it takes into account the overall development of the counterterrorism regime, as more states ratify more agreements, states are more heavily penalized for not ratifying. To illustrate this, Figure 5.2 plots the treaty capital index for Pakistan and Colombia.

As the figure shows, treaty capital for Colombia decreased throughout the 1980's and 1990's because it failed to ratify the 1979 Kidnapping Convention (among others) while other states ratified it. During this time the worldwide average increased while Colombia's did not. When Colombia ratified the convention in the 2005, their treaty capital increased. A similar trend is seen in Pakistan's treaty capital. In this way, the treaty capital index provides a relative measure of ratification that is centered around zero, the value for states which are average ratifiers.

In addition to this joint measure, I estimate models using ratification for each

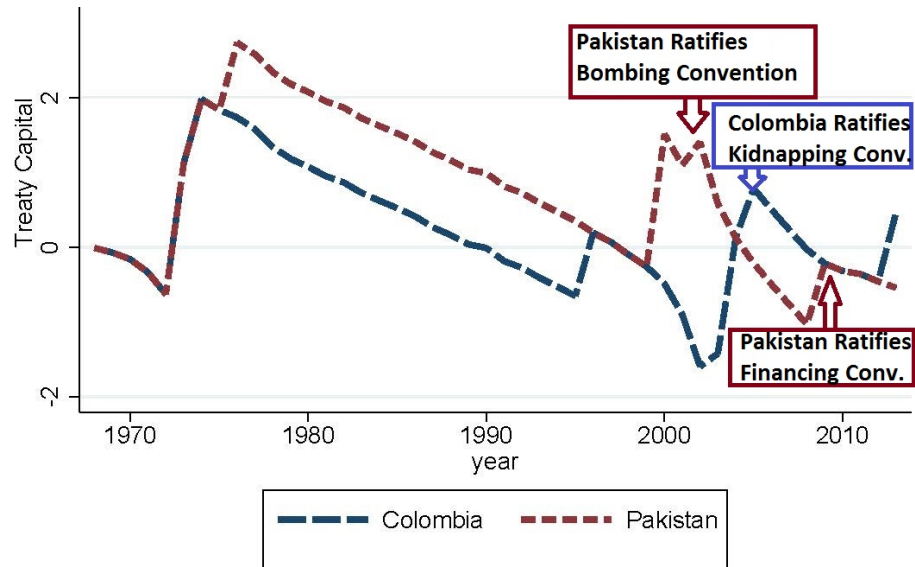


Figure 5.2: Treaty Capital: Colombia and Pakistan

individual convention separately. These conventions are organized by issue area and include terrorist bombing,<sup>2</sup> kidnapping,<sup>3</sup> aviation safety,<sup>4</sup> and financing.<sup>5</sup> In addition to each individual convention, models are estimated for whether a state has ratified all conventions in an issue area.

### 5.1.1 Control Variables

I also include covariates to control for factors that the quantitative literature on transnational terrorism suggests may be associated with levels of terrorism. Many of these overlap with controls in the models testing the first hypothesis, including GDP per Capita, population, civil conflict, and regime type. In the models testing

<sup>2</sup>Tables 5.3, C.2, and C.3.

<sup>3</sup>Tables 5.4, C.4, and C.5.

<sup>4</sup>Tables 5.5, C.6, and C.7.

<sup>5</sup>Table 5.6.

Hypothesis 2, I also control for colonial legacy (Alesina and Dollar 2000), interstate rivalry (Thompson and Dreyer 2011), and the Amnesty International measure of state use of torture and extrajudicial killings (Gibney et al. 2013).

***Colonial Legacy:*** This dichotomous variable captures whether a state was a colony during the 19th century drawing upon Alesina and Dollar’s measure of colonial legacy (2000) in order to account for the influence of colonial legacy on patterns of transnational terrorism and aid allocation.

***Interstate Rivalry:*** This variable uses Thompson and Dreyer’s measure of strategic rivalry to account for the influence of rivalry on international cooperation for counterterrorism (Findley, Piazza and Young 2012, Boutton 2014). This measure uses historical accounts to classify states as rivals when states consider each other competitors, the source of threats that may become militarized, and enemies (Thompson and Dreyer 2011).

***Political Terror:*** To operationalize government use of repression, we draw upon the Political Terror Scale published by Amnesty International. This provides a measure of state-sanctioned killings, torture, disappearances, and political imprisonment at the country level (Gibney et al. 2013) which may influence both ratification patterns and patterns of transnational terrorism.

### 5.1.2 Models: Attacks

I first estimate a series of fixed-effects Negative Binomial event count models using a lagged dependent variable to account for temporal autocorrelation (Beck and Katz 2011) in Table 5.2. Next, in Table C.1 I estimate similar models which differs in that it uses covariates for time, time squared, and time cubed rather than a lagged

dependent variable in order to account for temporal effects.

After these models which consider the joint impact of the United Nations counterterrorism regime, I estimate models using ratification for each individual convention separately. For these models, I use the dependent variable for the particular attack type they regard. First, I estimate the influence of the conventions in the bombing issue area on terrorist bombings. Next, I consider the impact of the kidnapping conventions on terrorist kidnappings. After that, I estimate models for the air safety conventions using the dependent variable of aerial hijackings. Finally I estimate models for ratification of the terrorist financing convention using all transnational attacks.

Next, I estimate models to take into account that relative to the number of units of observation, terrorism is a rare event. To do so, I employ a zero-inflated binomial model of terrorist attacks. The results of the rare events models are presented in Table C.8. The left-most column reports of the following tables reports the results from the zero inflated Negative Binomial (ZINB) model, the column on the right reports the same ZINB model results with the addition of a lagged dependent variable.

In final terrorist attack model as a robustness check, I take an instrumental variable approach in an attempt to address endogeneity concerns similar to those discussed above in Chapter 4. This model uses adjacent state ratification as an instrument for ratification. See Chapter Four for a discussion of this variable as an instrument for ratification.

### 5.1.3 Results: Transnational Attacks

Table 5.2 presents the results of the Negative Binomial count models used to test Hypothesis 2. The first model on the left is a fixed effects Negative Binomial model. The second model is the same, except it does not include foreign aid or its interaction with Treaty Capital. The third model is the same as the first, except it includes the lagged dependent variable. The fourth model is the same as the third, except it does not include the foreign aid terms. Overall, these results indicate that the interaction between Treaty Capital and foreign aid is significant and negative for a wide range of model specifications.

Table C.1, presented in the appendix to this chapter, presents similar models which use temporal covariates for time, time squared, and time cubed rather than a lagged dependent variable. The results of these models is substantively similar to those in Table 5.2. The coefficient on the interaction between ratification and foreign aid is negative and significant.

Figure 5.3 illustrates the marginal effect of foreign aid on the number of transnational terrorism events for different values of Counterterrorism Treaty Capital. This shows that for states that have not ratified the United Nations conventions, foreign aid is associated with an increase in transnational attacks. This finding echoes recent arguments that due to moral hazard problems in the use of aid for counterterrorism (Bapat 2011). Without agreements, foreign aid does not reliably reduce the number of attacks originating from the recipient. However, these results suggest that as states ratify the United Nations conventions this misappropriation of aid is constrained. Strikingly, when states have ratified more than the worldwide average ratified, foreign aid is predicted to have a negative and significant reduction

|                            | FE Neg. Bin.                | FE Neg. Bin.              | FE Neg. Bin.                | FE Neg. Bin.               |
|----------------------------|-----------------------------|---------------------------|-----------------------------|----------------------------|
| Treaty Capital<br>(lagged) | 0.000245<br>(0.0248)        | -0.0425<br>(0.0234)       | -0.00582<br>(0.0248)        | -0.0424<br>(0.0234)        |
| Foreign Aid                | 0.000563***<br>(0.000124)   |                           | 0.000458***<br>(0.000122)   |                            |
| Treaty Cap.x For. Aid      | -0.000371***<br>(0.0000622) |                           | -0.000304***<br>(0.0000604) |                            |
| Population                 | -0.000713*<br>(0.000351)    | -0.000611<br>(0.000333)   | -0.000656<br>(0.000351)     | -0.000582<br>(0.000335)    |
| GDP per Capita             | 0.00000467<br>(0.0000119)   | 0.00000621<br>(0.0000117) | 0.000000281<br>(0.0000120)  | 0.000000572<br>(0.0000118) |
| Regime Type                | 0.0741***<br>(0.0157)       | 0.0847***<br>(0.0155)     | 0.0679***<br>(0.0157)       | 0.0764***<br>(0.0156)      |
| Political Terror           | 0.374***<br>(0.0405)        | 0.376***<br>(0.0406)      | 0.334***<br>(0.0409)        | 0.335***<br>(0.0410)       |
| Civil Conflict             | 0.343***<br>(0.0841)        | 0.317***<br>(0.0845)      | 0.330***<br>(0.0840)        | 0.300***<br>(0.0842)       |
| Post Cold War              | -0.368***<br>(0.0662)       | -0.391***<br>(0.0662)     | -0.373***<br>(0.0661)       | -0.391***<br>(0.0661)      |
| Post 2001                  | -0.691***<br>(0.0936)       | -0.658***<br>(0.0932)     | -0.624***<br>(0.0941)       | -0.586***<br>(0.0936)      |
| Rivalry                    | 0.264**<br>(0.0954)         | 0.255**<br>(0.0952)       | 0.275**<br>(0.0957)         | 0.273**<br>(0.0956)        |
| Colonial Legacy            | -0.343*<br>(0.142)          | -0.307*<br>(0.140)        | -0.309*<br>(0.142)          | -0.283*<br>(0.141)         |
| Lagged DV                  |                             |                           | 0.0156***<br>(0.00212)      | 0.0167***<br>(0.00209)     |
| Constant                   | -1.911***<br>(0.219)        | -1.961***<br>(0.218)      | -1.793***<br>(0.219)        | -1.827***<br>(0.219)       |
| Observations               | 3030                        | 3030                      | 3030                        | 3030                       |
| Fixed Effects              | YES                         | YES                       | YES                         | YES                        |

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5.2: Ratification, Foreign Aid, and Transnational Attacks: Fixed Effects Negative Binomial Models

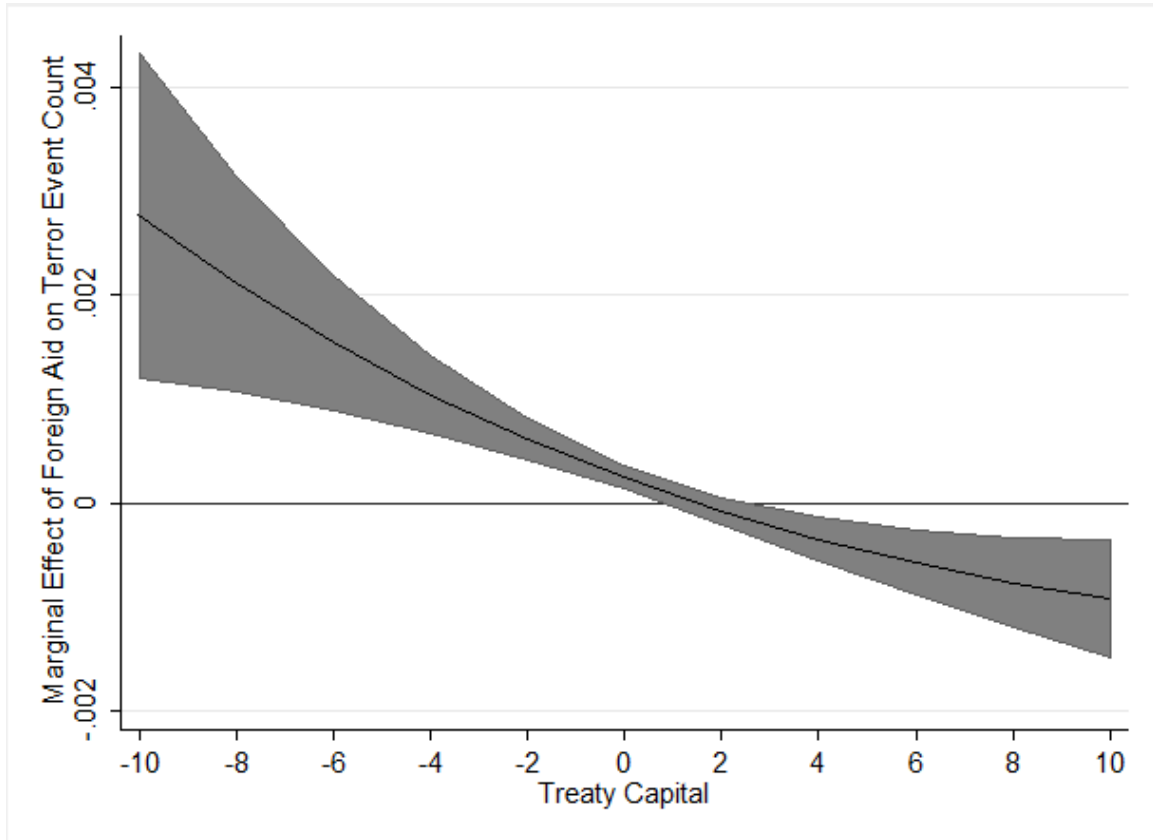


Figure 5.3: Treaty Capital and Transnational Terrorism: Marginal Effects at Means transnational attacks.

This negative and statistically significant interaction coefficient between Treaty Capital and foreign aid suggests that treaty ratification can help mitigate misappropriation of foreign aid by increasing transparency. I include models without foreign aid and the interaction term and find that while the sign of Treaty Capital is negative, it is not statistically significant. This suggests that the UN conventions foster cooperation for counterterrorism through the foreign aid mechanism presented in the formal model.

## Bombings

The results for the models considering ratification of the terrorist bombing conventions using aid from state donors are presented in Table 5.3. These models use only terrorist bombings, not all transnational attacks, as their dependent variable. The left most column considers the impact of ratification of both bombing conventions with a dichotomous variable that is equal to one if a state has ratified both the Bombing Convention and the Plastic Explosives Convention and zero otherwise. The second column considers ratification of the Bombing Convention only. The third column considers ratification of the Plastic Explosives Convention only.

The substantive results for each are similar. The coefficient on ratification is negative and statistically significant, suggesting that ratification of the conventions in this issue areas were associated with a reduction in bombings. However, the coefficient on foreign aid and the interaction term are positive and significant, which does not support the expectation that ratification enhances the effectiveness of foreign aid at reducing transnational attacks.

Figure 5.4 shows the marginal effect at means of ratification of the bombing conventions on the number of terrorist bombings perpetrated by a states nationals for values of foreign aid between 0 and 500 million USD. The marginal effect indicates that ratification of the conventions does indeed reduce the number of terrorist bombings perpetrated, and that while significant the substantive impact of foreign aid is too slight to swamp the beneficial effect of ratification.

Table C.2 and Table C.3, located in the appendix to this chapter, present the results for United States military aid and economic aid, respectively. The results of both are similar substantively to the findings for aid from all state donors. The co-

| Ratification of:          | Both Conventions          | Bombing Conv.            | Plastic Explosives Conv. |
|---------------------------|---------------------------|--------------------------|--------------------------|
| Ratification<br>(lagged)  | -0.937***<br>(0.239)      | -0.822***<br>(0.237)     | -0.412*<br>(0.180)       |
| Foreign Aid<br>(lagged)   | 0.000784***<br>(0.000231) | 0.000694**<br>(0.000243) | 0.000653*<br>(0.000269)  |
| Ratification $\times$ Aid | 0.00431***<br>(0.00118)   | 0.00267***<br>(0.000761) | 0.00215***<br>(0.000498) |
| Population                | -0.454<br>(0.482)         | -0.368<br>(0.485)        | -0.331<br>(0.481)        |
| GDP per Cap.              | 0.0299*<br>(0.0145)       | 0.0242<br>(0.0143)       | 0.0244<br>(0.0145)       |
| Regime Type               | 0.0928***<br>(0.0210)     | 0.0986***<br>(0.0210)    | 0.0922***<br>(0.0211)    |
| Political Terror          | 0.293***<br>(0.0547)      | 0.302***<br>(0.0546)     | 0.282***<br>(0.0547)     |
| Civil Conflict            | 0.573***<br>(0.105)       | 0.547***<br>(0.104)      | 0.577***<br>(0.106)      |
| Post Cold War             | 0.0671<br>(0.184)         | 0.0675<br>(0.184)        | 0.0318<br>(0.183)        |
| Post 2001                 | 0.214<br>(0.224)          | 0.189<br>(0.223)         | 0.186<br>(0.230)         |
| Rivalry                   | 0.338*<br>(0.134)         | 0.335*<br>(0.134)        | 0.360**<br>(0.134)       |
| Constant                  | -5.485***<br>(0.886)      | -5.647***<br>(0.888)     | -4.902***<br>(0.881)     |
| Observations              | 2517                      | 2517                     | 2517                     |
| Fixed Effects             | YES                       | YES                      | YES                      |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5.3: Ratification of Terrorist Bombing Conventions, Foreign Aid (State Donors), and Terrorist Bombings

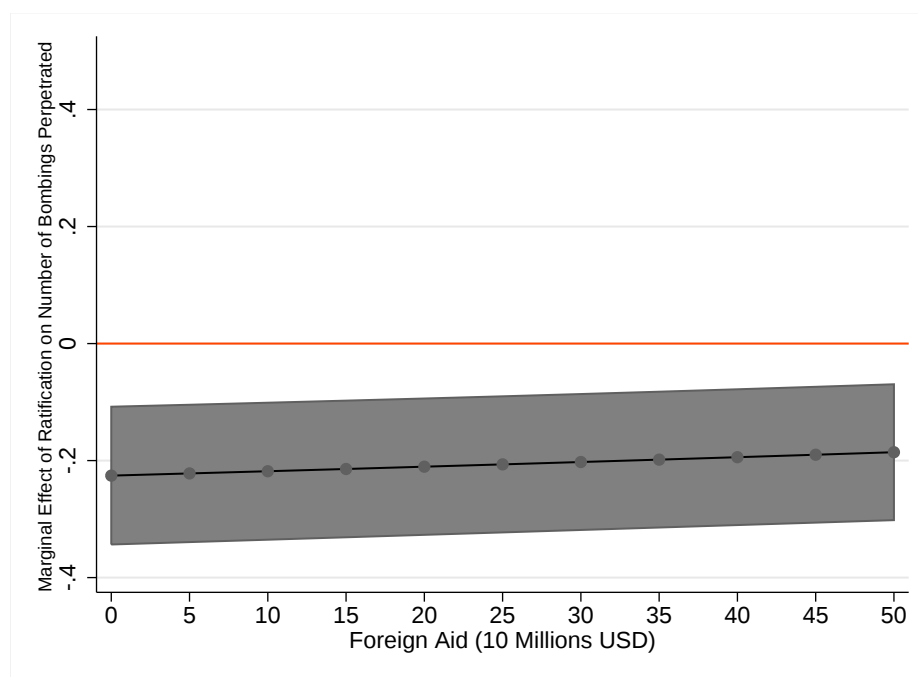


Figure 5.4: Ratification of Bombing Conventions: Marginal Effect on Terrorist Bombings at Means

efficients on Ratification are negative and statistically significant, but the coefficients on aid and the interaction term are positive and significant for each model.

## **Kidnappings**

The results for the influence of ratification of the Hostages Convention and the Diplomat Convention on terrorist kidnappings is presented in Table 5.4. These models use kidnappings only, not all terrorist attacks as its dependent variable. The first column presents the results using a dichotomous variable for ratification of both conventions. The second column presents the results for the Hostages Convention. The third column presents results for the Diplomat Convention.

The results indicate that the conventions are associated with reduction in terrorist kidnappings. The coefficient on ratification is negative and significant for the Hostages Convention, the Diplomat Convention and for ratification of both. The results for foreign aid are mixed. The coefficient on foreign aid is positive and significant for each model. This may reflect the fact that foreign aid workers are often targets for terrorist kidnappings. However, the interaction term for the diplomatic agents convention is negative and significant, suggesting that ratification of the Diplomatic Agents Convention may be associated with a reduction in the increase in kidnappings associated with aid.

The substantive impacts of foreign aid on kidnappings pale in comparison to ratification. Figure 5.5 presents the marginal effect at means of ratification of the Convention Against Hostage-Taking on terrorist kidnappings. As the figure shows, there is a statistically significant marginal effect of ratification for all values of foreign aid between 0 and 500 million USD of Foreign Aid.

| Ratification of:          | Both Conventions          | Hostages Conv.            | Diplomat Conv.            |
|---------------------------|---------------------------|---------------------------|---------------------------|
| Ratification<br>(lagged)  | -0.599**<br>(0.183)       | -0.619***<br>(0.175)      | -0.294*<br>(0.148)        |
| Foreign Aid<br>(lagged)   | 0.000947***<br>(0.000229) | 0.000921***<br>(0.000232) | 0.00280***<br>(0.000430)  |
| Ratification $\times$ Aid | 0.00120<br>(0.000741)     | 0.00139<br>(0.000723)     | -0.00185***<br>(0.000469) |
| Population                | -1.133<br>(0.755)         | -1.228<br>(0.744)         | -0.791<br>(0.759)         |
| GDP per Cap.              | 0.0118<br>(0.0223)        | 0.0123<br>(0.0222)        | 0.00391<br>(0.0221)       |
| Regime Type               | 0.120***<br>(0.0257)      | 0.122***<br>(0.0257)      | 0.0996***<br>(0.0254)     |
| Political Terror          | 0.376***<br>(0.0633)      | 0.384***<br>(0.0633)      | 0.372***<br>(0.0633)      |
| Civil Conflict            | 0.698***<br>(0.126)       | 0.701***<br>(0.126)       | 0.728***<br>(0.127)       |
| Post Cold War             | -0.380<br>(0.219)         | -0.400<br>(0.219)         | -0.351<br>(0.217)         |
| Post 2001                 | -0.836**<br>(0.291)       | -0.862**<br>(0.291)       | -0.848**<br>(0.297)       |
| Rivalry                   | 0.148<br>(0.161)          | 0.161<br>(0.161)          | 0.165<br>(0.161)          |
| Constant                  | -2.498**<br>(0.955)       | -2.439*<br>(0.951)        | -2.363*<br>(0.955)        |
| Observations              | 2363                      | 2363                      | 2363                      |
| Fixed Effects             | YES                       | YES                       | YES                       |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5.4: Ratification of Terrorist Kidnapping Conventions, Foreign Aid (State Donors), and Terrorist Hostage-Taking

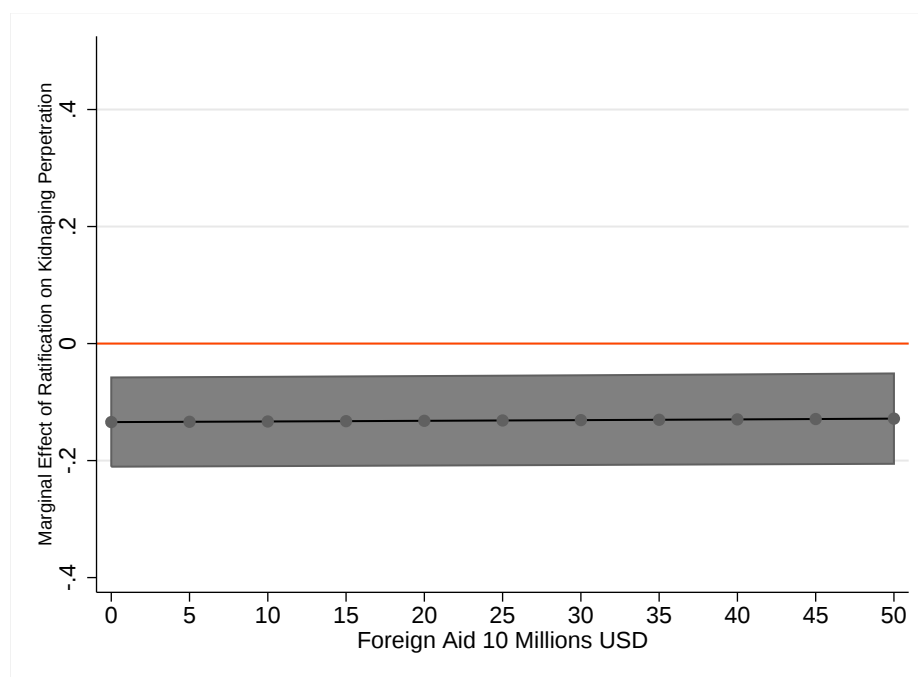


Figure 5.5: Ratification of Convention Against Hostage-Taking: Marginal Effect on Terrorist Kidnappings at Means

Appendix Table C.4 presents the same models using US foreign aid instead of aid from all state donors. The results on ratification are similar to those for all state donors. The coefficient for each of the conventions is negative and significant, as is the coefficient on their joint ratification. However, the coefficient on US military aid is not significant for the Hostages Convention and is positive and significant for the Diplomatic Agents Convention. The interaction term is negative but does not obtain significance at the .05 level. Contrary to the expectations of the theoretical model, the coefficient for the interaction term for the Hostages coefficient is positive and significant. Similarly, the results for US economic aid, presented in Table C.5 show a negative and significant coefficient for ratification for both conventions, however the coefficient on economic aid is small, positive, and significant.

### **Hijackings of Aircraft**

The results for the influence of the air safety conventions on terrorist hijackings of aircraft are presented in Table 5.5. The coefficient on the interaction term is negative and significant as expected for each of the air safety conventions except for the Air Safety Offenses Convention.

However, the coefficient on ratification is positive and significant for each of these conventions except the civil aviation convention. The conventions on the Hijacking of Aircraft were the first in the United Nations Counterterrorism Regime. They were introduced due the rise in the use of hijacking of aircraft as a terrorist strategy for raising revenue. The stark increase in air travel since 1963 and the associated increase in hijacking and challenges for air safety may explain this unexpected result.

| Ratification of:         | All Conv's.            | Air Off. Conv.       | Seizure Conv.          | Civ. Avia. Conv.       |
|--------------------------|------------------------|----------------------|------------------------|------------------------|
| Ratification<br>(lagged) | 0.882*<br>(0.408)      | 1.152*<br>(0.450)    | 0.855*<br>(0.425)      | 0.763<br>(0.414)       |
| Foreign Aid<br>(lagged)  | 0.00752*<br>(0.00317)  | 0.0122<br>(0.00658)  | 0.00744*<br>(0.00320)  | 0.00716*<br>(0.00318)  |
| Ratif. $\times$ Aid      | -0.00696*<br>(0.00314) | -0.0116<br>(0.00662) | -0.00687*<br>(0.00318) | -0.00659*<br>(0.00315) |
| Population               | -1.409*<br>(0.687)     | -1.517*<br>(0.683)   | -1.395*<br>(0.686)     | -1.379*<br>(0.685)     |
| GDP per Cap.             | -0.0719<br>(0.0664)    | -0.0796<br>(0.0667)  | -0.0739<br>(0.0662)    | -0.0740<br>(0.0660)    |
| Regime Type              | -0.0249<br>(0.0641)    | -0.0165<br>(0.0635)  | -0.0208<br>(0.0637)    | -0.0199<br>(0.0638)    |
| Political Terror         | 0.395**<br>(0.141)     | 0.406**<br>(0.142)   | 0.387**<br>(0.141)     | 0.393**<br>(0.141)     |
| Civil Conflict           | 0.385<br>(0.275)       | 0.351<br>(0.275)     | 0.390<br>(0.274)       | 0.386<br>(0.274)       |
| Post Cold War            | -0.0264<br>(0.474)     | -0.0282<br>(0.473)   | -0.0370<br>(0.473)     | -0.0385<br>(0.473)     |
| Post 2001                | -0.812<br>(0.623)      | -0.813<br>(0.623)    | -0.814<br>(0.625)      | -0.810<br>(0.625)      |
| Rivalry                  | -0.553<br>(0.438)      | -0.537<br>(0.443)    | -0.548<br>(0.439)      | -0.558<br>(0.438)      |
| Constant                 | -2.505<br>(2.014)      | -2.513<br>(2.007)    | -2.630<br>(2.013)      | -2.596<br>(2.012)      |
| Observations             | 1478                   | 1478                 | 1478                   | 1478                   |
| Fixed Effects            | YES                    | YES                  | YES                    | YES                    |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5.5: Ratification of Aviation Conventions, Foreign Aid (State Donors), and the Hijacking of Aircraft

## Financing

Table 5.6 presents the results for ratification of the Financing Convention. The first column presents the results from the model using aid from state donors. The second column presents the results for US economic aid and the third column uses US military aid. The coefficient on ratification is negative and significant for all of the models, indicating that ratification of the Financing Convention is associated with a decrease in transnational attacks.

For the state donors model on foreign aid is negative and significant, however the coefficient on the interaction term is positive and significant. Figure 5.6 presents the marginal effects of ratification of the convention on the number of attacks perpetrated at means for this model. For the US economic aid and US military aid models, the coefficient on aid is positive and significant, as is the coefficient on the interaction term.

### 5.1.4 Robustness: Rare Events and Instrumental Variable Models

The results from the rare events estimation is presented in Table C.8 of the appendix to this chapter. The left-most column reports of the following tables reports the results from the zero inflated Negative Binomial (ZINB) model, the column on the right reports the same ZINB model results with the addition of a lagged dependent variable.

Table C.9 of this chapter's appendix presents the results from Negative Binomial models without fixed effects or instrumental variables in the two leftmost columns and the results from instrumental variable models in the two columns on the

|                          | State Donors             | US Economic Aid          | US Military Aid         |
|--------------------------|--------------------------|--------------------------|-------------------------|
| Ratification<br>(lagged) | -0.777***<br>(0.194)     | -0.659***<br>(0.191)     | -0.476**<br>(0.183)     |
| Aid<br>(lagged)          | -0.000107<br>(0.000155)  | 0.00232***<br>(0.000515) | 0.00205**<br>(0.000710) |
| Ratif. $\times$ Aid      | 0.00170***<br>(0.000406) | 0.0126***<br>(0.00244)   | 0.00294*<br>(0.00138)   |
| Population               | -0.516<br>(0.316)        | -0.319<br>(0.309)        | -0.296<br>(0.308)       |
| GDP per Cap.             | 0.00974<br>(0.0111)      | 0.0154<br>(0.0110)       | 0.00970<br>(0.0108)     |
| Regime Type              | 0.0696***<br>(0.0164)    | 0.0582***<br>(0.0164)    | 0.0662***<br>(0.0162)   |
| Political Terror         | 0.332***<br>(0.0416)     | 0.323***<br>(0.0419)     | 0.330***<br>(0.0418)    |
| Civil Conflict           | 0.426***<br>(0.0796)     | 0.453***<br>(0.0800)     | 0.430***<br>(0.0794)    |
| Post Cold War            | -0.129<br>(0.139)        | -0.112<br>(0.138)        | -0.117<br>(0.139)       |
| Post 2001                | -0.268<br>(0.170)        | -0.281<br>(0.170)        | -0.286<br>(0.171)       |
| Rivalry                  | 0.194*<br>(0.0975)       | 0.163<br>(0.0977)        | 0.171<br>(0.0978)       |
| Constant                 | -4.257***<br>(0.671)     | -4.217***<br>(0.666)     | -4.206***<br>(0.670)    |
| Observations             | 3110                     | 3110                     | 3110                    |
| Fixed Effects            | YES                      | YES                      | YES                     |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5.6: Ratification of Terrorist Financing Convention, Foreign Aid, and Transnational Attacks

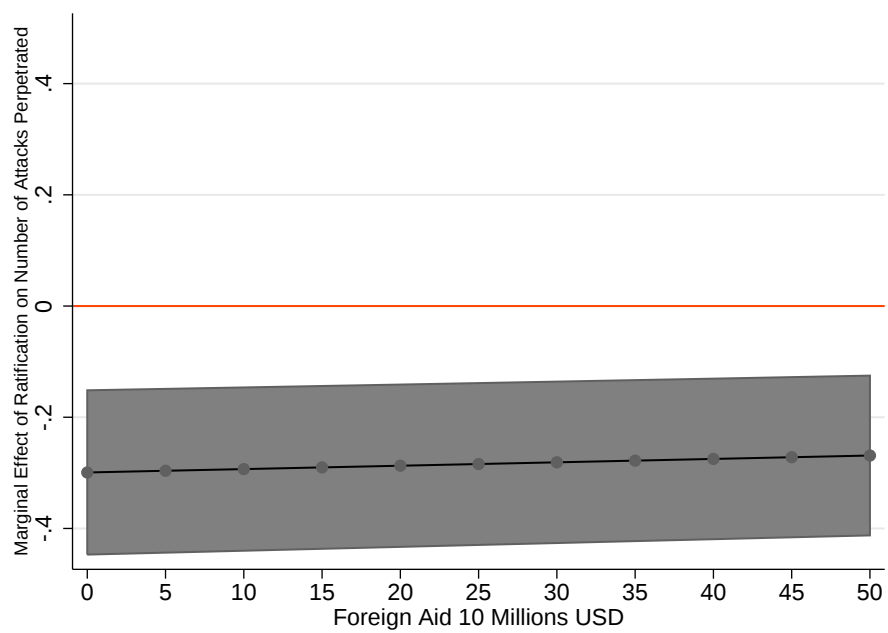


Figure 5.6: Ratification of Financing Convention: Marginal Effect on Terrorist Attacks

right. These models, like the instrumental variable models discussed in Chapter 4, use the average ratification of neighboring states as an instrument for treaty ratification. These results show broad support for the findings of the models without an instrumental variable.

## 5.2 Conclusion

Overall, the results on transnational attacks provide support for the second hypothesis. Aid is associated with reductions in transnational terrorism for states which ratify counterterrorism agreements across a variety of model specifications using both temporal covariates and lagged depended variable for the models considering the joint impact of the UN counterterrorism regime. These results are echoed by the instrumental variable and rare events models presented in the appendix.

The results for the individual conventions are mixed. The coefficients on ratification are negative and statistically significant, suggesting that ratification of the conventions is associated with reductions in attacks perpetrated by the ratifying states nationals. However, the results for foreign aid do not show the predicted negative coefficient on the interaction between ratification and aid. The overall effect of ratification but insignificance of the interaction term and pessimistic results for foreign aid may be due to strategic substitution by terrorists between different attack modes. Because these models consider particular attack modes in isolation, they do not account for such contingencies. In addition, bombings and kidnappings are very often targeted at foreign aid workers, which may help explain these results.

Therefore, there is support that the United Nations counterterrorism conventions as a whole do help curb donor misappropriation. When considered individually,

convention ratification is associated with reductions in transnational attacks, however the same support is not found for the interaction between aid and ratification. In the next, I consider whether the agreements influence the role of aid on the duration of terrorist groups.

## Chapter 6

# Empirics III: Terrorist Group Duration

These treaties are a major component of our international strategy to develop a comprehensive framework of agreements that obligate nations to criminalize terrorist conduct, to assist one another in the investigation and prosecution of these crimes, and to extradite alleged offenders to another country with jurisdiction or submit the case for prosecution.

-U.S. Ambassador Francis X. Taylor <sup>1</sup>

In this chapter, I consider how treaty ratification and foreign aid influence the duration of terrorist groups using grouped duration models. The dependent variable for these models is a dichotomous variable which is 1 if the terrorist group dissolves and 0 otherwise. The duration data is based on the Jones and Libicki (2006) data on terrorist group dissolution.

For context, Table 6.1 presents the number of unique terrorist groups and the average US aid per year in Constant 2011 USD. To increase readability, average aid

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<sup>1</sup>(Taylor 2001)

is in ten millions of dollars. Bangladesh, India, Indonesia, Iraq, Israel, Pakistan, The Philippines, and Turkey are among the states with the highest number of terrorist groups between 1968 and 2006.

Figure 6.1 shows a histogram of group survival for those groups which failed before 2006. By far, the modal longevity of terrorists groups in the data is one year or less. More than 150 of the groups which failed between 1968 and 2006 lasted less than one year. However past that the duration of survival is heterogeneous. Many groups failed within ten years but some groups lasted as many as 35 years before dissolving. The analysis that follows asks whether treaty ratification helps explain the heterogeneity in group survival. Does ratification improve the ability of aid to build capacity to eliminate terrorist groups within its recipients? In the next section, I discuss the research design employed to consider how ratification influences the conditional effect of foreign aid on the probability of group failure.

## 6.1 Research Design

The group duration analysis belows employs a repeated logit grouped duration design which is organized at the country-year level with the dependent variable taking a value of 1 if the group fails in year  $t$ . The data on group duration is available from 1968-2006.

As in the previous chapter, I use multiple measures of ratification of the counterterrorism conventions, including the proportion of agreements ratified, and the Treaty Capital Index. Each captures slightly different aspects of a states participation in the international counterterrorism regime as discussed in the previous two chapters.

| Country            | Avg. US Aid<br>(10 mil. USD) | # of Groups<br>(1968-2006) | Country        | Avg. US Aid<br>(10 mil. USD) | # of Groups<br>(1968-2006) |
|--------------------|------------------------------|----------------------------|----------------|------------------------------|----------------------------|
| Afghanistan        | 86.325905                    | 6                          | Laos           | 0.74717772                   | 1                          |
| Albania            | 5.9383163                    | 1                          | Latvia         | 1.4054407                    | 1                          |
| Algeria            | 0.25157642                   | 3                          | Lebanon        | 5.7766042                    | 10                         |
| Angola             | 2.742564                     | 4                          | Liberia        | 6.869081                     | 1                          |
| Argentina          | 4.8134489                    | 4                          | Libya          | 0.10748935                   | 4                          |
| Austria            | 0.0021213                    | 2                          | Macedonia      | 3.472542                     | 1                          |
| Bangladesh         | 22.266037                    | 10                         | Malaysia       | 0.28132904                   | 1                          |
| Bolivia            | 20.763588                    | 2                          | Mexico         | 5.9648013                    | 5                          |
| Brazil             | 67.358246                    | 4                          | Morocco        | 10.882223                    | 3                          |
| Cambodia           | 15.965096                    | 1                          | Mozambique     | 4.813344                     | 1                          |
| Chad               | 2.8627467                    | 1                          | Myanmar        | 0.92408592                   | 4                          |
| Chile              | 3.2942786                    | 6                          | Nepal          | 4.8235164                    | 2                          |
| China              | 2.4058707                    | 3                          | Nicaragua      | 6.3547101                    | 2                          |
| Colombia           | 32.90963                     | 8                          | Nigeria        | 11.835159                    | 4                          |
| Costa Rica         | 5.0676432                    | 1                          | Pakistan       | 47.540993                    | 25                         |
| Cyprus             | 1.9091733                    | 1                          | Panama         | 11.478371                    | 2                          |
| DR Congo           | 7.5126109                    | 3                          | Peru           | 23.273195                    | 3                          |
| Dominican Republic | 10.321556                    | 1                          | Philippines    | 29.70442                     | 10                         |
| Ecuador            | 8.0394163                    | 3                          | Portugal       | 13.329846                    | 2                          |
| Egypt              | 310.39371                    | 6                          | Saudi Arabia   | 0.11397266                   | 2                          |
| El Salvador        | 41.10001                     | 4                          | Sierra Leone   | 3.2810133                    | 1                          |
| Ethiopia           | 13.473034                    | 5                          | South Africa   | 6.1658354                    | 2                          |
| France             | 0.010885237                  | 16                         | Spain          | 18.358904                    | 5                          |
| Georgia            | 11.429892                    | 1                          | Sri Lanka      | 10.701817                    | 3                          |
| Greece             | 39.306129                    | 5                          | Swaziland      | 0.040833101                  | 1                          |
| Guatemala          | 11.207952                    | 5                          | Syria          | 3.6038611                    | 2                          |
| Haiti              | 9.2333517                    | 2                          | Tajikistan     | 5.9394803                    | 1                          |
| Honduras           | 22.85638                     | 4                          | Thailand       | 3.4227581                    | 5                          |
| India              | 31.290943                    | 30                         | Turkey         | 61.129215                    | 15                         |
| Indonesia          | 29.398998                    | 10                         | Uganda         | 12.855466                    | 3                          |
| Iran               | 0.063372247                  | 4                          | United Kingdom | 0.051038306                  | 12                         |
| Iraq               | 489.76862                    | 24                         | Uruguay        | 3.822118                     | 2                          |
| Israel             | 454.9054                     | 21                         | Uzbekistan     | 7.247951                     | 2                          |
| Italy              | 0.40604112                   | 15                         | Venezuela      | 1.3444091                    | 5                          |
| Japan              | 2.973496                     | 5                          | Yemen          | 4.3019528                    | 3                          |
| Jordan             | 48.473106                    | 1                          | Zimbabwe       | 0.43013936                   | 1                          |

Table 6.1: Average US Foreign Aid and Number of Terrorist Groups 1968-2006

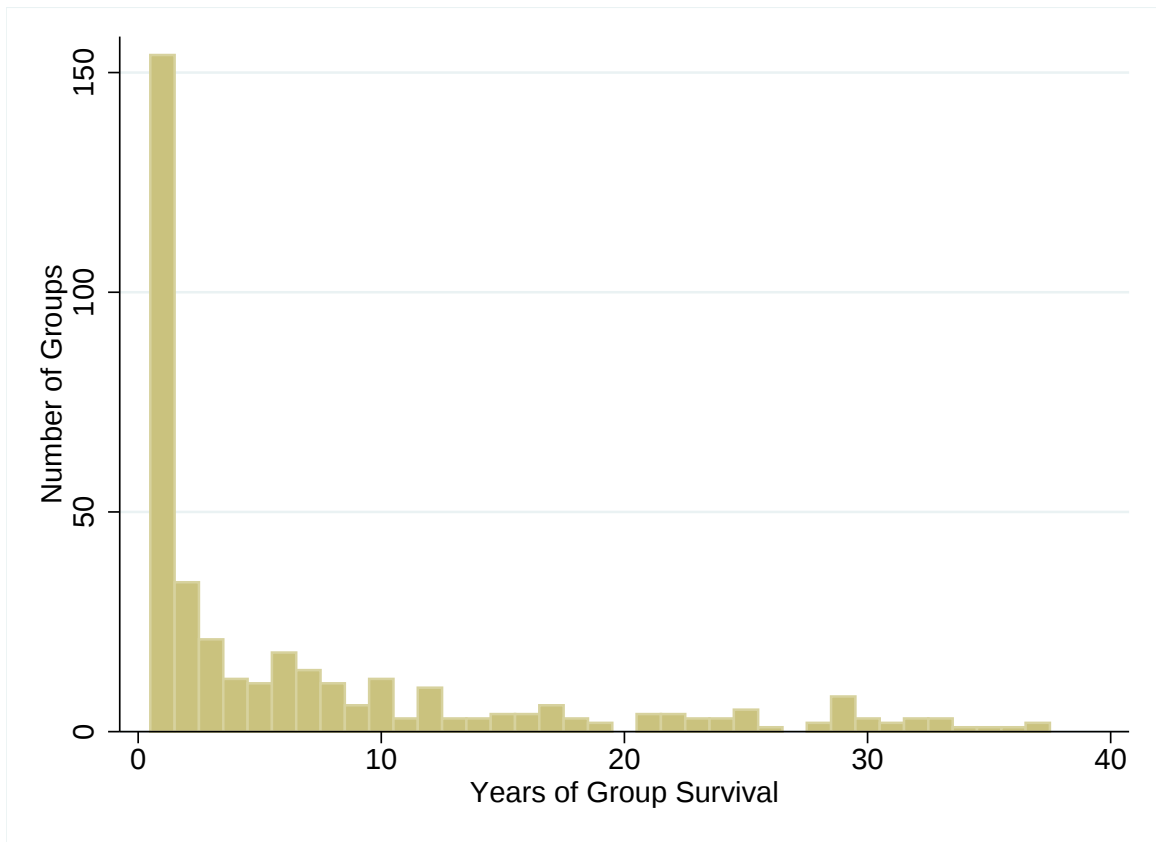


Figure 6.1: Survival of Terrorist Groups

In these models I control for three additional factors in addition to the covariates from the empirical chapters above. First, I control for whether the group is state sponsored (Carter 2012). If a group is state sponsored, the theory presented above may not apply or at the very least it may influence both propensity to ratify and group duration, which could bias estimates if it were omitted. Second, I include the number of terrorist groups in the country in the estimation (Jones and Libicki 2006) to account for the possibility that it may be easier for terrorist groups to survive if the government must confront multiple groups at once. Finally I include whether the state is a military regime (Geddes, Wright and Frantz 2014) to account for differing counterterrorism strategies of military regimes and the particular nature of foreign aid relationships with military regimes. To model temporal dependence, I include cubic polynomials following the approach of Carter and Signorino (2010) and country-level random effects.

## 6.2 Results

First, I consider the influence of the proportion ratified on the impact of total US aid on group duration. The results from this analysis are presented in Table 6.2. The first column uses the proportion of agreements ratified as its measure of ratification. The coefficient on total US aid is negative and significant, however the interaction term is positive and significant as expected. Interestingly, the coefficient on ratification is negative, indicating that the probability of group failure is lower in states which ratify, however ratification makes aid more likely to produce group failure. The results for military aid and economic aid are substantively similar.

Figure 6.2 shows the marginal effect of US Foreign Aid on the probability

|                             | Total US Aid           | US Military Aid       | US Economic Aid        |
|-----------------------------|------------------------|-----------------------|------------------------|
| Prop. Ratified              | -1.112*<br>(0.505)     | -1.090*<br>(0.490)    | -1.093*<br>(0.537)     |
| Aid                         | -0.00501*<br>(0.00252) | -0.0139*<br>(0.00681) | -0.00837+<br>(0.00484) |
| Aid $\times$ Prop. Ratified | 0.00939*<br>(0.00455)  | 0.0213*<br>(0.00962)  | 0.0168+<br>(0.00934)   |
| Rivalry                     | 0.172<br>(0.202)       | 0.184<br>(0.202)      | 0.178<br>(0.209)       |
| GDP                         | 0.711**<br>(0.144)     | 0.683**<br>(0.142)    | 0.743**<br>(0.156)     |
| Population                  | -0.270**<br>(0.0978)   | -0.286**<br>(0.0951)  | -0.248*<br>(0.0999)    |
| Regime Type                 | 0.0106<br>(0.0456)     | 0.00725<br>(0.0451)   | 0.00942<br>(0.0464)    |
| Military Regime             | -0.838+<br>(0.453)     | -0.855+<br>(0.449)    | -0.852+<br>(0.462)     |
| State Sponsored             | -0.0975<br>(0.287)     | -0.132<br>(0.285)     | -0.0803<br>(0.288)     |
| Political Terror            | 0.109<br>(0.118)       | 0.105<br>(0.118)      | 0.105<br>(0.123)       |
| Post Cold War               | 0.0435<br>(0.233)      | 0.0558<br>(0.232)     | 0.0424<br>(0.235)      |
| Post 2001                   | 0.0655<br>(0.237)      | 0.0964<br>(0.231)     | 0.0293<br>(0.240)      |
| Num. of Groups              | 0.0459*<br>(0.0198)    | 0.0522**<br>(0.0187)  | 0.0391+<br>(0.0202)    |
| Civil Conflict              | -0.0694<br>(0.210)     | -0.0739<br>(0.209)    | -0.0513<br>(0.225)     |
| Constant                    | -3.306<br>(2.205)      | -2.808<br>(2.157)     | -3.933+<br>(2.282)     |
| Observations                | 4827                   | 4827                  | 4827                   |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

+  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$

Table 6.2: US Foreign Aid, Ratification, and Terrorist Group Duration

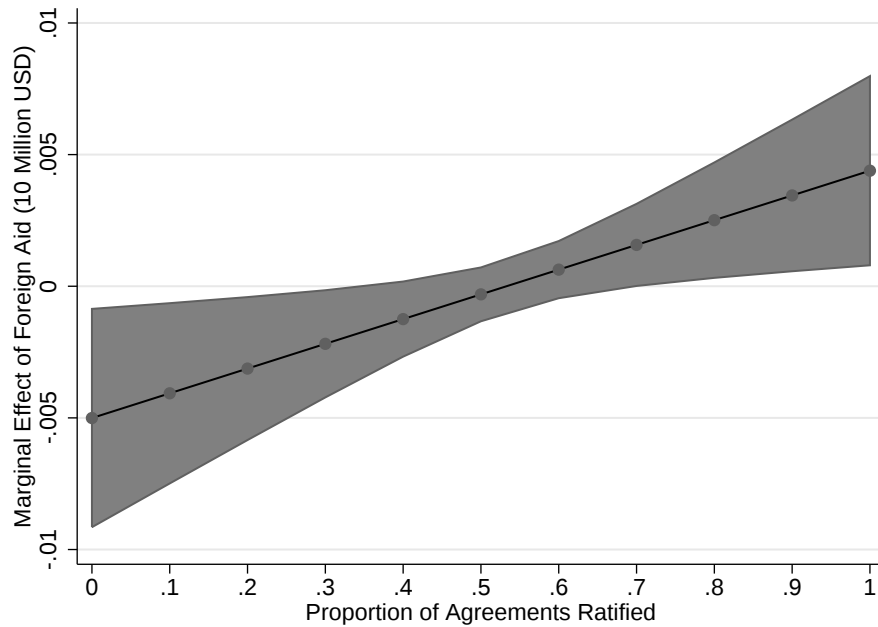


Figure 6.2: Marginal Effect of US Foreign Aid on Probability of Group Failure

of group failure for variable levels of proportion of agreements ratified. While the effect is not large it is statistically significant. When states have ratified greater than 70 percent of available agreements aid increases the probability of group failure significantly. However when states have ratified less than 30 percent of available agreements foreign aid actually decreases the probability of group failure.

Table 6.3 presents the results of the same models using treaty capital rather proportion ratified. The results are substantively similar to those found for proportion ratified. The marginal effect is also similar. The marginal effect of aid is to decrease the probability of failure for states that have ratified agreements but is negative for states that have ratified relatively few agreements.

|                             | Total US Aid                       | US Military Aid                   | US Economic Aid                |
|-----------------------------|------------------------------------|-----------------------------------|--------------------------------|
| Treaty Capital              | -0.140 <sup>+</sup><br>(0.0821)    | -0.136 <sup>+</sup><br>(0.0791)   | -0.129<br>(0.0833)             |
| Aid                         | 0.00164 <sup>+</sup><br>(0.000933) | 0.000963<br>(0.00209)             | 0.00349*<br>(0.00171)          |
| Aid $\times$ Treaty Capital | 0.000882*<br>(0.000393)            | 0.00195 <sup>+</sup><br>(0.00100) | 0.00156*<br>(0.000722)         |
| Rivalry                     | 0.155<br>(0.204)                   | 0.165<br>(0.203)                  | 0.160<br>(0.206)               |
| GDP                         | 0.698**<br>(0.143)                 | 0.671**<br>(0.142)                | 0.724**<br>(0.149)             |
| Population                  | -0.291**<br>(0.0986)               | -0.292**<br>(0.0952)              | -0.279**<br>(0.0998)           |
| Regime Type                 | 0.00576<br>(0.0454)                | 0.000741<br>(0.0449)              | 0.00574<br>(0.0458)            |
| Military Regime             | -0.879 <sup>+</sup><br>(0.453)     | -0.888*<br>(0.449)                | -0.886 <sup>+</sup><br>(0.459) |
| State Sponsored             | -0.0943<br>(0.287)                 | -0.125<br>(0.285)                 | -0.0749<br>(0.288)             |
| Political Terror            | 0.103<br>(0.119)                   | 0.0982<br>(0.118)                 | 0.103<br>(0.122)               |
| Post Cold War               | 0.0301<br>(0.234)                  | 0.0459<br>(0.233)                 | 0.0275<br>(0.236)              |
| Post 2001                   | -0.133<br>(0.224)                  | -0.104<br>(0.221)                 | -0.160<br>(0.226)              |
| Num. of Groups              | 0.0507*<br>(0.0201)                | 0.0539**<br>(0.0190)              | 0.0453*<br>(0.0202)            |
| Civil Conflict              | -0.0617<br>(0.212)                 | -0.0725<br>(0.210)                | -0.0530<br>(0.225)             |
| Constant                    | -3.415<br>(2.209)                  | -3.137<br>(2.168)                 | -3.839 <sup>+</sup><br>(2.245) |
| Observations                | 4827                               | 4827                              | 4827                           |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$

Table 6.3: US Foreign Aid, Treaty Capital, and Terrorist Group Duration

## 6.3 Conclusion

The results suggest a conditional effect for the effect of foreign aid on group duration. When states have not ratified counterterrorism agreements, foreign aid is associated with a decreased probability that groups in the recipient state fail. When states have ratified counterterrorism treaties foreign aid is associated with an increase in the probability that terrorist groups in the recipient state fail. Therefore foreign aid increases the survival of terrorist groups in states which have not ratified, but decreases survival in states which have ratified. This result is found for total, military and economic aid from the United States.

This finding is consistent with previous research which suggests that the unconditional effect of foreign aid is to make states less likely to attempt to destroy or settle with terrorist groups within their territory due to moral hazard (Bapat 2011). However, it adds an important wrinkle to the story. Aid only decreases the probability of terrorist group failure in recipient states which have not ratified counterterrorism conventions. The results here suggest that international agreements significantly mitigate the moral hazard problem such that aid has a positive, rather than negative, effect on the probability of group survival.

# Chapter 7

## Conclusion

“The way to defeat international terrorism is through international cooperation based on international law.”

-Charles Kennedy<sup>1</sup>

This dissertation has focused on the research question of whether and how the United Nations Conventions for the Suppression of Transnational Terrorism foster international security cooperation. Foreign aid relationships between donors and recipients of foreign aid are a prominent part of counterterrorism cooperation. However, foreign aid often fails to produce effective counterterrorism due to recipient misappropriation.

The argument advanced here is that counterterrorism agreements help ameliorate the recipient misappropriation problem. Chapter Three presented a formal theory of how international agreements may help mitigate problems in the allocation of foreign aid for counterterrorism by increasing the observability of recipients' actions. Because donors can condition aid based on whether recipient states achieve the

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<sup>1</sup>(Kennedy 2001)

benchmarks which agreements lay out, they can more credibly threaten to withdraw it. This threat of foreign aid withdraw forms an informal enforcement mechanism for the United Nations counterterrorism agreements which previous studies have overlooked.

The promise of future aid is an inducement for states to ratify. For haven states, the agreements provide a way to get more foreign aid in exchange for policy concessions in the area of counterterrorism. However, the threat of the withdrawal of aid if the benchmarks of the conventions are not met means that foreign aid is also the informal enforcement mechanism of the conventions. Some states do not ratify because they fear not complying, which could result in receiving less aid than under the non-ratification status quo

The statistical results presented in Chapter Four support the empirical implication of the model that states that ratify receive more foreign aid. The analysis in Chapter Five supports the implication that ratification makes foreign aid a better tool for reducing transnational attacks. For states which ratify agreements foreign aid reduces transnational attacks, but it does not for states which have not ratified. The empirical analysis presented in Chapter Six suggests that aid increases the probability of failure for states which have ratified counterterrorism agreements, but decreases it for non-ratifiers. Taken together, Chapter Five and Six support the hypothesis that aid is marginally more effective as a counterterrorism tool when recipient states have ratified agreements.

To conclude this dissertation, I discuss its contributions to the study of transnational terrorism, foreign aid, and international institutions. I also discuss potential next steps for future research.

## 7.1 Counterterrorism Cooperation

The implications for transnational terrorism are that these agreements can really matter. By providing benchmarks which make the monitoring of aid recipients possible, they make aid a more effective instrument in the fight against transnational terrorism.

It is worth noting that terrorists are not strategic actors in the model presented above. While this simplifying assumption made the analysis tractable, strategic behavior, such as spoiling strategies, might complicate the theoretical model in ways that future research should consider. A recent body of literature has argued that domestic political actors are a possible mechanism for the enforcement of international institutions and agreements.<sup>2</sup> These studies have focused on how a domestic political actor's ability to influence a leader's domestic political survival creates indirect enforcement mechanisms for international institutions. However, there is a need for more research about the much more direct influence non-state actors can have on the effectiveness of, and state compliance with, international agreements by violating the terms of an international agreement unilaterally.

Because the UN conventions for the suppression of transnational terrorism criminalize non-state actor behaviors and call upon states to adopt domestic policies to curb them, it may be the case that non-state actors could adopt strategies to erode trust in the counterterrorism aid delegation relationship outlined above. While interesting in their own right, spoiling strategies would make it more difficult to get the results found here, and therefore they do not cast doubt on the empirical findings

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<sup>2</sup>For example see Dai (2005), Mansfield, Milner and Rosendorff (2002), Leeds (1999).

presented here.

Future research should also consider whether these treaties, designed to suppress transnational terrorism, also have spillover effects for domestic terrorism. When states criminalize, police, and take steps to prevent and prosecute the instances of transnational terrorism as required by the United Nations conventions, it is possible that it has positive consequences for domestic terrorism as well.

Furthermore, there are many regional counterterrorism agreements with great diversity in their design of and scope. It may be that regional organizations are better able to identify needs and provide resources due to proximity (Ewi 2013) at the expense of geographical scope and the benefits from broad multilateralism that the UN agreements offer. For instance, the United Nations Office on Drugs and Crime identifies over twenty-five bilateral and regional instruments for international counterterrorism cooperation in South Asia alone (United Nations Office on Drugs and Crime 2015). By investigating these agreements, further insights about the role of interstate agreements in fostering international security cooperation for counterterrorism could be gained.

Future research could also utilize the recently geocoded version of the ITER-ATE database of transnational terrorism (Findley, Young, Braithwaite, Marineau and Pascoe, Working Paper) to investigate the impacts of the United Nations Conventions for the Suppression of Transnational Terrorism at the subnational level. Because the theory presented here posits that the government of recipient states adjust their behavior due to the fear of foreign aid being withdrawn, the conventions should primarily reduce terrorism in areas which the government controls.

Relatedly, the conventions may also give haven state governments incentives

to expand the size of the geographic region that the state controls. Therefore, one expectation might be that the conventions should be associated with greater reductions in transnational attacks around the state capital, which is easier for the government to control, and less effective around mountains and forests, which present geographic impediments to state control. While terrorists may target aid locations, at the country level aggregate aid should reduce transnational attacks. The use of multilevel models which model the country and subnational level would help in investigating this expectation.

Because they call for counterterrorism measures to be implemented without exceptions for extenuating factors such as rivalries or civil war, they might help diffuse cycles of negative reciprocity in rivalries or civil war and thus mute the increase in transnational attacks usually associated with rivalry and civil war. However, because they commit the government not to offer amnesty for terrorist attacks on foreigners, even in the context of a peace deal, they may make civil wars harder to settle, even though they may also deter attacks on foreign targets. The use of the subnational dataset would allow for fine-grained consideration of these expectations at the geographic level.

## **7.2 Foreign Aid**

This dissertation also has implications for the literature on foreign aid. The United Nations counterterrorism conventions are a case in which international agreements improve the ability of foreign aid to accomplish its goals by making aid conditionality a credible strategy. International institutions help dampen agency problems which often undercut the effectiveness of foreign aid.

However, the problem of weak states as havens for transnational terrorism is emblematic of a more general set of problems in International Relations: namely that governments may have limited control over non-state actors in their territory which may produce negative externalities for other state actors. Future research should consider whether international institutions would be useful for improving the ability of aid to accomplish other goals.

For instance, global health conventions regarding medical protocols, disease prevention, investigation of and response to epidemics and other measures may help reduce negative externalities from diseases thriving in places with limited capacity and political will to address public health issues. Principal-agent problems have long been lamented by policy makers and scholars of foreign aid. It is possible that agreements following the design of counterterrorism conventions could be effective at mitigating such principal-agent problems in other issue areas.

## **7.3 International Institutions**

The literature on international institutions has long debated the role of enforcement versus the role of capacity building in the promotion of international cooperation. While my theory highlights that heterogeneous preferences cannot be ignored in international cooperation – in fact I show that they are often created to constrain aid recipient states whose preferences may differ from donors– both ability and will are necessary for cooperation to occur. In a international system in which many states do not completely control their territory (Wagner 2007, Milner 1991), the need for capacity building to accomplish cooperative measures is clear. However, capacity building can only be effective if divergent preferences can be constrained through

enforcement. The benchmarks set up by the United Nations Conventions make enforcement through aid conditionality more credible, and thus augment the efficacy of foreign aid as a tool to build counterterrorism capacity.

Rather than a weakness, the informal, often bilateral, enforcement mechanism by which the UN counterterrorism agreements operate promotes flexibility in a contentious issue area. Enforcement based on the threat of the withdrawal of foreign aid allows these agreement to serve the interests of powerful states without exposing them to the risk of punishment because they do not receive foreign aid, and thus are not at risk of having it withdrawn. This suggests a novel approach to how transnational political economy, in this case flows of foreign aid, may often be a vital part of international agreements work. Future research should further explore the role of other transnational flows for facilitating cooperation between states.

One implication of the model that was not tested here is whether aid donors respond to failures to meet agreement benchmarks. To do so, data on the achievement of the benchmarks that these agreements create much be collected. With such data it would be possible to test whether aid donors respond state failure to achieve the benchmarks of criminalization and prevention measures with the withdrawal of foreign aid as predicted by the theoretical model.

For example, coding two of the benchmarks of the United Nations Convention for the Suppression of Terrorist Financing: 1) domestic ratification of law criminalizing and establishing severe penalties for the financing of terrorist groups, and 2) domestic regulation of banking to provide means of prosecuting suspected financing and prevention measures such as the freezing of accounts suspected of terrorist financing would allow for the testing of whether states indeed withdraw aid if the

benchmarks of the Terrorist Financing Convention are not met. This will allow for the investigation of the empirical implication of the formal model presented above, that foreign aid donors punish recipient states for not achieving benchmarks by reducing how much aid they provide when states fail to meet them.

The impact of the information that these international institutions provide are likely not limited to foreign aid. Information about terrorism prevention measures should be valuable to international business, those making sovereign loans, and alliance partners. Whether and how the United Nations conventions for the suppression of transnational terrorism are important for these relationships is an open question. These multilateral agreements provide information that may be useful to these audiences, much as in the way they are useful to donors of foreign aid. It may be that the costs and benefits that these audiences impose are important elements of how these international agreements work.

## 7.4 Conclusion

In the modern state system, governments are ascribed territory and expected to govern the people in that territory. However, many governments do not control wide swaths of their territory. These areas of limited state control provide a staging ground for transnational behaviors by non-state actors that threaten international security. Prominent among such behaviors is transnational terrorism. For example, Pakistan's Federally Administered Tribal Areas provide a haven from which terrorists base attacks on foreign targets.

International Relations theory has focused on the importance of anarchy *between* states. Waltz's theory of international politics is a prominent example (1979).

Debates in International Relations have therefore centered on whether anarchy between states is a plausible assumption (Lake 2009) and the implications of it for international relations (Wendt 1992, Keohane 1984). They share an assumption that domestic politics is hierarchical, assuming away anarchy within states.

Because of these theoretical foundations, research in International Relations on international agreements have emphasized that their purpose is to address problems arising from anarchy between states by diffusing norms or creating institutions that create mutually beneficial cooperation under interstate anarchy and overlooked the implications of anarchy *within* states for international relations. Anarchy within states arises from the inability or unwillingness of states to control non-state actors within their territory.

However, transnational terrorism thrives in such areas, which presents severe challenges for international cooperation. Furthermore, much of international law concerns problems arising from anarchy within states, outlining steps for international cooperation to regulate undesirable behaviors of non-state entities such as terrorist groups, transnational crime organizations, corporations, and individuals (Paust 2011). The United Nations conventions for the suppression of transnational terrorism are a prominent example of such an institution.

This dissertation has considered whether and how these international agreements help promote cooperation for the suppression of transnational terrorism. By creating common standards for what states must do regarding transnational terrorism, the agreements provide benchmarks that donors can use to learn about how aid is used by recipient states. This information makes threats to withdraw aid more credible and constrain recipient misappropriation. Thus despite the fact that the

United Nations conventions have no formal provisions for enforcement nor delegation to a central authority, they succeed in fostering international counterterrorism cooperation.

## Appendices

# Appendix A

## Chapter 3 Appendix

### A.1 Proposition 3.1.1

**Proposition 3.1.1** *The strategy profiles,  $\sigma_H \equiv \{\beta_R, \varepsilon_1^*, \varepsilon_2^*\}$  for Home and  $\sigma_F \equiv \{a^*, \bar{\beta}_F\}$  for Foreign, and the belief system  $\omega$  form a Perfect Bayesian Equilibrium.*

Where  $\beta_R$  and  $\bar{\beta}_F$  are cutpoint strategies and  $\varepsilon_1^*$ ,  $\varepsilon_2^*$  and  $a^*$  are equilibrium values defined below before turning to the proof of the proposition.

The ratification cutpoint  $\beta_R$  defines the equilibrium ratification strategy. *Home* ratifies if  $\beta_H > \beta_R$  where:

$$\beta_R \equiv \frac{2(a^R - a^{-R})\varepsilon_1^{-R} - \varepsilon_1^R + \varepsilon_2^{-RS} - \varepsilon_2^{RS} + p^R(\varepsilon_2^{RS} + \varepsilon_2^{RC} - c) + p^{-R}(c - \varepsilon_2^{-RC})}{f(\varepsilon_2^{RS}) - f(\varepsilon_2^{-RS}) + p^R(f(\varepsilon_2^{RC}) - f(\varepsilon_2^{RS})) - p^{-R}(f(\varepsilon_2^{-RC}) - f(\varepsilon_2^{-RS}))} \quad (\text{A.1})$$

The equilibrium quantity  $\varepsilon_1^*$ , *Home's* counterterrorism investment in the first period, is given by the following equation:

$$\varepsilon_1^* \equiv \begin{cases} \min\{\ln(\beta_H), r_H + a\} & \text{if no conditionality} \\ \min\{\ln(\beta_H + c), r_H + a\} & \text{if } \neg R, \text{ conditionality OR } R, \text{ strict conditionality} \\ \min\left\{\ln\left(\frac{\beta_H + \sqrt{\beta_H^2 + 8c}}{2}\right), r_H + a\right\} & \text{if } R \text{ and weak conditionality} \end{cases} \quad (\text{A.2})$$

*Home's* counterterrorism investment in the second period,  $\varepsilon_2^*$  is given by the following equation:

$$\varepsilon_2^* \equiv \min\{\ln(\beta_H), r_H + a - 1_{\text{withdraw}}(c)\} \quad (\text{A.3})$$

*Foreign's* equilibrium amount of aid,  $a^*$ , is given by

$$a^* \equiv \begin{cases} \frac{\beta_R \ln(\beta_R)}{\beta_R - 1} - 1 - r_H & \text{if } \neg R, \text{ no conditionality} \\ \frac{(\beta_R + c) \ln(\beta_R + c) - (1 + c) \ln(1 + c)}{\beta_R - 1} - 1 - r_H & \neg R, \text{ conditionality} \\ \frac{(\theta) \ln(\theta) - (\beta_R) \ln(\beta_R)}{\theta - \beta_R} - 1 - r_H & R, \text{ no conditionality} \\ \frac{1}{\theta - \beta_R} \left( \theta \ln\left(\frac{\theta + \sqrt{\theta^2 + 8c}}{2}\right) - \beta_R \ln\left(\frac{\beta_R + \sqrt{\beta_R^2 + 8c}}{2}\right) + \sqrt{\beta_R^2 + 8c} - \sqrt{\theta^2 + 8c} \right) & \text{if } R, \text{ weak conditionality} \\ \frac{(\theta + c) \ln(\theta + c) - (\beta_R + c) \ln(\beta_R + c)}{\theta - \beta_R} - 1 - r_H & R, \text{ strict conditionality} \end{cases} \quad (\text{A.4})$$

*Foreign's* conditionality cutpoint defines the equilibrium conditionality strategy. *Foreign* withdraws aid if  $\beta_F < \bar{\beta}_F$  where:

$$\bar{\beta}_F \equiv E_F \left[ \frac{c}{f(\varepsilon_2^c) - f(\varepsilon^{-c})} \right] \quad (\text{A.5})$$

### Proof of Proposition 3.1.1

Define  $p$  as the probability of aid being withdrawn in equilibrium, where  $p^R$  denotes the probability if *Home* ratifies and  $p^{-R}$  denotes the probability of aid being

withdrawn if *Home* does not ratify. This probability is a function of Home's equilibrium enforcement decision in the aid stage and *Foreign's* conditionality strategy.

Formally, *Home* ratifies if:

$$\begin{aligned}
 & EU(Ratify) > EU(\neg Ratify) \\
 & a^R - \varepsilon^R - \beta_H e^{-\varepsilon_1^R} + p \left( a^R - c - \varepsilon_2^{RC} - \beta_H e^{-\varepsilon_2^{RC}} \right) + (1-p) \left( a^R - \varepsilon_2^{RS} - \beta_H e^{-\varepsilon_2^{RS}} \right) \\
 & > a^{\neg R} - \varepsilon^{\neg R} - \beta_H e^{-\varepsilon_1^{\neg R}} + p \left( a^{\neg R} - c - \varepsilon_2^{\neg RC} - \beta_H e^{-\varepsilon_2^{\neg RC}} \right) + (1-p) \left( a^{\neg R} - \varepsilon_2^{\neg RS} - \beta_H e^{-\varepsilon_2^{\neg RS}} \right)
 \end{aligned}$$

An inequality which is satisfied by  $\beta_R$ .

Counterterrorism investment in the first period,  $\varepsilon_1$ , balances the risk of a terrorist attack and its associated direct costs,  $\beta_H$ , and any indirect costs in the form of reductions in aid depending on *Foreign's* conditionality strategy with the cost of counterterrorism investment. Formally, the maximum amount *Home* is willing to spend is given by a simple reduction and maximization of the expected utility function for *Home*:

$$\varepsilon_1 \leq \begin{cases} \ln(\beta_H) & \text{if no conditionality} \\ \ln(\beta_H + c) & \text{if } \neg R, \text{ conditionality OR } R, \text{ strict conditionality} \\ \ln\left(\frac{\beta_H + \sqrt{\beta_H^2 + 8c}}{2}\right) & \text{if } R \text{ and weak conditionality} \end{cases} \quad (\text{A.6})$$

However, *Home's* spending decision is constrained by the amount of resources and aid it has, therefore it spends the minimum of the preferred values given above and its resource constraint  $r_H + a$ . The maximum values which satisfy this inequality are given by  $\varepsilon_1^*$ , which thus satisfy sequential rationality.

In the second period *Home's* investment decision is simpler because there is no longer risk of the withdrawal of aid. Their preferred amount of aid balances expectations of preventing an attack and thus not facing costs  $\beta_H$ , with the costs of counterterrorism investment. A simple maximization of *Home's* expected utility yields:

$$\varepsilon_2 \leq \ln(\beta_H) \quad (\text{A.7})$$

However, *Home's* investment in the second period is constrained by the amount of resources and aid they have less any amount withdrawn. The maximum values that satisfy this inequality subject to this resource constraint are given by  $\varepsilon_2^*$  above, which thus satisfies sequential rationality.

*Foreign* must condition its aid decisions,  $a$ , and conditionality strategy on its beliefs  $\omega$  which are derived via Bayes rule below.

$$\mu_F(\beta_H | \text{Ratify}) = \frac{\mathbb{1}_{\beta_H \geq \beta_R}}{\theta - \beta_R}. \quad (\text{A.8})$$

Similarly, if *Home* does not ratify then foreign updated beliefs are uniform and bounded above by  $\beta_R$ , formally

$$\mu_F(\beta_H | \neg \text{Ratify}) = \frac{\mathbb{1}_{\beta_H < \beta_R}}{\beta_R - 1}. \quad (\text{A.9})$$

This gives the beliefs held by home when it makes its aid allocation decision,  $a$ . Given strategy  $\varepsilon^1$  and the assumption that  $\beta_F > \theta$  it follows that  $a^*$  defined above satisfies the sequential rationality constraint  $a = E[\varepsilon_1^*] - r_H$  based on the above beliefs consistent with Bayes rule.

Finally, *Foreign's* conditionality strategy is based on its updated beliefs after observing whether or not *Home* met the benchmark and whether a terrorist event occurred. These beliefs are derived according to Bayes rule below.

$$\mu_F(\beta_H | \neg \text{Ratify}, \text{Error}) = \frac{\mu_F(\beta_H | \neg \text{Ratify}) Pr(\text{Error} | \beta_H)}{\int \mu_F(\beta_H | \neg \text{Ratify}) Pr(\text{Error} | \beta_H) d\beta_H} \quad (\text{A.10})$$

$$= \frac{e^{-\varepsilon_1^*}}{\int e^{-\varepsilon_1^*} d\beta_H} \mathbb{1}_{\beta_H < \beta_R}. \quad (\text{A.11})$$

$$\mu_F(\beta_H | \neg \text{Ratify}, \neg \text{Error}) = \frac{\mu_F(\beta_H | \neg \text{Ratify}) Pr(\neg \text{Error} | \beta_H)}{\int \mu_F(\beta_H | \neg \text{Ratify}) Pr(\neg \text{Error} | \beta_H) d\beta_H} \quad (\text{A.12})$$

$$= \frac{1 - e^{-\varepsilon_1^*}}{\int 1 - e^{-\varepsilon_1^*} d\beta_H} \mathbb{1}_{\beta_H < \beta_R}. \quad (\text{A.13})$$

In the most pessimistic case after observing both a terror attack and *Home* not meeting the benchmark its beliefs about home's type are given by:

$$\mu_F(\beta_H | \text{Ratify}, \text{Error}, \neg \text{Benchmark}) = \frac{\mu_F(\beta_H | \text{Ratify}) Pr(\text{Error}, \neg \text{Benchmark} | \beta_H)}{\int \mu_F(\beta_H | \text{Ratify}) Pr(\text{Error}, \neg \text{Benchmark} | \beta_H) d\beta_H} \quad (\text{A.14})$$

$$= \frac{e^{-2\varepsilon_1^*}}{\int e^{-2\varepsilon_1^*} d\beta_H} \mathbb{1}_{\beta_H \geq \beta_R}. \quad (\text{A.15})$$

However, if a terror event occurs and but *Home* meets the benchmark, their belief is more favorable

$$\mu_F(\beta_H | \text{Ratify}, \text{Error}, \text{Benchmark}) = \frac{\mu_F(\beta_H | \text{Ratify}) Pr(\text{Error}, \text{Benchmark} | \beta_H)}{\int \mu_F(\beta_H | \text{Ratify}) Pr(\text{Error}, \text{Benchmark} | \beta_H) d\beta_H} \quad (\text{A.16})$$

$$= \frac{e^{-\varepsilon_1^*} (1 - e^{-\varepsilon_1^*})}{\int e^{-\varepsilon_1^*} (1 - e^{-\varepsilon_1^*}) d\beta_H} \mathbb{1}_{\beta_H \geq \beta_R}. \quad (\text{A.17})$$

In the most optimistic case, When a terror event does not occur and home meets the benchmark beliefs are given by

$$\mu_F(\beta_H|Ratify, \neg Terror, Benchmark) = \frac{\mu_F(\beta_H|Ratify)Pr(\neg Terror, Benchmark|\beta_H)}{\int \mu_F(\beta_H|Ratify)Pr(\neg Terror, Benchmark|\beta_H)d\beta_H} \quad (A.18)$$

$$= \frac{(1 - e^{-\varepsilon_1^*})^2}{\int (1 - e^{-\varepsilon_1^*})^2 d\beta_H} \mathbb{1}_{\beta_H \geq \beta_R}. \quad (A.19)$$

However if a terror event does not occur and home does not meet the benchmark they are more pessimistic, and beliefs are given by

$$\mu_F(\beta_H|Ratify, \neg Terror, \neg Benchmark) = \frac{\mu_F(\beta_H|Ratify)Pr(\neg Terror, \neg Benchmark|\beta_H)}{\int \mu_F(\beta_H|Ratify)Pr(\neg Terror, \neg Benchmark|\beta_H)d\beta_H} \quad (A.20)$$

$$= \frac{e^{-\varepsilon_1^*}(1 - e^{-\varepsilon_1^*})}{\int e^{-\varepsilon_1^*}(1 - e^{-\varepsilon_1^*})d\beta_H} \mathbb{1}_{\beta_H \geq \beta_R}. \quad (A.21)$$

Simple maximization of *Foreign's* expected utility yields  $\bar{\beta}_F$ , defined above, as the cutpoint strategy which satisfies sequential rationality based on these beliefs consistent with Bayes Rule.

## A.2 Proposition 3.2.1

**Proposition 3.2.1**  $a^{*|R} - a^{*|\neg R} > 0$

Where  $a^{*|R}$  is the equilibrium level of aid provided by *Foreign* given *Home* ratifies and  $a^{*|\neg R}$  is the equilibrium level of aid given by *Foreign* in equilibrium given *Home* does not ratify.

**Proof of Proposition 3.2.1** From above, the equilibrium aid allocations are given by.

$$a^* \equiv \begin{cases} \frac{\beta_R \ln(\beta_R)}{\beta_R - 1} - 1 - r_H & \text{if } \neg R, \text{ no conditionality} \\ \frac{(\beta_R + c) \ln(\beta_R + c) - (1 + c) \ln(1 + c)}{\beta_R - 1} - 1 - r_H & \neg R, \text{ conditionality} \\ \frac{(\theta) \ln(\theta) - (\beta_R) \ln(\beta_R)}{\theta - \beta_R} - 1 - r_H & R, \text{ no conditionality} \\ \frac{1}{\theta - \beta_R} \left( \theta \ln \left( \frac{\theta + \sqrt{\theta + 8c}}{2} \right) - \beta_R \ln \left( \frac{\beta_R + \sqrt{\beta_R + 8c}}{2} \right) + \sqrt{\beta_R^2 + 8c} - \sqrt{\theta^2 + 8c} \right) & \text{if } R, \text{ weak conditionality} \\ \frac{(\theta + c) \ln(\theta + c) - (\beta_R + c) \ln(\beta_R + c)}{\theta - \beta_R} - 1 - r_H & R, \text{ strict conditionality} \end{cases} \quad (\text{A.22})$$

Given  $\beta_R > \theta$ ,  $\beta_R > 1$ , and  $c > 0$ , the proposition follows directly.

### A.3 Proposition 3.2.2

**Proposition 3.2.2**  $\varepsilon_1^{*|R} - \varepsilon_1^{*|\neg R} \geq 0$  and therefore  $Pr(t|R) \leq Pr(t|\neg R)$ .

Where  $\varepsilon_1^{*|R}$  is the equilibrium investment in counterterrorism by *Home* if they Ratify and  $\varepsilon_1^{*|\neg R}$  is the equilibrium investment if they do not ratify.

**Proof of Proposition 3.2.2** From above, the equilibrium levels of counterterrorism investment are:

$$\varepsilon_1^* \equiv \begin{cases} \min\{\ln(\beta_H), r_H + a\} & \text{if no conditionality} \\ \min\{\ln(\beta_H + c), r_H + a\} & \text{if } \neg R, \text{ conditionality OR } R, \text{ strict conditionality} \\ \min \left\{ \ln \left( \frac{\beta_H + \sqrt{\beta_H^2 + 8c}}{2} \right), r_H + a \right\} & \text{if } R \text{ and weak conditionality} \end{cases} \quad (\text{A.23})$$

For all cases, it follows straightforwardly that the level of counterterrorism investment when *Home* ratifies is equal to or greater than the level of counterterrorism investment when *Home* does not ratify. Because the probability of terrorist attacks

is monotonically decreasing in counterterrorism investment, the proposition follows directly.

# Appendix B

## Chapter 4 Appendix

| Fixed-Effects Models       | Log Aid (State Donors) |                       |                       |
|----------------------------|------------------------|-----------------------|-----------------------|
| Treaty Capital<br>(lagged) | 0.552**<br>(0.178)     | 0.302**<br>(0.0994)   | 0.0575<br>(0.0521)    |
| GDP per Cap.               |                        | -0.354***<br>(0.0703) | -0.197***<br>(0.0397) |
| Population                 |                        | 16.82<br>(11.59)      | 6.986<br>(6.074)      |
| Civil Conflict             |                        | 0.256<br>(0.744)      | -0.471<br>(0.598)     |
| Regime Type                |                        | 0.273***<br>(0.0703)  | 0.0968**<br>(0.0329)  |
| UN Ideal Point             |                        | 1.593**<br>(0.498)    | 1.060***<br>(0.230)   |
| Post Cold War              |                        | 2.342***<br>(0.343)   | 0.935***<br>(0.178)   |
| Post 2001                  |                        | -0.149<br>(0.238)     | -0.236<br>(0.142)     |
| Log Aid<br>(lagged)        |                        |                       | 0.507***<br>(0.0221)  |
| Constant                   | 12.30***<br>(0.00167)  | 13.69***<br>(0.792)   | 8.134***<br>(0.683)   |
| Observations               | 8595                   | 4660                  | 4660                  |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.1: Treaty Capital Index and Aid From State Donors

| Fixed-Effects Models        |                       | Log US NADR Aid      |                      |
|-----------------------------|-----------------------|----------------------|----------------------|
| Treaty Capital<br>(lagged)  | 0.0254<br>(0.150)     | 0.230<br>(0.182)     | 0.103<br>(0.129)     |
| GDP per Cap.                |                       | 0.717***<br>(0.211)  | 0.357**<br>(0.134)   |
| Population                  |                       | 121.6*<br>(47.72)    | 78.71*<br>(32.68)    |
| Civil Conflict              |                       | 6.507***<br>(1.498)  | 7.018**<br>(2.579)   |
| Regime Type                 |                       | 0.747*<br>(0.323)    | 0.402<br>(0.253)     |
| UN Ideal Point              |                       | -0.474<br>(1.538)    | 0.343<br>(1.102)     |
| Post 2001                   |                       | 1.870***<br>(0.362)  | 0.896**<br>(0.271)   |
| Log US NADR Aid<br>(lagged) |                       |                      | 0.401***<br>(0.0353) |
| Constant                    | 4.778***<br>(0.00115) | -17.55***<br>(2.609) | -12.55***<br>(3.031) |
| Observations                | 2865                  | 1514                 | 1379                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.2: Treaty Capital Index and United States NADR Aid

| Fixed-Effects Models      | Log Aid (All Donors) |                       |                       |
|---------------------------|----------------------|-----------------------|-----------------------|
| Num. Ratified<br>(lagged) | 0.804***<br>(0.0814) | 0.323***<br>(0.0729)  | 0.109*<br>(0.0448)    |
| GDP per Cap.              |                      | -0.425***<br>(0.0689) | -0.247***<br>(0.0388) |
| Population                |                      | 11.83<br>(13.44)      | 6.878<br>(7.033)      |
| Civil Conflict            |                      | 0.481<br>(0.753)      | -0.125<br>(0.559)     |
| Regime Type               |                      | 0.101<br>(0.0727)     | 0.0735<br>(0.0410)    |
| UN Ideal Point            |                      | 2.652***<br>(0.524)   | 1.503***<br>(0.303)   |
| Post Cold War             |                      | 1.549***<br>(0.338)   | 0.875***<br>(0.218)   |
| Post 2001                 |                      | -0.341<br>(0.252)     | -0.179<br>(0.137)     |
| Log Aid<br>(lagged)       |                      |                       | 0.448***<br>(0.0327)  |
| Constant                  | 11.23***<br>(0.271)  | 15.97***<br>(0.903)   | 9.504***<br>(0.794)   |
| Observations              | 8595                 | 4660                  | 4660                  |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.3: Total Ratified and Aid From All Donors

| Fixed-Effects Models       | Log Aid (All Donors) |                       |                       |
|----------------------------|----------------------|-----------------------|-----------------------|
| Prop. Ratified<br>(lagged) | 6.684***<br>(0.609)  | 1.540**<br>(0.460)    | 0.460<br>(0.267)      |
| GDP per Cap.               |                      | -0.405***<br>(0.0678) | -0.240***<br>(0.0381) |
| Population                 |                      | 12.34<br>(13.27)      | 7.081<br>(6.947)      |
| Civil Conflict             |                      | 0.518<br>(0.764)      | -0.117<br>(0.560)     |
| Regime Type                |                      | 0.118<br>(0.0735)     | 0.0798<br>(0.0409)    |
| UN Ideal Point             |                      | 2.625***<br>(0.531)   | 1.485***<br>(0.303)   |
| Post Cold War              |                      | 1.807***<br>(0.356)   | 0.962***<br>(0.228)   |
| Post 2001                  |                      | 0.145<br>(0.205)      | -0.00518<br>(0.119)   |
| Log Aid<br>(lagged)        |                      |                       | 0.450***<br>(0.0323)  |
| Constant                   | 10.48***<br>(0.312)  | 15.74***<br>(0.928)   | 9.421***<br>(0.791)   |
| Observations               | 8595                 | 4660                  | 4660                  |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.4: Proportion Ratified and Aid From All Donors

| Fixed-Effects Models       | Log Aid               | (All Donors)          |                       |
|----------------------------|-----------------------|-----------------------|-----------------------|
| Treaty Capital<br>(lagged) | 0.453*<br>(0.176)     | 0.162<br>(0.0834)     | 0.0409<br>(0.0475)    |
| GDP per Cap.               |                       | -0.408***<br>(0.0675) | -0.240***<br>(0.0379) |
| Population                 |                       | 13.41<br>(13.47)      | 7.386<br>(6.971)      |
| Civil Conflict             |                       | 0.486<br>(0.773)      | -0.130<br>(0.564)     |
| Regime Type                |                       | 0.135<br>(0.0754)     | 0.0847*<br>(0.0411)   |
| UN Ideal Point             |                       | 2.536***<br>(0.536)   | 1.453***<br>(0.300)   |
| Post Cold War              |                       | 1.937***<br>(0.370)   | 0.994***<br>(0.235)   |
| Post 2001                  |                       | 0.431*<br>(0.191)     | 0.0784<br>(0.123)     |
| Log Aid<br>(lagged)        |                       |                       | 0.453***<br>(0.0321)  |
| Constant                   | 13.91***<br>(0.00166) | 16.36***<br>(0.883)   | 9.574***<br>(0.798)   |
| Observations               | 8595                  | 4660                  | 4660                  |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.5: Treaty Capital and Aid From All Donors

| Fixed-Effects Models         | Log US Economic Aid  |                     |                      |
|------------------------------|----------------------|---------------------|----------------------|
| Num. Ratified<br>(lagged)    | 0.911***<br>(0.0746) | 0.195*<br>(0.0868)  | 0.0279<br>(0.0421)   |
| GDP per Cap.                 |                      | -0.0907<br>(0.0652) | -0.0349<br>(0.0304)  |
| Population                   |                      | 9.530<br>(15.03)    | 3.983<br>(5.848)     |
| Civil Conflict               |                      | 2.382**<br>(0.829)  | 1.168*<br>(0.534)    |
| Regime Type                  |                      | -0.0746<br>(0.0850) | -0.0275<br>(0.0416)  |
| UN Ideal Point               |                      | 3.219***<br>(0.367) | 1.242***<br>(0.214)  |
| Post Cold War                |                      | 1.615***<br>(0.444) | 0.727***<br>(0.206)  |
| Post 2001                    |                      | 1.655***<br>(0.396) | 0.857***<br>(0.183)  |
| Log US Econ. Aid<br>(lagged) |                      |                     | 0.600***<br>(0.0345) |
| Constant                     | 7.631***<br>(0.248)  | 9.512***<br>(1.051) | 3.778***<br>(0.659)  |
| Observations                 | 8572                 | 4658                | 4656                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.6: Total Ratified and United States Economic Aid

| Fixed-Effects Models         |                     | Log US Economic Aid |                      |
|------------------------------|---------------------|---------------------|----------------------|
| Prop. Ratified<br>(lagged)   | 6.289***<br>(0.600) | 1.047<br>(0.531)    | 0.126<br>(0.252)     |
| GDP per Cap.                 |                     | -0.0788<br>(0.0654) | -0.0333<br>(0.0308)  |
| Population                   |                     | 9.726<br>(14.92)    | 4.032<br>(5.829)     |
| Civil Conflict               |                     | 2.407**<br>(0.826)  | 1.171*<br>(0.533)    |
| Regime Type                  |                     | -0.0659<br>(0.0857) | -0.0259<br>(0.0418)  |
| UN Ideal Point               |                     | 3.211***<br>(0.371) | 1.239***<br>(0.217)  |
| Post Cold War                |                     | 1.764***<br>(0.428) | 0.749***<br>(0.201)  |
| Post 2001                    |                     | 1.926***<br>(0.346) | 0.900***<br>(0.159)  |
| Log US Econ. Aid<br>(lagged) |                     |                     | 0.600***<br>(0.0345) |
| Constant                     | 7.443***<br>(0.307) | 9.318***<br>(1.071) | 3.759***<br>(0.659)  |
| Observations                 | 8572                | 4658                | 4656                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.7: Proportion Ratified and United States Economic Aid

| Fixed-Effects Models         |                       | Log US Economic Aid |                      |
|------------------------------|-----------------------|---------------------|----------------------|
| Treaty Capital<br>(lagged)   | 0.186<br>(0.189)      | -0.0575<br>(0.129)  | -0.0952<br>(0.0591)  |
| GDP per Cap.                 |                       | -0.0815<br>(0.0658) | -0.0341<br>(0.0308)  |
| Population                   |                       | 10.88<br>(14.92)    | 4.386<br>(5.763)     |
| Civil Conflict               |                       | 2.373**<br>(0.828)  | 1.158*<br>(0.535)    |
| Regime Type                  |                       | -0.0501<br>(0.0876) | -0.0215<br>(0.0428)  |
| UN Ideal Point               |                       | 3.138***<br>(0.384) | 1.221***<br>(0.216)  |
| Post Cold War                |                       | 1.817***<br>(0.422) | 0.735***<br>(0.200)  |
| Post 2001                    |                       | 2.122***<br>(0.314) | 0.923***<br>(0.149)  |
| Log US Econ. Aid<br>(lagged) |                       |                     | 0.601***<br>(0.0341) |
| Constant                     | 10.66***<br>(0.00113) | 9.805***<br>(1.058) | 3.842***<br>(0.667)  |
| Observations                 | 8572                  | 4658                | 4656                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.8: Treaty Capital Index and United States Economic Aid

| Fixed-Effects Models        | Log US Military Aid  |                     |                      |
|-----------------------------|----------------------|---------------------|----------------------|
| Num. Ratified<br>(lagged)   | 0.901***<br>(0.0787) | 0.496***<br>(0.118) | 0.0520<br>(0.0404)   |
| GDP per Cap.                |                      | -0.208*<br>(0.101)  | -0.0611*<br>(0.0272) |
| Population                  |                      | 1.284<br>(4.221)    | 2.982<br>(1.880)     |
| Civil Conflict              |                      | 0.716<br>(0.470)    | 0.357<br>(0.439)     |
| Regime Type                 |                      | 0.363***<br>(0.105) | 0.163***<br>(0.0373) |
| UN Ideal Point              |                      | 2.624***<br>(0.377) | 0.663***<br>(0.123)  |
| Post Cold War               |                      | 1.127*<br>(0.481)   | 0.279<br>(0.157)     |
| Post 2001                   |                      | 0.896<br>(0.486)    | 0.413*<br>(0.176)    |
| Log US Mil. Aid<br>(lagged) |                      |                     | 0.749***<br>(0.0150) |
| Constant                    | 4.283***<br>(0.262)  | 4.832***<br>(0.850) | 0.976<br>(0.503)     |
| Observations                | 8595                 | 4660                | 4660                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.9: Total Ratification and United States Military Aid

| Fixed-Effects Models        | Log US Military Aid |                     |                      |
|-----------------------------|---------------------|---------------------|----------------------|
| Prop. Ratified<br>(lagged)  | 6.572***<br>(0.609) | 2.853***<br>(0.744) | 0.315<br>(0.241)     |
| GDP per Cap.                |                     | -0.177<br>(0.0978)  | -0.0578*<br>(0.0273) |
| Population                  |                     | 1.607<br>(4.190)    | 3.000<br>(1.890)     |
| Civil Conflict              |                     | 0.787<br>(0.474)    | 0.365<br>(0.440)     |
| Regime Type                 |                     | 0.382***<br>(0.103) | 0.165***<br>(0.0369) |
| UN Ideal Point              |                     | 2.616***<br>(0.378) | 0.663***<br>(0.123)  |
| Post Cold War               |                     | 1.495**<br>(0.474)  | 0.316*<br>(0.154)    |
| Post 2001                   |                     | 1.552***<br>(0.436) | 0.479**<br>(0.157)   |
| Log US Mil. Aid<br>(lagged) |                     |                     | 0.749***<br>(0.0149) |
| Constant                    | 3.918***<br>(0.311) | 4.254***<br>(0.885) | 0.908<br>(0.519)     |
| Observations                | 8595                | 4660                | 4660                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.10: Proportion Ratified and United States Military Aid

| Fixed-Effects Models        | Log US Military Aid   |                     |                      |
|-----------------------------|-----------------------|---------------------|----------------------|
| Treaty Capital<br>(lagged)  | 0.441*<br>(0.178)     | 0.217<br>(0.158)    | -0.0611<br>(0.0526)  |
| GDP per Cap.                |                       | -0.182*<br>(0.0914) | -0.0584*<br>(0.0258) |
| Population                  |                       | 3.793<br>(4.229)    | 3.456<br>(1.780)     |
| Civil Conflict              |                       | 0.721<br>(0.477)    | 0.350<br>(0.443)     |
| Regime Type                 |                       | 0.415***<br>(0.101) | 0.170***<br>(0.0367) |
| UN Ideal Point              |                       | 2.444***<br>(0.388) | 0.631***<br>(0.123)  |
| Post Cold War               |                       | 1.718***<br>(0.482) | 0.317*<br>(0.157)    |
| Post 2001                   |                       | 2.083***<br>(0.419) | 0.532***<br>(0.150)  |
| Log US Mil. Aid<br>(lagged) |                       |                     | 0.753***<br>(0.0147) |
| Constant                    | 7.285***<br>(0.00167) | 5.437***<br>(0.825) | 1.053*<br>(0.503)    |
| Observations                | 8595                  | 4660                | 4660                 |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.11: Treaty Capital Index and United States Military Aid

| Tobit Models               | Aid From All Donors (Ten Millions) |                      |                      |
|----------------------------|------------------------------------|----------------------|----------------------|
| Num. Ratified<br>(lagged)  | 6.725***<br>(1.851)                |                      |                      |
| Prop. Ratified<br>(lagged) |                                    | 35.29**<br>(10.76)   |                      |
| Treaty Capital<br>(lagged) |                                    |                      | 6.269**<br>(2.092)   |
| GDP per Cap.               | -12.15***<br>(0.720)               | -12.07***<br>(0.718) | -12.02***<br>(0.717) |
| Population                 | 375.4***<br>(25.13)                | 376.6***<br>(25.12)  | 375.3***<br>(25.14)  |
| Civil Conflict             | 15.03<br>(25.78)                   | 16.09<br>(25.76)     | 15.88<br>(25.77)     |
| Regime Type                | 3.292**<br>(1.206)                 | 3.363**<br>(1.206)   | 3.499**<br>(1.202)   |
| UN Ideal Point             | -0.325<br>(4.934)                  | -0.569<br>(4.931)    | -1.564<br>(4.934)    |
| Post Cold War              | 20.18**<br>(7.627)                 | 25.92***<br>(7.360)  | 30.04***<br>(7.383)  |
| Post 2001                  | 11.83<br>(9.124)                   | 21.95**<br>(8.185)   | 28.56***<br>(7.985)  |
| Aid<br>(lagged)            | 0.502***<br>(0.0149)               | 0.502***<br>(0.0149) | 0.503***<br>(0.0149) |
| Constant                   | 4.115<br>(26.36)                   | 0.391<br>(26.53)     | 14.05<br>(26.21)     |
| $\sigma$                   | 194.6***<br>(2.199)                | 194.6***<br>(2.199)  | 194.6***<br>(2.200)  |
| Observations               | 4660                               | 4660                 | 4660                 |

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.12: Tobit Models: Ratification and Aid from All Donors

| Tobit Models                   | Aid From State Donors (Ten Millions) |                      |                      |
|--------------------------------|--------------------------------------|----------------------|----------------------|
| Num. Ratified<br>(lagged)      | 2.048**<br>(0.644)                   |                      |                      |
| Prop. Ratified<br>(lagged)     |                                      | 11.83**<br>(3.754)   |                      |
| Treaty Capital<br>(lagged)     |                                      |                      | 0.983<br>(0.724)     |
| GDP per Cap.                   | -4.656***<br>(0.262)                 | -4.645***<br>(0.261) | -4.562***<br>(0.261) |
| Population                     | 89.12***<br>(8.631)                  | 89.56***<br>(8.625)  | 89.57***<br>(8.644)  |
| Civil Conflict                 | -11.41<br>(8.958)                    | -11.04<br>(8.953)    | -11.31<br>(8.956)    |
| Regime Type                    | 0.288<br>(0.418)                     | 0.293<br>(0.418)     | 0.422<br>(0.417)     |
| UN Ideal Point                 | -1.557<br>(1.726)                    | -1.622<br>(1.725)    | -1.829<br>(1.727)    |
| Post Cold War                  | 9.795***<br>(2.662)                  | 11.48***<br>(2.573)  | 12.40***<br>(2.583)  |
| Post 2001                      | 1.574<br>(3.178)                     | 4.460<br>(2.854)     | 6.553*<br>(2.785)    |
| Aid (State Donors)<br>(lagged) | 0.682***<br>(0.0125)                 | 0.682***<br>(0.0125) | 0.684***<br>(0.0125) |
| Constant                       | 18.63*<br>(9.165)                    | 17.08<br>(9.226)     | 21.72*<br>(9.110)    |
| $\sigma$                       | 66.98***<br>(0.777)                  | 66.97***<br>(0.777)  | 67.02***<br>(0.778)  |
| Observations                   | 4660                                 | 4660                 | 4660                 |

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.13: Tobit Models: Ratification and Aid from State Donors

| Tobit Models               | US Economic Aid (Ten Millions) |                       |                       |
|----------------------------|--------------------------------|-----------------------|-----------------------|
| Num. Ratified<br>(lagged)  | 0.310*<br>(0.146)              |                       |                       |
| Prop. Ratified<br>(lagged) |                                | 1.352<br>(0.851)      |                       |
| Treaty Capital<br>(lagged) |                                |                       | 0.0782<br>(0.164)     |
| GDP per Cap.               | -1.009***<br>(0.0591)          | -1.002***<br>(0.0589) | -0.989***<br>(0.0586) |
| Population                 | -1.023<br>(1.835)              | -0.915<br>(1.833)     | -0.797<br>(1.836)     |
| Civil Conflict             | 5.596**<br>(2.171)             | 5.633**<br>(2.170)    | 5.605**<br>(2.170)    |
| Regime Type                | -0.000240<br>(0.0950)          | 0.00809<br>(0.0950)   | 0.0255<br>(0.0947)    |
| UN Ideal Point             | 2.474***<br>(0.400)            | 2.459***<br>(0.399)   | 2.431***<br>(0.400)   |
| Post Cold War              | 1.757**<br>(0.611)             | 2.035***<br>(0.590)   | 2.136***<br>(0.592)   |
| Post 2001                  | 3.550***<br>(0.719)            | 4.069***<br>(0.645)   | 4.307***<br>(0.629)   |
| L.US Econ. Aid             | 0.915***<br>(0.00704)          | 0.915***<br>(0.00705) | 0.916***<br>(0.00704) |
| Constant                   | -5.298*<br>(2.216)             | -5.358*<br>(2.229)    | -4.841*<br>(2.205)    |
| $\sigma$                   | 15.02***<br>(0.177)            | 15.02***<br>(0.177)   | 15.03***<br>(0.177)   |
| Observations               | 4660                           | 4660                  | 4660                  |

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.14: Tobit Models: Ratification and US Economic Aid

| Tobit Models               | US Military Aid (Ten Millions) |                      |                      |
|----------------------------|--------------------------------|----------------------|----------------------|
| Num. Ratified<br>(lagged)  | 2.599***<br>(0.393)            |                      |                      |
| Prop. Ratified<br>(lagged) |                                | 15.77***<br>(2.325)  |                      |
| Treaty Capital<br>(lagged) |                                |                      | 1.857***<br>(0.442)  |
| GDP per Cap.               | -2.750***<br>(0.165)           | -2.740***<br>(0.164) | -2.652***<br>(0.163) |
| Population                 | -8.012<br>(5.232)              | -7.691<br>(5.225)    | -7.285<br>(5.232)    |
| Civil Conflict             | 6.762<br>(5.782)               | 7.382<br>(5.781)     | 7.088<br>(5.772)     |
| Regime Type                | 1.242***<br>(0.257)            | 1.227***<br>(0.257)  | 1.361***<br>(0.256)  |
| UN Ideal Point             | 10.55***<br>(1.094)            | 10.52***<br>(1.092)  | 10.02***<br>(1.091)  |
| Post Cold War              | 4.414**<br>(1.622)             | 6.632***<br>(1.570)  | 7.900***<br>(1.579)  |
| Post 2001                  | 2.627<br>(1.888)               | 6.236***<br>(1.679)  | 9.107***<br>(1.636)  |
| US Mil. Aid<br>(lagged)    | 0.781***<br>(0.0140)           | 0.780***<br>(0.0140) | 0.783***<br>(0.0140) |
| Constant                   | -23.90***<br>(5.916)           | -26.37***<br>(5.966) | -19.99***<br>(5.868) |
| $\sigma$                   | 37.74***<br>(0.508)            | 37.71***<br>(0.508)  | 37.76***<br>(0.508)  |
| Observations               | 4660                           | 4660                 | 4660                 |

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table B.15: Tobit Models: Ratification and US Military Aid

# Appendix C

## Chapter 5 Appendix

| Negative Binomial Models:   | Transnational Attacks       |                            |                          |
|-----------------------------|-----------------------------|----------------------------|--------------------------|
| Treaty Capital<br>(lagged)  | 0.0152<br>(0.0301)          | 0.0169<br>(0.0300)         | 0.119<br>(0.0673)        |
| Foreign Aid<br>(lagged)     | 0.0000764<br>(0.000148)     | 0.0000509<br>(0.000148)    | 0.000529<br>(0.000356)   |
| Treaty Capital× Foreign Aid | -0.000236***<br>(0.0000709) | -0.000213**<br>(0.0000718) | -0.000485*<br>(0.000198) |
| Population                  | -0.179<br>(0.328)           | -0.239<br>(0.324)          | 0.338<br>(0.567)         |
| GDP per Cap.                | 0.00251<br>(0.0111)         | -0.00425<br>(0.0109)       | 0.0902***<br>(0.0254)    |
| Regime Type                 | 0.0673***<br>(0.0166)       | 0.0780***<br>(0.0164)      | 0.103***<br>(0.0312)     |
| Political Terror            | 0.334***<br>(0.0417)        | 0.339***<br>(0.0415)       | 0.622***<br>(0.0864)     |
| Civil Conflict              | 0.404***<br>(0.0795)        | 0.419***<br>(0.0781)       | 0.930***<br>(0.168)      |
| Post Cold War               | -0.132<br>(0.138)           | -0.312***<br>(0.0702)      | -0.106<br>(0.211)        |
| Post 2001                   | -0.319<br>(0.175)           | -0.894***<br>(0.0942)      | -1.366***<br>(0.245)     |
| Rivalry                     | 0.184<br>(0.0975)           | 0.213*<br>(0.0968)         | 1.127***<br>(0.202)      |
| $t$                         | 0.250**<br>(0.0932)         |                            |                          |
| $t^2$                       | -0.00892*<br>(0.00418)      |                            |                          |
| $t^3$                       | 0.0000837<br>(0.0000559)    |                            |                          |
| Constant                    | -3.914***<br>(0.651)        | -2.005***<br>(0.188)       | -3.518***<br>(0.347)     |
| Observations                | 3110                        | 3110                       | 3603                     |
| Fixed Effects               | YES                         | YES                        | NO                       |

Clustered standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.1: Ratification and Transnational Attacks: Models with Temporal Covariates

| Ratification of:               | Both Conventions        | Bombing Conv.           | Plastic Explosives Conv. |
|--------------------------------|-------------------------|-------------------------|--------------------------|
| Ratification<br>(lagged)       | -0.756***<br>(0.225)    | -0.662**<br>(0.225)     | -0.370*<br>(0.176)       |
| US Military Aid                | 0.00266**<br>(0.000869) | 0.00253**<br>(0.000883) | 0.00245*<br>(0.000961)   |
| Ratification $\times$ Mil. Aid | 0.00402*<br>(0.00167)   | 0.00395*<br>(0.00161)   | 0.00486***<br>(0.00138)  |
| Population                     | 0.0767<br>(0.497)       | 0.115<br>(0.506)        | 0.00184<br>(0.490)       |
| GDP per Cap.                   | 0.0221<br>(0.0142)      | 0.0186<br>(0.0141)      | 0.0204<br>(0.0144)       |
| Regime Type                    | 0.0964***<br>(0.0210)   | 0.0967***<br>(0.0211)   | 0.0975***<br>(0.0210)    |
| Political Terror               | 0.288***<br>(0.0548)    | 0.290***<br>(0.0548)    | 0.285***<br>(0.0548)     |
| Civil Conflict                 | 0.583***<br>(0.105)     | 0.574***<br>(0.105)     | 0.567***<br>(0.105)      |
| Post Cold War                  | 0.0782<br>(0.184)       | 0.0736<br>(0.184)       | 0.0312<br>(0.184)        |
| Post 2001                      | 0.206<br>(0.224)        | 0.221<br>(0.223)        | 0.202<br>(0.229)         |
| Rivalry                        | 0.319*<br>(0.134)       | 0.319*<br>(0.134)       | 0.336*<br>(0.134)        |
| Constant                       | -5.379***<br>(0.888)    | -5.400***<br>(0.896)    | -4.811***<br>(0.883)     |
| Observations                   | 2517                    | 2517                    | 2517                     |
| Fixed Effects                  | YES                     | YES                     | YES                      |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.2: Ratification of Terrorist Bombing Conventions, US Military Aid, and Terrorist Bombings

| Ratification of:                   | Both Conventions         | Bombing Conv.            | Plastic Explosives Conv. |
|------------------------------------|--------------------------|--------------------------|--------------------------|
| Ratification<br>(lagged)           | -0.930***<br>(0.235)     | -0.882***<br>(0.237)     | -0.504**<br>(0.185)      |
| US Economic Aid<br>(lagged)        | 0.00234***<br>(0.000657) | 0.00225***<br>(0.000673) | 0.00250***<br>(0.000661) |
| Ratification $\times$ Economic Aid | 0.0144***<br>(0.00330)   | 0.0136***<br>(0.00301)   | 0.0134***<br>(0.00242)   |
| Population                         | 0.0386<br>(0.496)        | 0.114<br>(0.510)         | -0.0451<br>(0.488)       |
| GDP per Cap.                       | 0.0292*<br>(0.0144)      | 0.0264<br>(0.0143)       | 0.0299*<br>(0.0146)      |
| Regime Type                        | 0.0890***<br>(0.0212)    | 0.0889***<br>(0.0213)    | 0.0917***<br>(0.0211)    |
| Political Terror                   | 0.286***<br>(0.0547)     | 0.286***<br>(0.0548)     | 0.285***<br>(0.0547)     |
| Civil Conflict                     | 0.589***<br>(0.105)      | 0.582***<br>(0.105)      | 0.562***<br>(0.105)      |
| Post Cold War                      | 0.0995<br>(0.184)        | 0.0925<br>(0.184)        | 0.0524<br>(0.184)        |
| Post 2001                          | 0.157<br>(0.224)         | 0.195<br>(0.224)         | 0.146<br>(0.231)         |
| Rivalry                            | 0.319*<br>(0.134)        | 0.308*<br>(0.134)        | 0.335*<br>(0.134)        |
| Constant                           | -5.656***<br>(0.884)     | -5.604***<br>(0.892)     | -5.114***<br>(0.882)     |
| Observations                       | 2517                     | 2517                     | 2517                     |
| Fixed Effects                      | YES                      | YES                      | YES                      |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.3: Ratification of Terrorist Bombing Conventions, US Economic Aid, and Terrorist Bombings

| Ratification of:                   | Both Conventions     | Hostages Conv.         | Diplomat Conv.         |
|------------------------------------|----------------------|------------------------|------------------------|
| Ratification<br>(lagged)           | -0.535**<br>(0.171)  | -0.581***<br>(0.165)   | -0.315*<br>(0.145)     |
| US Military Aid<br>(lagged)        | 0.00195<br>(0.00105) | 0.00144<br>(0.00116)   | 0.00676**<br>(0.00235) |
| Ratification $\times$ Military Aid | 0.00355<br>(0.00191) | 0.00518**<br>(0.00178) | -0.00424<br>(0.00241)  |
| Population                         | -0.528<br>(0.789)    | -0.588<br>(0.785)      | -0.503<br>(0.725)      |
| GDP per Cap.                       | 0.00345<br>(0.0222)  | 0.00394<br>(0.0222)    | 0.000872<br>(0.0219)   |
| Regime Type                        | 0.126***<br>(0.0257) | 0.129***<br>(0.0258)   | 0.108***<br>(0.0251)   |
| Political Terror                   | 0.371***<br>(0.0634) | 0.378***<br>(0.0633)   | 0.383***<br>(0.0630)   |
| Civil Conflict                     | 0.700***<br>(0.126)  | 0.705***<br>(0.126)    | 0.702***<br>(0.127)    |
| Post Cold War                      | -0.350<br>(0.219)    | -0.367<br>(0.218)      | -0.357<br>(0.218)      |
| Post 2001                          | -0.827**<br>(0.292)  | -0.852**<br>(0.293)    | -0.846**<br>(0.296)    |
| Rivalry                            | 0.122<br>(0.160)     | 0.135<br>(0.160)       | 0.130<br>(0.160)       |
| Constant                           | -2.417*<br>(0.963)   | -2.324*<br>(0.960)     | -2.410*<br>(0.962)     |
| Observations                       | 2363                 | 2363                   | 2363                   |
| Fixed Effects                      | YES                  | YES                    | YES                    |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.4: Ratification of Terrorist Kidnapping Conventions, US Military Aid, and Terrorist Hostage-Taking

| Ratification of:                   | Both Conventions         | Hostages Conv.           | Diplomat Conv.         |
|------------------------------------|--------------------------|--------------------------|------------------------|
| Ratification<br>(lagged)           | -0.558**<br>(0.183)      | -0.630***<br>(0.176)     | -0.296*<br>(0.147)     |
| US Economic Aid<br>(lagged)        | 0.00350***<br>(0.000535) | 0.00343***<br>(0.000541) | 0.00926**<br>(0.00330) |
| Ratification $\times$ Economic Aid | 0.00376<br>(0.00313)     | 0.00628*<br>(0.00294)    | -0.00559<br>(0.00330)  |
| Population                         | -0.553<br>(0.802)        | -0.608<br>(0.793)        | -0.512<br>(0.761)      |
| GDP per Cap.                       | 0.0149<br>(0.0224)       | 0.0170<br>(0.0224)       | 0.0107<br>(0.0220)     |
| Regime Type                        | 0.107***<br>(0.0262)     | 0.107***<br>(0.0262)     | 0.0921***<br>(0.0256)  |
| Political Terror                   | 0.364***<br>(0.0638)     | 0.367***<br>(0.0636)     | 0.381***<br>(0.0632)   |
| Civil Conflict                     | 0.711***<br>(0.127)      | 0.718***<br>(0.126)      | 0.721***<br>(0.128)    |
| Post Cold War                      | -0.325<br>(0.218)        | -0.335<br>(0.217)        | -0.332<br>(0.217)      |
| Post 2001                          | -0.855**<br>(0.292)      | -0.879**<br>(0.293)      | -0.873**<br>(0.296)    |
| Rivalry                            | 0.114<br>(0.160)         | 0.120<br>(0.160)         | 0.137<br>(0.160)       |
| Constant                           | -2.386*<br>(0.956)       | -2.228*<br>(0.953)       | -2.594**<br>(0.960)    |
| Observations                       | 2363                     | 2363                     | 2363                   |
| Fixed Effects                      | YES                      | YES                      | YES                    |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.5: Ratification of Terrorist Kidnapping Conventions, US Economic Aid, and Terrorist Hostage-Taking

| Ratification of:            | All Conv's.          | Air Off. Conv.      | Seizure Conv.       | Civ. Avia. Conv.    |
|-----------------------------|----------------------|---------------------|---------------------|---------------------|
| Ratification<br>(lagged)    | 0.630<br>(0.378)     | 0.854*<br>(0.420)   | 0.587<br>(0.391)    | 0.513<br>(0.383)    |
| US Military Aid<br>(lagged) | 0.0864<br>(0.107)    | -0.247<br>(0.557)   | 0.0869<br>(0.107)   | 0.0791<br>(0.108)   |
| Ratif. $\times$ Mil. Aid    | -0.0858<br>(0.107)   | 0.248<br>(0.557)    | -0.0863<br>(0.107)  | -0.0785<br>(0.108)  |
| Population                  | -1.251<br>(0.653)    | -1.335*<br>(0.660)  | -1.237<br>(0.653)   | -1.225<br>(0.653)   |
| GDP per Cap.                | -0.0834<br>(0.0663)  | -0.0803<br>(0.0662) | -0.0845<br>(0.0661) | -0.0844<br>(0.0659) |
| Regime Type                 | 0.00612<br>(0.0626)  | -0.0113<br>(0.0631) | 0.00920<br>(0.0622) | 0.00973<br>(0.0623) |
| Political Terror            | 0.404**<br>(0.140)   | 0.402**<br>(0.141)  | 0.399**<br>(0.141)  | 0.404**<br>(0.141)  |
| Civil Conflict              | 0.323<br>(0.276)     | 0.327<br>(0.275)    | 0.329<br>(0.275)    | 0.327<br>(0.275)    |
| Post Cold War               | -0.000406<br>(0.472) | -0.00831<br>(0.473) | -0.00926<br>(0.471) | -0.0122<br>(0.471)  |
| Post 2001                   | -0.806<br>(0.623)    | -0.811<br>(0.620)   | -0.806<br>(0.624)   | -0.803<br>(0.624)   |
| Rivalry                     | -0.540<br>(0.439)    | -0.537<br>(0.439)   | -0.536<br>(0.439)   | -0.543<br>(0.438)   |
| Constant                    | -2.333<br>(2.015)    | -2.316<br>(2.016)   | -2.439<br>(2.011)   | -2.423<br>(2.013)   |
| Observations                | 1478                 | 1478                | 1478                | 1478                |
| Fixed Effects               | YES                  | YES                 | YES                 | YES                 |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.6: Ratification of Aviation Conventions, United States Military Aid, and the Hijacking of Aircraft

| Ratification of:            | All Conv's.         | Air Off. Conv.      | Seizure Conv.        | Civ. Avia. Conv.     |
|-----------------------------|---------------------|---------------------|----------------------|----------------------|
| Ratification<br>(lagged)    | 0.734<br>(0.396)    | 1.146*<br>(0.454)   | 0.699<br>(0.410)     | 0.618<br>(0.401)     |
| US Economic Aid<br>(lagged) | 0.0182<br>(0.0145)  | 0.0493<br>(0.0356)  | 0.0186<br>(0.0146)   | 0.0176<br>(0.0145)   |
| Ratif. $\times$ Econ. Aid   | -0.0181<br>(0.0145) | -0.0492<br>(0.0357) | -0.0184<br>(0.0146)  | -0.0175<br>(0.0146)  |
| Population                  | -1.254<br>(0.660)   | -1.397*<br>(0.666)  | -1.239<br>(0.660)    | -1.227<br>(0.659)    |
| GDP per Cap.                | -0.0803<br>(0.0668) | -0.0856<br>(0.0674) | -0.0817<br>(0.0666)  | -0.0817<br>(0.0664)  |
| Regime Type                 | -0.0103<br>(0.0643) | -0.0197<br>(0.0642) | -0.00765<br>(0.0641) | -0.00661<br>(0.0641) |
| Political Terror            | 0.391**<br>(0.141)  | 0.381**<br>(0.141)  | 0.386**<br>(0.142)   | 0.392**<br>(0.141)   |
| Civil Conflict              | 0.358<br>(0.278)    | 0.347<br>(0.277)    | 0.366<br>(0.277)     | 0.362<br>(0.277)     |
| Post Cold War               | -0.00317<br>(0.473) | -0.00102<br>(0.475) | -0.0115<br>(0.472)   | -0.0140<br>(0.472)   |
| Post 2001                   | -0.809<br>(0.623)   | -0.817<br>(0.621)   | -0.810<br>(0.624)    | -0.806<br>(0.624)    |
| Rivalry                     | -0.559<br>(0.439)   | -0.576<br>(0.448)   | -0.557<br>(0.439)    | -0.564<br>(0.438)    |
| Constant                    | -2.452<br>(2.013)   | -2.659<br>(2.021)   | -2.577<br>(2.013)    | -2.552<br>(2.013)    |
| Observations                | 1478                | 1478                | 1478                 | 1478                 |
| Fixed Effects               | YES                 | YES                 | YES                  | YES                  |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.7: Ratification of Aviation Conventions, US Economic Aid, and Terrorist Hostage-Taking

| <b>Count Stage</b>      |                           |                           |
|-------------------------|---------------------------|---------------------------|
| Treaty Cap.x For. Aid   | -0.000201<br>(0.000336)   | -0.000325**<br>(0.000113) |
| Foreign Aid             | 0.00121**<br>(0.000435)   | 0.000437<br>(0.000267)    |
| Treaty Capital (lagged) | 0.0329<br>(0.0669)        | 0.0716<br>(0.0437)        |
| GDP per Capita          | 0.0000291<br>(0.0000506)  | -0.0000218<br>(0.0000225) |
| Regime Type             | 0.0710<br>(0.0375)        | 0.0264<br>(0.0605)        |
| Political Terror        | 0.334**<br>(0.108)        | 0.258**<br>(0.0974)       |
| Civil Conflict          | 0.454<br>(0.239)          | 0.256<br>(0.275)          |
| Lagged DV               |                           | 0.0655***<br>(0.0108)     |
| <b>Inflation Stage</b>  |                           |                           |
| Foreign Aid             | 0.00134<br>(0.000900)     | -0.000651<br>(0.00447)    |
| Treaty Capital (lagged) | 0.0314<br>(0.140)         | 0.106<br>(0.254)          |
| Treaty Cap.x For. Aid   | -0.000183<br>(0.000458)   | -0.000892<br>(0.00310)    |
| GDP per Capita          | -0.0000942<br>(0.0000918) | -0.000128*<br>(0.0000557) |
| Regime Type             | -0.117<br>(0.0714)        | -0.0683<br>(0.169)        |
| Political Terror        | -1.077***<br>(0.223)      | -0.683***<br>(0.167)      |
| Civil Conflict          | -1.693<br>(1.468)         | -0.763<br>(0.523)         |
| Lagged DV               |                           | -1.810<br>(0.967)         |
| Observations            | 3661                      | 3661                      |

Coefficients for Intercepts, Colonial Legacy, Rivalry, Population, Post2001 and Post Cold War included in estimation but omitted in table due to space constraints.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.8: Zero Inflated Negative Binomial Models

|                            | Neg. Binomial               | Neg. Binomial                | IV Neg. Binomial            | IV Neg. Binomial           |
|----------------------------|-----------------------------|------------------------------|-----------------------------|----------------------------|
| Treaty Capital<br>(lagged) | 0.0285<br>(0.0274)          | 0.0490*<br>(0.0242)          | 0.244**<br>(0.0945)         | 0.282**<br>(0.0976)        |
| Foreign Aid                | 0.000982***<br>(0.000243)   | 0.000508*<br>(0.000215)      | 0.00129***<br>(0.000199)    | 0.000888***<br>(0.000218)  |
| Treaty Cap.x For. Aid      | -0.000227*<br>(0.000105)    | -0.000203*<br>(0.0000903)    | -0.000564***<br>(0.000143)  | -0.000501***<br>(0.000148) |
| Population                 | -0.000339<br>(0.000373)     | 0.000223<br>(0.000297)       | -0.000539*<br>(0.000215)    | -0.0000449<br>(0.000215)   |
| GDP per Capita             | 0.0000803***<br>(0.0000118) | 0.0000552***<br>(0.00000989) | 0.0000469***<br>(0.0000103) | 0.0000317**<br>(0.0000105) |
| Regime Type                | 0.0873***<br>(0.0167)       | 0.0611***<br>(0.0148)        | 0.0704***<br>(0.0159)       | 0.0344*<br>(0.0164)        |
| Political Terror           | 0.673***<br>(0.0509)        | 0.510***<br>(0.0451)         | 0.621***<br>(0.0335)        | 0.469***<br>(0.0348)       |
| Civil Conflict             | 0.707***<br>(0.108)         | 0.425***<br>(0.0955)         | 0.660***<br>(0.0670)        | 0.395***<br>(0.0707)       |
| Post Cold War              | -0.416***<br>(0.0891)       | -0.329***<br>(0.0811)        | -0.401***<br>(0.0622)       | -0.280***<br>(0.0657)      |
| Post 2001                  | -0.981***<br>(0.114)        | -0.660***<br>(0.102)         | -0.946***<br>(0.0791)       | -0.643***<br>(0.0811)      |
| Rivalry                    | 0.930***<br>(0.0851)        | 0.669***<br>(0.0763)         | 0.847***<br>(0.0564)        | 0.605***<br>(0.0591)       |
| Colonial Legacy            | -0.472***<br>(0.106)        | -0.263**<br>(0.0932)         | -0.465***<br>(0.0670)       | -0.235***<br>(0.0706)      |
| Lagged DV                  |                             | 0.196***<br>(0.0120)         |                             | 0.166***<br>(0.00755)      |
| Constant                   | -2.890***<br>(0.217)        | -2.751***<br>(0.191)         | -2.558***<br>(0.144)        | -2.438***<br>(0.149)       |
| $\ln(\alpha)$              | 1.304***<br>(0.0458)        | 0.945***<br>(0.0496)         |                             |                            |
| Observations               | 3661                        | 3661                         | 3655                        | 3655                       |
| Fixed Effects              | NO                          | NO                           | NO                          | NO                         |
| Instrumental Variable      | NO                          | NO                           | YES                         | YES                        |

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table C.9: Instrumental Variable Models

# Appendix D

## Chapter 6 Appendix

| Measure of Ratification:  | Proportion Ratified                | Number Ratified                   | Treaty Capital                 |
|---------------------------|------------------------------------|-----------------------------------|--------------------------------|
| US Economic Aid           | -0.00837 <sup>+</sup><br>(0.00484) | -0.0111 <sup>+</sup><br>(0.00671) | 0.00349*<br>(0.00171)          |
| Ratification              | -1.093*<br>(0.537)                 | -0.110<br>(0.0777)                | -0.129<br>(0.0833)             |
| Aid $\times$ Ratification | 0.0168 <sup>+</sup><br>(0.00934)   | 0.00284 <sup>+</sup><br>(0.00168) | 0.00156*<br>(0.000722)         |
| Rivalry                   | 0.178<br>(0.209)                   | 0.156<br>(0.208)                  | 0.160<br>(0.206)               |
| GDP                       | 0.743**<br>(0.156)                 | 0.731**<br>(0.155)                | 0.724**<br>(0.149)             |
| Population                | -0.248*<br>(0.0999)                | -0.238*<br>(0.0981)               | -0.279**<br>(0.0998)           |
| Regime Type               | 0.00942<br>(0.0464)                | -0.00217<br>(0.0457)              | 0.00574<br>(0.0458)            |
| Military Regime           | -0.852 <sup>+</sup><br>(0.462)     | -0.889 <sup>+</sup><br>(0.464)    | -0.886 <sup>+</sup><br>(0.459) |
| State Sponsored           | -0.0803<br>(0.288)                 | -0.0836<br>(0.288)                | -0.0749<br>(0.288)             |
| Political Terror          | 0.105<br>(0.123)                   | 0.0932<br>(0.124)                 | 0.103<br>(0.122)               |
| Post Cold War             | 0.0424<br>(0.235)                  | -0.0636<br>(0.243)                | 0.0275<br>(0.236)              |
| Post 2001                 | 0.0293<br>(0.240)                  | 0.0188<br>(0.270)                 | -0.160<br>(0.226)              |
| Num. of Groups            | 0.0391 <sup>+</sup><br>(0.0202)    | 0.0370 <sup>+</sup><br>(0.0202)   | 0.0453*<br>(0.0202)            |
| Civil Conflict            | -0.0513<br>(0.225)                 | -0.0536<br>(0.228)                | -0.0530<br>(0.225)             |
| Constant                  | -3.933 <sup>+</sup><br>(2.282)     | -4.075 <sup>+</sup><br>(2.253)    | -3.839 <sup>+</sup><br>(2.245) |
| Observations              | 4827                               | 4827                              | 4827                           |

Standard errors in parentheses

$t$ ,  $t^2$ , and  $t^3$  included in estimation but omitted from table due to space considerations.

<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$

Table D.1: US Economic Aid, Ratification, and Terrorist Group Duration

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