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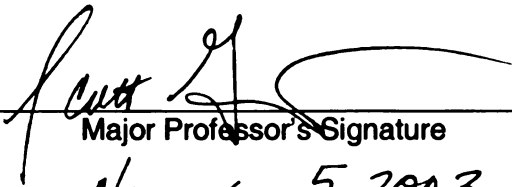
ECONOMIC SANCTIONS, DOMESTIC POLITICAL  
INSTITUTIONS, AND UNITED STATES DRUG POLICY: THE  
USE AND EFFECTIVENESS OF ECONOMIC COERCION

presented by

David James Lektzian

has been accepted towards fulfillment  
of the requirements for the

Ph.D. degree in Political Science

  
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**ECONOMIC SANCTIONS, DOMESTIC POLITICAL INSTITUTIONS, AND UNITED  
STATES DRUG POLICY: THE USE AND EFFECTIVENESS OF ECONOMIC  
COERCION**

**By**

**David James Lektzian**

**A DISSERTATION**

**Submitted to Michigan State University**

**In partial fulfillment of the requirements for the degree of**

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## ABSTRACT

# ECONOMIC SANCTIONS AND DOMESTIC POLITICAL INSTITUTIONS: AN EMPIRICAL ANALYSIS WITH A STUDY OF UNITED STATES SANCTIONS AGAINST COUNTRIES SUPPORTING INTERNATIONAL NARCOTICS TRAFFICKING

By

David James Lektzian

In this dissertation I use a general framework regarding the importance of domestic politics in international relations to address two important topics in the study of economic coercion; the initiation and the success of economic sanctions. The first part of the dissertation focuses on the initiation of sanctions. In this section, I perform an empirical analysis including all sanctions cases from 1950-1989. The findings show that domestic political institutions influence the use of economic sanctions and supports the idea of an “economic peace” among democratic states, at least regarding the use of economic sanctions. While democratic states are more likely to use economic sanctions than autocratic states, they are less likely to use them against another democracy.

The second part of the dissertation focuses on the success of economic sanctions. A game theoretic model is developed and used to derive several hypotheses regarding the success of sanctions at the threat and initiation stage. These hypotheses are tested using a strategic probit model (STRAT) and data gathered on the US sanctions against countries that do not cooperate in the fight against the trafficking of illicit narcotics. The findings show that threats of sanctions have tended to be more successful than their implementation, leading to a bias against findings of success in studies that only analyze implemented sanctions. This helps answer one of the most puzzling questions in the

study of economic sanctions; why do states continue to use sanctions when they are so likely to be unsuccessful? The simple answer proposed by this study is that states continue to use sanctions because they expect to be successful. However, because most of the success of sanctions takes place at the threat stage, traditional estimates of success based on implemented sanctions are likely to be biased downward. A second important finding is that when the potential target of sanctions is a democracy, both the sender and the target are more likely to back down at the threat stage. This helps account for the empirical finding in the first part of the dissertation that democracies are less frequently the target of sanctions.

Dedicated to the memory of my father, Sam Lektzian

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## ACKNOWLEDGEMENTS

The research presented in this dissertation represents my attempt to bridge theories of economic coercion and military conflict. Most people never have the opportunity in life to pursue, let alone complete, such a self-indulgent task. I warmly acknowledge those who helped make it possible for me to step outside of 'the real world' for a period of years and exercise my mind in this manner.

I have been fortunate to have two people in my life who made the completion of this dissertation possible. The first person came to me through the right of birth; the other came about through the luck of placement. Of course there are many others who played important roles in the completion of this dissertation, but the two who stand out most prominently are my mother, Helen Lektzian, and my advisor, Scott Gates.

Scott Gates has and continues to be more than just an advisor; he is a friend and a mentor. Without Scott's guidance I would have still written a dissertation, but the end product would not have been nearly as good and the task could not have been as enjoyable. Most importantly, my mother has always provided unquestioned support throughout my life and throughout the writing of this dissertation. Without her help I would not have even begun the task, let alone finish it! My deepest thanks and gratitude go out to both of you!

I believe every happy and successful graduate student needs somebody in his or her cohort group to interact with. For me the perfect colleague and friend during my graduate school years was Mark Souva. Likewise, we all need somebody to keep us from getting too serious and distract us from work every now and then. The Reverend Mark LaVelle always filled this role most enthusiastically! I was also blessed by having my

brother Michael, sister Joan, and my niece and nephew, Zack and Katy, live within 2 miles of my house during most of my graduate years.

I also benefited greatly from those who provided support for my graduate studies by giving me the opportunity to work in a challenging yet flexible work environment. Karen Klomparens provided the perfect work environment for graduate students. She made sure that my work for The Graduate School was never a burden and that I always had adequate facilities to complete my work for The Graduate School as well as my dissertation. Likewise, having the opportunity to learn about the discipline from Ada Finifter, as an intern for the APSR, has been invaluable.

It would be impossible to mention the contributions of all the other people who helped along the way. My entire dissertation committee was most helpful and supportive and helped make the end product stronger. In particular Bill Reed helped broaden my understanding of the fields of International Relations and Quantitative Methods. Among other faculty members influential in the writing of my dissertation, Jim Granato taught methods in a way that was enjoyable and accessible; Brian Silver made sure I always had funding opportunities available; and Gretchen Hower provided a great foundation in how to think critically. Fellow graduate students who helped develop my thoughts as well as providing friendship were Brandon Prins, Chris Butler, Chris Sprecher, Sara Mitchel, Wonjae Hwang, Sara Benesch, Gina Lambright, Lu-huei Chen, Matt Kleiman, BJ Dobski, Mark Hurwitz, Misa Nishikowa, and Wendy Martinik.

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## **Chapter 1**

### **Introduction – Why Study Sanctions**

Economic sanctions play an essential, yet under appreciated, role in the interactions between states. As a policy option that fits between the two poles of military force and doing nothing sanctions have been employed by governments all around the world with increased frequency and great diversity in the types of issues to which they are applied. Since 1990 alone, economic sanctions were used by the United States, Greece, Russia, the United Nations and the European Union, China, Germany, Belgium, France, Saudi Arabia, England, the Netherlands, Spain, Japan, the OAU and ECOWAS, Mercosur, and Turkey to take on goals such as discouraging the proliferation of nuclear weapons and ballistic missile technology, promoting human rights, combating terrorism, curtailing drug trafficking, gaining mineral rights, ending armed conflicts, and assisting in the destabilization of governments<sup>1</sup>.

The United States has been a particularly frequent user of economic sanctions leading Richard Haass, the Director of Foreign Policy Studies at Brookings, to describe sanctions as “the policy tool of choice for the United States in the post-Cold War world” (Haass, 1998:1). Similarly, Zachary Selden, the Director of the Business Executives for National Security (BENS) has called sanctions “Virtually the default option in American foreign policy” (Selden, 1999: ix).

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That policy makers have turned to sanctions with an increasing degree of frequency over the last decade is undisputed. Elliot and Hufbauer (1998) summarizing data collected at the Institute for International Economics show the imposition of at least 50 new cases of sanctions in the 1990s alone after counting 115 cases in the entire period from 1914 – 1989. Furthermore, a recent study by the Brookings institute (O’Sullivan, 2003) counts 66 new sanctions by the United States or UN during the 1990-2002 period.

There have been various reasons offered for the increased use of sanctions in the 1990s<sup>2</sup>. One is that the dissolution of the Soviet Union has left the United States searching for a post cold war paradigm and this has lead to an increased demand to “do something” about many different problems around the world, including ethnic conflict, human-rights violations, drug trafficking, terrorism, or nuclear proliferation

A second explanation for the increased use of sanctions in the 1990s is that the end of the cold war has freed the UN to act now that the East-West gridlock created by the United States-Soviet opposition has ended. As a result there have been 15 new UN sanctions since the 1990s (O’Sullivan, 1999) compared to only two prior to 1990.

A third explanation is that the international economy has become more integrated, producing a greater ability for states to use sanctions for coercive diplomacy. However, economic interdependence is a double-edged sword for sanctions because while it

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<sup>1</sup> See Hufbauer, and Oegg (2000) for a list of sanctions cases since 1990.

<sup>2</sup> Aside from the explanations offered here van Bergeijk (1995) offers six additional factors to explain “why sanctions are and will be increasingly used: the end of the Cold War; strategic trade policy considerations; the greening of trade issues; the proliferation of weapons of mass destruction and the related technology; scale economies in the implementation of sanctions; and the process of globalization” (van Bergeijk, 1995: 445).

increases the potential vulnerability to the disruption of trade flows, it also increases the potential for evasion by targets of sanctions.

Whatever the underlying reasons for their increased usage, the paucity of academic analysis of sanctions compared to studies of military conflict is surprising and somewhat disturbing. David Baldwin in his treatise on economic statecraft passionately argues for scholars to study options other than military statecraft. He says

“Any generalization about the utility of military force as a technique of statecraft made without reference to the utility of alternative techniques is likely to be both intellectually misleading and socially irresponsible. Given the plethora of studies of military statecraft at a high level of generality, most of which make no serious attempt to consider alternative techniques, scholars are derelict in fulfillment of their social responsibilities if they fail to provide studies of alternative techniques of statecraft at comparable levels of generality...Since the books on military statecraft cannot be unwritten, the only socially responsible alternative is to generate studies of alternative policy techniques at comparable levels of generality” (Baldwin 1985: 67)

In this dissertation, as Baldwin urges, economic statecraft will be studied at a level consistent with studies of military force, thus at least partly filling the void that Baldwin laments in the above quote.

Aside from contributions to the academic study of economic sanctions, the findings of the dissertation also have important implications in the realm of policy. With the rise in their use and increased complexity of issues for which they are applied, understanding the mechanisms that produce successful or failed sanctions has become increasingly important. Sanctions policies that miss the mark by applying pressure in ways that should be predictably ineffective, are likely to cause increased economic

hardship on poor segments of the target state's population. The massive economic damage inflicted on Iraq by UN sanctions between 1990 and 2002 without achieving stated policy objectives has forced the world to take notice of the consequences of misusing economic sanctions. If there was ever a doubt about the ability to punish a country economically through sanctions, it has vanished in the wake of the Iraqi sanctions. Consider that prior to the sanctions imposed on Iraq in 1990, one Iraqi dinar was worth three-and-a-half U.S. dollars. By 1999 it took just under 2,000 Iraqi dinars to make a dollar<sup>3</sup>. (Roberts, 1999) Clearly, sanctions should not be used lightly, nor should they be used without an attempt to understand their repercussions.

When considering the use of economic sanctions, it is essential to understand how, or if, economic hardship will be translated to the achievement of political objectives. Perhaps the most important lesson to understand about economic sanctions is that effective sanctions (in terms of economic damage) do not always equal successful sanctions (in terms of policy achievement).

Woodrow Wilson demonstrated an appreciation for the power of sanctions to punish when in a speech in 1919 he uttered these famous words,

"A nation that is boycotted is a nation that is in sight of surrender. Apply this economic, peaceful, silent, deadly remedy and there will be no need for force. It is a terrible remedy. It does not cost a life outside the nation boycotted, but it brings a pressure upon the nation which, in my judgment, no modern nation could resist" (Padover, 1942:108).

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<sup>3</sup> While this is a comparatively objective measure of the consequences of the sanctions, many researchers cite figures on the increased number of deaths of children under 5 in Iraq as a result of the sanctions. These estimates range widely from about 237,000 to about 1.5 million children dead as a result of sanctions.

What Wilson failed to understand (although it was made painfully clear in the failed attempt by the League of Nations to use economic sanctions to coerce Italy in 1935) was that while sanctions may indeed be a terrible remedy in respect to their ability to impose economic hardship, this hardship will not necessarily translate into surrender by the target. Simply put, some governments will be less responsive to economic coercion attempts than others regardless of the economic damage imposed. This point was also made clear in the Iraqi sanctions, and it demands that we strive for a better understanding of the workings of this “terrible remedy.” However, the ultimate irony for the statesperson may be that it is not sanctions that are a terrible remedy; it is their improper use, which has terrible consequences.

### **The Puzzling Use of Sanctions**

Contrary to the opinion of Woodrow Wilson, researchers have been highly skeptical of the ability of sanctions to accomplish their policy goals and many have come to the conclusion that sanctions are simply an ineffective policy tool. Johan Galtung in one of the most frequently cited works on economic sanctions concludes “In this article the conclusion about the probable effectiveness of economic sanctions is, generally, negative” (Galtung, 1967; p. 409). Barber (1979) and Olson (1979) find the same conclusions in their reviews of the literature. “There is a strong consensus that sanctions have not been successful in achieving their primary objectives” (Barber, 1979; p. 384). “There is a consensus in the literature that economic sanctions are largely ineffective.” (Olson, 1979; p. 473). In a more recent work, Cortright and Lopez come to the same conclusion as evidenced by this statement “Yet the conventional belief, seemingly

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supported by the scholarly research, is that sanctions do not work” (Cortright and Lopez, 2000; p.13).

All of these negative assessments of the effectiveness of sanctions as a policy tool lead to what is probably the most frequently addressed puzzle by sanctions researchers; why do states use economic sanctions when they have such a dismal record of success. For example, Lindsay (1986) asks “Yet if trade sanctions do not work, why do states continue to impose them” (Lindsay 1986: 153) In other words, if sanctions are so unlikely to succeed, why are they turned to so frequently to address important security concerns? And what is particularly puzzling is why the senders of sanctions are so frequently powerful countries that have many other foreign policy tools at their disposal, but still choose sanctions. In other words, why, out of all the options available, would policy makers knowingly choose one with such a low success rate?

In this dissertation, I propose a unique answer to the question of why sanctions are used so much when they are so unlikely to be successful. The direct and intuitive answer is that sanctions are simply not an unsuccessful policy, or they would not be used as often as they are. The reason that traditional studies of sanctions have been so far off the mark on this issue is that traditional empirical estimates of sanctions success are likely to be biased downward because successful *threats* of sanctions are ignored. I develop this line of reasoning through a deductive model accounting for threats of sanctions that explains why states may rationally continue to use sanctions as a foreign policy tool even in the face of low success rates for those sanctions that are implemented.

This deductive model shows that most of the success of economic sanctions should be seen at the threat stage and not after they are implemented. Once, the two sides



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have actually engaged in implemented sanctions, the probability of success is shown to be much lower. Therefore, analysts who base their assessment of the usefulness of sanctions on their observed empirical success rate are only seeing part of the picture; and the most dismal part at that. Viewing the policy in its entirety (including the success and failure of threats) shows that it is entirely reasonable for policy makers to use sanctions with the expectation of reaching success. Furthermore, in order for senders of sanctions to increase their credibility and prevent targets from anticipating that the sender will back down, it may be perfectly rational for senders to leave ineffective sanctions policies in place for long periods of time to signal their resolve. In other words, it may be quite necessary to have failed cases of sanction in order to demonstrate resolve on the part of the sender and lead to successful future threats of sanctions.

While the previous discussion focuses on the formulation of a deductive model and its uses in the derivation of formal hypotheses, I also perform an empirical test of these hypotheses. Gates and Humes (1997) describe the method used here for analysis in the following way

“Using the deductive approach, a game theoretic model is developed and formalized form a more general theory to model a social interaction. Assumptions (initial conditions) and equilibria for the game are then identified. From this analysis, a set of propositions are presented and empirically evaluated. The empirical analysis essentially tests propositions derived from the analysis and identification of equilibria” (Gates and Humes, 1997:15).

In order to test the hypotheses of the deductive model, a new database of sanctions cases, which includes threats of sanctions, is created. This data includes all threats and impositions of sanctions by the United States from 1986-2002 against countries supporting the illegal trafficking of narcotics. Important independent variable concepts

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are operationalized with data on the amount of drug production and traffic for every country from 1987-2000 gathered from United Nations sources and supplemented from United States sources where UN data was missing<sup>4</sup>. Thus, a major innovation in this research is that unlike other deductive studies that focus on cases of implemented sanctions, this study is able to analyze the importance of the entire sanctions policy, including threats.

The results of the empirical model also lend strong support to the importance of regime type in sanctions. Of particular importance for this study is that the biggest impact of target democracy level was found to be at the threat stage. After sanctions have been threatened, they are significantly less likely to occur between democracies. These findings help reconcile the expectation common in the literature that sanctions are more likely to be successful against democratic governments but at the same time are empirically less likely to occur between democracies (as demonstrated empirically later in this dissertation)<sup>5</sup>.

In one of the most important findings of the dissertation, the United States is found to threaten other democracies with regularity, as they should do if they expect success, but those cases involving democracies as targets are significantly less likely to reach the implementation stage because both the sender and the target are more likely to back down. This shows the strong signaling qualities of sanctions when democracies are involved. Both senders and targets are found to be more likely to back down when a democracy signals its intentions by using or resisting sanctions.

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<sup>4</sup> Of course, there was still some missing data. See chapter 5 for complete details on this data set.

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Without this finding there is an unresolved question for all studies of sanctions success and regime type. That question is that if democracies are less able to resist sanctions (as proposed by the sanctions and democracy literature), then why are they less likely to be sanctioned? If potential senders of sanctions are behaving rationally, and they have a higher utility for successful sanctions than failed sanctions, then democracies should be sanctioned more frequently. However, democracies are actually less frequent targets of sanctions and the findings of this dissertation help explain why.

There are actually two parts to the explanation as proposed here. First, as shown in the initiation section of the dissertation, democracies are the most frequent users of sanctions, but are less likely to use them against similar regimes. This results in fewer sanctions against democracies because of ideological similarities. Second, sanctions against democracies are less likely to occur because of the ability of democracies to send more credible signals. Thus when a democracy resists sanctions, the potential sender is more likely to back down without a sanction being recorded. Also when a democracy is truly unable to resist the sanctions once they are imposed, they are again more credible and are more likely to give in at the threat stage rather than bluffing and having to give in once the sanctions are enacted. Importantly, in both instances sanctions are never observed in traditional studies of sanctions. This leads traditional studies of sanctions to underestimate the frequency with which democracies are targeted by sanctions.

Therefore, we see that by framing the research question within a model that includes the importance of domestic institutions and by considering the successful use of

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<sup>5</sup> Similarly, Drezner (1999) predicts fewer sanctions against allies even though he predicts states to be more successful against allies than adversaries.

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threats of sanctions, state behavior is found to be not so puzzling. States use sanctions because they expect to be, and very often are, successful. However, because much of this success is occurring at the threat stage it is unobserved by typical empirical analysts. Therefore, much of what is cast by others as puzzling is shown here to be quite expected.

### **Studying Sanctions as a Type of Conflict**

In addition to the explanations provided in the first section of this chapter for the increased use of sanctions in the 1990s, Baldwin provides another explanation for the general attractiveness of sanctions relative to other policy options. Baldwin describes sanctions as filling an important space between using military force and doing nothing. He says, “Economic sanctions lie somewhere in between war and appeasement in terms of a continuum of *toughness*.” (Baldwin 1985:104) “[Sanctions] are stronger than diplomatic protests but weaker than military attack” (Baldwin 1985:104). Another analyst has adeptly noted that “Sanctions straddle the line between the issue areas of national security and international economics, giving rise to unique theoretical and policy puzzles” (Martin, 1992; p.1).

Throughout the dissertation I build on the perspective that sanctions occupy this position between security studies and international economics, which leads me to take a vastly different approach to the study of sanctions. Previously scholars have approached the study of sanctions from an economic perspective with an interest in the economic implications of trade restrictions. However, if one sees sanctions as a type of conflict short of war, they can be analyzed in much the same way as in studies of militarized conflict. While the economic impact of sanctions is considered throughout this work, the



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primary focus is on studying sanctions as a type of conflict. Scholars studying military conflicts have already thoroughly explored the effect of domestic institutions on the initiation, duration, severity and outcomes of wars, but such analysis has not typically been performed on economic conflicts. Treating sanctions as conflicts provides an opportunity to extend existing research on militarized disputes to the realm of economic disputes, thus developing an exiting new area of research in International Relations.

While the conflict literature is rife with theoretical perspectives, in this dissertation the body of work generally referred to, as the 'Democratic Peace' will provide the theoretical framework for most of the analysis. One of the most robust findings in all of International Relations is that democratic countries will not fight wars with each other. This finding has been hailed as "the closest thing to an empirical law in world politics" (Levy 1988: 662). However, until very recently, this has not been a topic of study for those interested in the use of economic force. Kim Richard Nossal, a leading sanctions researcher, notes that scholars studying sanctions "...have tended to overlook one important variable: the impact that regime type has on the success or failure of international sanctions as an instrument of global governance" (Nossal 1999; p.127).

Nossal has identified a critical deficiency in the sanctions literature that pertains not only to the success or failure of sanctions, but the onset, or initiation, as well. One of the main theses developed in this research is that, much as in the democratic peace literature, regime type influences the behavior of states in the use of economic sanctions. However, since the costs associated with economic sanctions are less than those associated with uses of military force the relationship will not be as strong.

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The 1956 Suez crisis provides an example of this relationship. When Great Britain and France aided Israel in attacking Egypt without the approval of their ally, the United States, three fully democratic countries squared off on opposite sides of a potentially explosive dispute. The United States certainly wanted to exert pressure on its democratic allies Great Britain and France to disengage their militaries from the Sinai and honor an immediate ceasefire. But when the UK and France used their UN Security Council veto power to block the United States' call for an unconditional cease-fire, the United States had to decide what level of force was most appropriate for achieving its goal. In the end, the United States was willing to impose very costly economic sanctions that are estimated to have cost Great Britain approximately \$167 million (Hufbauer, Schott, and Elliot 1985: p. 277), but a United States military strike against Great Britain and France was never seriously considered. Hufbauer Schott and Elliot provide this assessment of the situation.

From late October through early November, [the] UK's oil reserves are nearly depleted and [a] serious run on the pound threatens its financial position. [The] United States blocks attempts by [the] UK to draw on its IMF reserves, refuses to provide financial assistance to support [the] pound unless [the] UK accepts UN recommendations, [and] promises Eden [a] \$1billion loan as soon as British troops are withdrawn from [the] Suez. Totally beaten, Eden capitulated at noon on 6 November. (Hufbauer, Schott, and Elliot, 1985: p.278)

An important question for consideration is whether the behavior described above, where one democracy is willing to impose costly economic sanctions against a democratic ally, is typical of international relations or an exceptional case. Another area for consideration pertains to the success of this influence attempt. Great Britain was one of the most economically and militarily powerful countries in the world, yet it acquiesced

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to the demands of the United States after costly sanctions were imposed. An explanation based on the importance of domestic institutions is provided in the dissertation for how the United States was able to persuade Great Britain to change behavior through the use of economic coercion.

By comparison, consider the response of the Soviet Union when the United States tried this same tactic two decades later. After the Soviet Union's invasion of Afghanistan in December 1979, the United States again responded to military aggression by a major world power with harsh economic sanctions, which included an embargo of United States grain shipments (Hufbauer, Schott, and Elliot, 1985:655). These sanctions heightened tensions between the countries and brought economic and political pressure on the Soviets as well as imposing political and economic costs on the Carter regime from the United States' agricultural community. Once again, even if the United States was unwilling to go to war over the issue, it was willing to impose costly sanctions to signal its disapproval for the action and demonstrate its resolve.

Assuming that the costs were prohibitively high for confronting the Soviets militarily in Afghanistan, the United States could have chosen to do nothing or to publicly condemn the actions without the accompaniment of sanctions. However, as Selden (1999) has pointed out, as a great power the United States pays a high price for inaction when others perceive them to have the ability to act. Thus doing nothing becomes a very costly response for great powers, which can send unintended signals to the rest of the world. If the United States chose to do nothing in response to the Soviet's invasion it may have signaled disinterest on their part, a general weakness that precluded any response, or tacit support for the actions. Issuing a public condemnation of the invasion

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without sanctions would have also signaled a lack of commitment on the part of the United States. Paarlberg (1980) summarizes the difficult situation facing the president after the Soviet's December invasion.

However slim its chances of success, the grain embargo must have appeared, last January, as more attractive than the alternatives. The alternative was to continue with plans...to sell in 1980 an all-time record 25 million tons of United States grain to the Soviet Union...Without an embargo of some kind, the President would have found himself presiding over the largest 'Russian grain deal' on record...To important allies abroad, this would have been an inappropriate token of the administration's new policy toward the Soviet Union, so soon after Afghanistan...Politically, the only thing worse than announcing a grain embargo two weeks before the Iowa caucuses would have been *not* to announce such an embargo." (Paarlberg, 1980: 160)

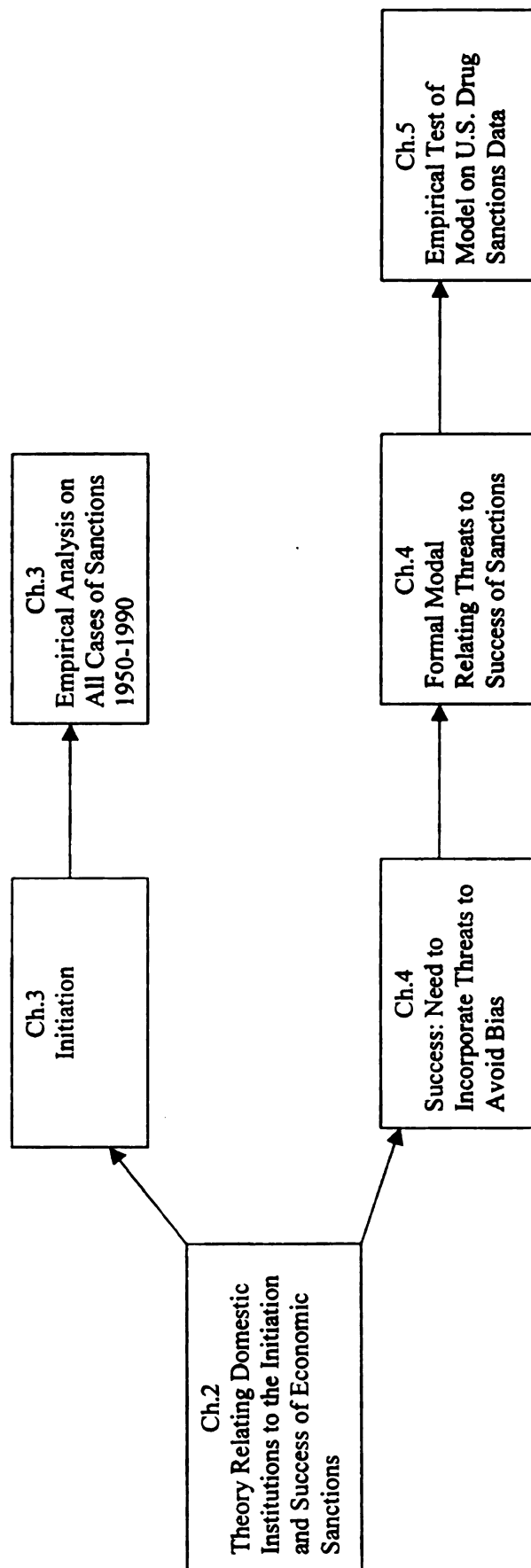
In the end, even though the sanctions imposed high costs to both the Soviet Union and the United States and may have actually been the best of the available options at the time, they were eventually lifted without achieving any of their stated goals.

### **Plan of the Dissertation**

I want to emphasize two points from the preceding examples, which pertain to the two main themes of this dissertation. These two main themes can be seen as the two branches in the flow chart in Figure 1.1.



**Figure 1.1: Flow Diagram of Dissertation Organization**



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The top branch in the figure shows the theme of the initiation of sanctions, which will be taken up in chapter 3, while the bottom branch shows that the theme of the success of sanctions will be the subject of chapters 4 and 5. On the far left of the diagram, Chapter 2 starts with a thorough review of existing theories regarding the use of and success of sanctions and proceeds to develop a unique theoretical perspective emphasizing the importance of domestic institutions. Thus, chapter 2 provides the theoretical “glue” (if you will) that holds the dissertation together.

Referring back to the Soviet grain embargo and the Suez sanctions, we see first that pertaining to initiation, sanctions were used in a way that corresponds to Baldwin’s characterization of them as a policy instrument lying between war and appeasement. In both cases the United States was unwilling to go to war, but they were also unwilling to give tacit approval by not responding. Thus in both cases, we see decidedly political conflicts where economic coercion is used in hopes of achieving a change in a political policy. Chapter 3 takes up the decision to impose sanctions by performing a detailed empirical analysis of the factors affecting the decision to use sanctions.

An essential theoretical question proposed in this chapter is whether there is a minimum threshold of hostility level to which theories of the democratic peace apply. Or, in other words, is there an “economic peace” between democratic countries with regard to uses of economic sanctions that mirrors the finding of the democratic peace with regard to militarized disputes? Or, on the other hand, when the costs involved in the conflict drop to the level involved in economic sanctions, will countries be quick to respond with economic force regardless of ideological similarities (as was the case in the United States sanctions against Great Britain)?

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The results of the statistical analysis in chapter 3 provide convincing evidence that even though democracies are more likely to use economic sanctions than other nations, they are significantly less likely to use them against fellow democratic nations. However, unlike in militarized conflicts, democracies are not altogether unwilling to use economic force against other democracies. Democracies are the most frequent users of economic sanctions, and, as evidenced in the Suez case, they will not completely exclude this lower cost option as a tool of coercion against fellow democracies. But when democracies do use sanctions against each other, domestic institutions present in democracies result in specific types of sanctions being imposed. For example, democracies prefer to impose financial sanctions as they cause less harm to the general public. I also find that the greater incentive in a democracy to promote the public welfare leads democracies to impose minor sanctions more often than autocracies.

The unambiguous conclusion of the analysis of chapter 3 is that domestic institutions influence the use of and responses to economic force. Similar to the results of the democratic peace regarding militarized force, countries with democratic institutions in place are more likely to use economic sanctions, but are less likely to use them against other democracies.

The second point from the two examples is that while the United States applied costly sanctions over aggressive military behavior in both cases, they were successful against Great Britain and not against the Soviet Union. Thus, a second theme of the dissertation (taken up in chapters 4 and 5) is an exploration of the factors affecting the successful use of economic sanctions. Chapter 4 is a theoretical chapter exploring the role of threats in the use of economic sanctions with a special emphasis on the importance

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of domestic institutions. A formal, game theoretic, model is developed showing how senders and targets of economic coercion can be expected to behave once economic sanctions have been threatened. The theoretical foundation of the model is that domestic political institutions can help explain why some targets of sanctions might comply at the mere threat of sanctions while others might resist complying even under the heaviest of sanctions. Chapter 5 subjects the findings of this model to empirical tests using data from the United States' sanctions policy against countries that are not cooperating in the fight against international trafficking in illicit narcotics.

A final point is that the Soviet Union and Great Britain had very different forms of government at the time they were targeted by the United States with sanctions in the two examples. As mentioned above, an important theme throughout the dissertation, which ties together the initiation and success of sanctions, is the regime type of the governments involved. Thus, before presenting the separate treatments of the initiation and success of sanctions a general framework describing the importance of domestic institutions is developed in the following chapter. The theory developed combines facets of both the democratic peace literature and a public choice approach to the use of economic sanctions. Before proceeding to the development of the theory, a general review of the sanctions literature will be performed in order to establish a definitional language and to evaluate previous arguments regarding domestic institutions and economic sanctions.

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## **Chapter 2**

### **Defining Sanctions and the Determinants of Success**

There are two main branches to this study, which are tied together by the importance of domestic institutions in the target and sender of sanctions. The first branch involves the study of the factors affecting the initiation of sanctions and the second addresses the factors leading to their success. The majority of the literature on sanctions addresses the question of success in some manner, and most authors have painted a rather pessimistic view regarding the potential for sanctions to achieve their stated foreign policy goals. However, there is little consensus as to why that is the case, or how important the achievement of stated goals is to the determination of the success of sanctions. It is my contention that much of the reason for this lack of consensus regarding the success of sanctions is due to vastly different definitions of what a sanction is and when a sanction is successful.

This lack of clarity in terms is also partly to explain for the puzzle mentioned earlier of why states continue to use sanctions when they are unlikely to be successful. For instance, some analysts have included as economic sanctions, such punishments as diplomatic restrictions, travel bans, sports bans, arms embargoes and other non-economic punishments as well as trade and financial restrictions<sup>6</sup>. Defining success has been just as inconsistent with some attributing success only if stated goals are achieved and a direct link can be established between the imposed economic restriction and the change in behavior of the target (best exemplified by Pape, 1997), while others have allowed for

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<sup>6</sup> For example both O'Sullivan (2003) and Doxey (1997) include UN imposed diplomatic sanctions against Sudan in 1996 among their cases of "sanctions".

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success to be achieved simply through the ability to punish a perceived wrongdoer (best exemplified by Nossal, 1989).

Thus, in the following sections I will discuss the differing perspectives found in previous research on what sanctions are and how to achieve and evaluate their success.

### **The Use of Sanctions (Type, Scope, Domain)**

Based on Baldwin's typology of economic statecraft (Baldwin, 1985; p.32), previous work on economic sanctions can be analyzed in terms of three areas. First, what is the type of policy instrument used? Or, in other words, what is and is not included as an economic sanction. Second, what is the scope of the influence attempt? Or, what is it that sanctions are trying to achieve, and how does one conclude that they have been successful? Finally, what is the domain of the influence attempt, or who are sanctions designed to affect in order to be successful? Each of these three areas (type, scope, and domain) will be addressed in the following sections.

### **The Type of Influence Attempted**

#### **Definition of Sanctions – What is a Sanction?**

It is essential to establish a clear definition of what is and is not included as an economic sanction. This is true not only for the obvious reason that it clarifies the boundaries for the discussion, but it also helps clarify when sanctions have failed and when they are successful. Unfortunately, the sanctions literature is anything but clear about what constitutes a sanction. Nossal (1989) laments this lack of clarity and points out that it inhibits the general understanding of sanctions. "One of the impediments to clear discussions about the useful purposes of sanctions is the use of the term "sanction" itself. Definitions tend to be idiosyncratic, often sloppy, and frequently in violation of the

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minimum requirement that a word be defined in a way that generally conforms to common usage” (Nossal, 1989; p.304).

Lack of clarity in determining what a sanction is can lead to ambiguity about factors that lead to sanctions usage as well as what constitutes a successful sanction. This problem is particularly acute for analysts testing empirical models with secondary data sources. It is essential that the definition for case selection is clear and that the cases are actually selected based on criteria matching the author’s criteria. It makes little sense to define sanctions in the theoretical realm in one way and then perform tests on cases fitting a different definition. The most widely used source of data for empirical studies of sanctions is Hufbauer, Schott, and Elliot (1985) who define sanctions as “...the deliberate government-inspired withdrawal, or threat of withdrawal of ‘customary’ trade or financial relations” (Hufbauer, Schott, and Elliot, 1985: p.2). Hufbauer, Schott and Elliot go on to say, “We define foreign policy goals to encompass changes actually and purportedly sought by the sender state – the country imposing sanctions – in the political behavior of the target state.” And, “We exclude from foreign policy goals the normal realm of objectives sought in banking, commercial, and tax negotiations between sovereign states” (Hufbauer, Schott, and Elliot, 1985: p.2). Thus empirical analysts using Hufbauer, Schott, and Elliot’s data, whether they agree with this definition or not, are constrained to report findings based on this definition or explain how the differences influence results.

Therefore, as Nossal (1989) notes, providing a clear definition of sanctions “is not merely a semantic exercise designed to add yet another idiosyncratic definition to an ever-expanding stock” (Nossal, 1989; p. 305). Providing a clear definition of the scope of sanctions is an essential part of any sanctions research. Thus, in an effort to avoid

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ambiguity in definition, I will define sanctions as used in this study as uses of economic means to coerce another state to do something that it would not have otherwise done in the political realm<sup>7</sup>. An important element of this definition is that sanctions are viewed as essentially political disputes linking economic means to political ends. As such, I view sanctions as a clear escalation of hostility between sender and target that is above what is seen in normal economic intercourse between nations.

This definition is developed, in part, from the definition of economic statecraft provided above from Hufbauer, Schott and Elliot, and in part from Baldwin (1985). While I point out important differences between Baldwin's definition of sanctions and that used here, Baldwin's "Economic Statecraft" is one of the most influential works on Economic Statecraft and it is used as a point of comparison for much of the discussion that follows. Baldwin defines economic statecraft as influence attempts relying primarily on resources that have a reasonable semblance of a market price in terms of money. The essential difference between Baldwin's definition of sanctions and the one used here is that Baldwin's definition includes all types of ends (beliefs, attitudes, opinions, expectations, emotions, and/or propensities to act). The definition used here (like that used by Hufbauer, Schott, and Elliot) departs from Baldwin, and is more traditional, in that it differentiates between economic influence attempts that are essentially political in their ends and those that are essentially economic in ends. Others who have made this distinction include, for example, Bienen and Gilpin (1979) who exclude the imposition of tariff barriers to retaliate against foreign trade barriers from their definition of economic

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<sup>7</sup> The terms economic sanction, economic coercion, and economic force are all used interchangeably throughout the dissertation.

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sanctions on the grounds that the primary purpose of those actions is “economic rather than political” (quoted in Baldwin p.47).

Lindsay (1986) also explicitly excludes economic means used to achieve economic ends. Lindsay defines sanctions in the following way: “Trade sanctions can be defined as measures in which one country (the initiator) *publicly* suspends a major portion of its trade with another country (the target) to attain *political* objectives” (Lindsay, 1986: p.154, emphasis in original). Lindsay goes on to say “...the pursuit of political objectives distinguishes sanctions from curbs on trade designed to secure economic ends” (Lindsay, 1986: p.154).

Another important work on economic sanctions, Barber (1979), begins by clearly defining sanctions as not to include economic means for economic ends, “Economic sanctions are economic measures directed to political objectives” (Barber, 1979, p.367). Thus, following the lead of Bienen and Gilpin, Lindsay, Hufbauer, Schott, and Elliot, and Barber, economic means used to achieve economic ends are excluded from the definition of “economic sanctions” used here.

Baldwin (1985) also has one of the most detailed and extensive typologies of sanctions. He breaks sanctions down into positive and negative sanctions, and then further dissects each of those categories into trade and capital controls. He defines 11 types of negative trade sanctions, 7 types of negative capital sanctions, 7 types of positive trade sanctions, and 5 types of positive capital sanctions (Baldwin, 1985, tables 2 and 3: pgs. 41-42).

While Baldwin clearly provides the broadest and most detailed typology of economic coercion attempts, a more general classification is provided by Hufbauer,

Schott and Elliot (1985). The simple typology of Hufbauer, Schott and Elliot has distinct advantages for empirical studies of sanctions like this one. While Hufbauer, Schott and Elliot's typology is not as detailed as Baldwin's it has the clear advantage of being operationalized and the data has been made available to empirical researchers. Hufbauer, Schott, and Elliot state that "There are three main ways a sender country tries to inflict costs on the target country: first by limiting exports; second by restricting imports; third by impeding finance, including the reduction of aid" (Hufbauer, Schott and Elliot, 1985: p.28). In general Hufbauer, Schott, and Elliot have far fewer distinctions between types of sanctions, limiting their analysis to just three types of sanctions and not making a distinction between positive and negative sanctions. Of the sanction cases that they quantify, approximately 75 percent of them involved some type of financial controls, while approximately 35 percent involved trade restrictions of either exports or imports. About 30 percent of the cases they document involved all three types of restrictions, exports, imports, and financial controls.

In chapter 3, I use Hufbauer, Schott, and Elliot's data to test a theoretical argument that there is an important distinction between uses of financial sanctions and uses of trade sanctions. In that chapter, I simplify Hufbauer, Schott, and Elliot's three categories even further to draw attention to the differences between financial sanctions and trade sanctions.

Before moving on, Baldwin's argument for including economic means for economic ends as forms of economic statecraft deserves consideration. He states his case for considering all uses of economic means as types of economic statecraft forcefully when he says "...an influence attempt intended to effect another state's tariff levels,

economic growth rate, attitude toward private foreign investment, or economic welfare is a political act.” (Baldwin, 1985:33) Thus, since economic ends can easily be converted to political ends he includes them as types of economic statecraft. It is somewhat curious though that Baldwin does place limitations on the means used, even if the ends pursued are economic. For example, bombing factories to reduce an adversary’s economic capabilities is not included in Baldwin’s definition of economic statecraft. But, using economic capabilities to reduce an adversary’s ability to bomb your factories would be included. This is a curious exclusion since Baldwin explicitly argues that all potential policy options available to a state are linked by comparative costs. But in logic typical to that used by Baldwin, the use of military force could actually be the best form of economic statecraft available to a policy maker. If bombing an adversary’s factories lessens their production possibilities, it simultaneously makes them less able to use economic coercion against your country and makes your country’s economy relatively stronger thus increasing your future ability to use economic means of coercion. Just as Baldwin is able to convert all economic ends into political ends, all political ends could be put into economic ends, or military means could be converted into enhanced economic means; this is simply a point of reference. Thus, extending Baldwin’s reasoning to its logical extreme would result in all political acts being types of economic statecraft. Clearly a boundary must be drawn somewhere. Baldwin draws the boundary at economic means, here I draw the boundary at economic ends.

As mentioned above, the definition used here is narrower than Baldwin’s because I view sanctions as essentially political disputes in which the sender is linking political outcomes to future economic relations. By restricting sanctions to this type of linking

behavior, and not including cases of economic means for economic ends, the type of cost structure associated with sanctions (as defined here) will be higher. Baldwin purposely maintains the definitional ends broad and means narrow because his main focus is normal 'economic statecraft,' not economic sanctions. Narrowing the definition, as done here, implies that sanctions are an 'abnormal' use of economic means. In other words sanctions as defined here are a deliberate and direct attempt to link economic power with political coercion. I agree with Baldwin that providing subsidies to domestic farmers discourages foreign imports and might force a lowering of foreign subsidies to their domestic producers. Thus, state A has used economic policy to affect B's economic policy and since economic policy is a product of politics, a coercion attempt has occurred. However, this type of action is decidedly different from, say, country A announcing publicly that it will no longer export arms that it produces to a country involved in a civil war. Or, that it will no longer provide most favored nation status to a country until it improves its human rights record. Olson (1979) also acknowledges this distinction between the more subtle nature of economic coercion and the more public form of trade sanctions about which he says, "ultimately, the objective of most attempts at sanction is to foster divisions between elements of the elite, or between the elite and the general populace, or both" (Olson, 1979; p. 474).

An important reason for making this distinction is that without it, it is difficult to imagine theories applying to costly militarized disputes (as used in this dissertation) also applying to economic sanctions. Trade disputes, not involving linkages to some outside political objective, will generally be associated with a smaller cost structure than when formal sanctions are imposed. Sanctions as defined here signal a clear escalation of

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hostilities, breaking trade or rescinding aid, and in many cases attempting to cast the target as a violator of international norms that must be punished. Therefore, if one were to align policy options from the least amount of hostility to the most, diplomacy would be at one end and military force at the other, with economic sanctions (as defined above) located between the two. Thus, economic sanctions, by themselves, fall short of the hostility involved in uses of military force, but clearly exceed that of pure diplomacy or general trade disputes.

As stated earlier, properly defining what a sanction is, goes a long way toward determining what a successful sanction is. However, a definition that is too broad introduces theoretically intractable problems in determining when a sanctions episode is a success. Allowing for the use of economic means to produce economic ends as part of the definition of sanctions means that, by definition, economic ends become part of the goal of sanctions and, thus, part of the definition of success. Restricting the ends of sanctions to clearly political objectives removes much of the ambiguity introduced by Baldwin's definition. For example, if sanctions are able to produce devastating economic effects on the Iraqi economy without achieving any of the stated political objectives, Baldwin's definition still allows for them to be successful in terms of imposing economic costs on Iraq. However, most would argue that UN sanctions imposed on Iraq in 1991 after the Gulf War ended have not been successful because they have not resulted in Iraqi compliance with UN demands.

Furthermore, there are serious ethical problems with defining success in terms of imposing economic costs on the target nation. Gordon (1999) investigates the morality of using economic sanctions to achieve political goals. She argues that sanctions are a form

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of siege warfare, and because they do not discriminate between innocent civilians and legitimate military targets, they violate the just war doctrine of *jus in bello*. The *jus in bello* principle of discrimination requires that “the means used for warfare must not be indiscriminate” (Gordon 1999: 91). This is a powerful critique based on the naïve theory of sanctions that imposing enough harm on civilian populations will cause them to pressure their leaders to change the policy so that sanctions will be lifted.

However, if one defines a criterion for success of sanctions, and thus one of the essential reasons for using them, as inflicting economic harm on the target nation, then sanctions fail to meet the just cause criteria (*jus ad bellum*) of the doctrine as well. The *jus ad bellum* criteria, as defined by Gordon “requires a real and certain danger, such as protecting innocent life, preserving conditions necessary for decent human existence, and securing basic human rights” (Gordon, 1999: 1988). If sanctions success is determined by inflicting costs on the target economy without achieving policy changes, then it is difficult to justify their use under this doctrine because it implies that policy change is not necessarily the objective. This definition of sanctions success would be similar to judging the success of war by the number of buildings blown up and people killed, and not in terms of the achievement of political goals.

To be fair, it is difficult to attribute policy change to sanctions if there is no economic harm done to the target. To continue the war analogy, this would be similar to attributing success to a military campaign that failed to inflict any casualties. However, the true measure of success would be to achieve political objectives while inflicting the minimum necessary amount of collateral damage in terms of civilian harm. Part of the



reason Gordon disapproves of sanctions is that she believes minimizing civilian casualties is neither possible nor even the intention of sanctions.

“...the damage done by indirect sanctions is not in fact collateral, in that the damage to the civilian population is necessary and instrumental. The direct damage to the economy is intended to indirectly influence the leadership, by triggering political pressure or uprisings of the civilians, or by generating moral guilt from the “fearful spectacle of the civilian dead.” Sanctions directed against an economy would in fact be considered unsuccessful if no disruption of the economy took place” (Gordon 1999:397).

However, Gordon’s conclusions would be stronger if not based on a naïve model of the determinants of success. Many researchers focused on the policy aspects of sanctions as well as those theorists operating in the public choice tradition (as does this dissertation) have focused on what are commonly referred to as “smart sanctions”<sup>8</sup>. In both of these areas it is clearly understood that civilian harm is not necessary to achieve policy success. Even van Bergeijk (1992), who shows an empirical connection to sanctions that harm the target’s economy and successful sanctions, is clear that sanctions effectiveness (in terms of economic harm) and sanctions success (in terms of policy success) are two separate phenomena.

There are yet other problems with using a definition as broad as Baldwin’s. His definition of sanctions not only demands an evaluation of whether the *political* and *economic* goals were met, but requires the analyst evaluate success based on “the scope of the influence attempt, which can include beliefs, attitudes, opinions, expectations, emotions, and/or propensities to act.” (Baldwin, 1985; p.32) Therefore, if the attitudes,

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<sup>8</sup> For an edited volume featuring several authors focused on smart sanctions policy see Cortright, David and Lopez, George. 2002. *Smart Sanctions*. Lanham: Rowman and Littlefield. For sanctions theorists in the public choice tradition see Kaempfer and Lopez (1988), Kirshner (1992), Bastos ()

or opinions or emotions of the target changed favorably during a sanction, it would be deemed a success even if there were no economic or political effects. Allowing for this broad of a definition of success waters down the concept of success to the point where it is hardly useful.

### **Threats of Sanctions**

As noted earlier, the definition of sanctions used here is both narrower and broader than what others have used. It is *broader* than most in the sense that it is not limited to actual implementations of economic sanctions. Threatened uses of economic force to achieve political ends are also included. Baldwin's definition, being one of the more inclusive, also includes threats of economic sanctions,<sup>9</sup> but others, like Lindsay (1986; p.155) explicitly exclude from their definition, cases where sanctions were threatened but never implemented. If, as argued in this dissertation, much of the success of sanctions occurs at the threat stage then ignoring threats is a significant omission leading to an under appreciation for the potential success of sanctions. It is also a somewhat curious omission since gaining compliance through the threat of sanctions is the least costly to the sender and thus the truest type of success. Once again it is evident how the definition of sanctions can affect opinions regarding the success of sanctions. Researchers can use a narrow definition that does not include threats to theoretically 'define away' some of the success of sanctions.

Another important distinction regarding the type of sanctions is whether they were implemented or merely threatened. The definition established above defines sanctions as uses of economic force to coerce political behavior. As such, if this can be accomplished

with the mere threat of a break in trade, then economic force *has* been used to coerce political behavior and an argument can be made that a sanction has occurred and succeeded. On the other hand, if a threat is made and the target of that threat refuses to cooperate, and the threatening state backs down without carrying out its threat, an unsuccessful sanction attempt has occurred. Also recall that the most frequently used definition of sanctions explicitly includes threats of sanctions, defining them as “...the deliberate government-inspired withdrawal, or *threat* of withdrawal of ‘customary’ trade or financial relations” (Hufbauer, Schott, and Elliot, 1985: p.2 emphasis on threat added). The problem for most empirical studies of sanctions has been that threats of sanctions are generally not documented in a fashion that makes them quantifiable. Thus, most previous empirical studies of sanctions ignore threats, and are thus only analyzing a subset of the uses of economic force that actually occur.

The extent of the problem introduced by ignoring threats of sanctions depends on whether selection bias is evident in the observed cases of sanctions. There are sound reasons to expect that selection bias does occur based on previous theoretical work on sanctions, and threats in general, which provide clear expectations regarding the importance of threats and the likelihood of selection bias. The remainder of this section will review some of the important literature on threats of sanctions.

While there has been much written about threats in general, (Schelling, 1960, 1966; Baldwin, 1985; van Bergeijk, 1994, 1995; Hovi, 1998) two major theoretical works focusing on the threat of sanctions stand out. First, Smith (1997) develops a formal model that incorporates two elements that were previously given very little attention in

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<sup>9</sup> See Baldwin 1985, p.41 where he lists forms of sanctions and threats of any of the listed actions.

the sanctions literature but are important relative to this study. His most important contribution was the development of a formal model revealing that in many cases of potential sanctions, they will never occur because one or the other side will back down prior to the implementation stage. Thus, Smith is able to show that factors affecting the success of sanctions should influence their use, and hence that a selection bias is expected to occur in observed cases of sanctions. This provides a strong theoretical foundation on which the empirical study of threats performed in later chapters is based.

A second important contribution of Smith's was to incorporate the costs of sanctions in the model as being both economic and political. While Smith makes a strong case for the importance of domestic factors in sanctions decisions, he stops short of specifying a model that explains *how* domestic factors influence sanctions. A logical extension to Smith's work is to specify a theory explaining when domestic costs will be high to the target or sender under different conditions. The economic costs that Smith mentions have long been studied in the sanctions literature, but the domestic component of the costs to targets and senders has not been explored. The theory developed later in this dissertation explores how different domestic institutional arrangements in the target and sender of sanctions affect the political costs of sanctions and thus their use and subsequent success or failure. The theory developed here is based on the institutional explanation of the democratic peace (Bueno de Mesquita et al., 1999) and is presented later in this chapter.

In Smith's time independent analysis, he arrives at three separate equilibria. These outcomes are based on values for the costs of sanctions to the sender and the target

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and the potential value of the policy in question to the target relative to the costs of sanctions. Smith's three equilibria are summarized below.

Condition 1: If  $C_a \geq 0$  ( $C_a$  = cost of sanctions for the sender)

The sender has no incentive to sanction and in this equilibrium sanctions are never observed and the target does not change its policy.

Condition 2: If  $C_b \geq \theta_{\max}$  ( $C_b$  = cost of sanctions to target;  $\theta_{\max}$  = Greatest potential value of policy to target)

In this case, the sender imposes sanctions, and the target immediately complies (This is considered to be a successful threat by Smith). The sender instantly gets the policy concession without ever having to pay the actual costs of sanctions. In this equilibrium, as in the previous, sanctions are never actually observed. However, unlike the previous case, the policy is changed.

Condition 3: Given that  $C_a \leq 0$  and  $\theta_{\max} > C_b$

This is the only equilibrium under which sanctions occur. Here, the sender is deriving some other benefits (Smith proposes increased domestic support) that make the sanctions beneficial to them ( $C_a \leq 0$ ). Therefore, the sender always sanctions and the target only resists if the payoff from maintaining its policy is greater than the cost of the sanctions.

In general, based on Smith's model, two conditions are necessary to observe sanctions. First, the sender must benefit from sanctions even if it never receives concessions from the target. Second, the target values its policy more than avoiding the costs of sanctions. "Sanctions only occur when the political benefits to nation A

outweigh the economic costs of sanctions and when the cost of sanctions is low for B” (Smith, 1997; p.234).

Smith’s study is important because it presents a formal framework for how cases might find their way into the implemented sanction, successful threat, and the failed threat categories of the model that will be developed later in this dissertation. Smith also lays the groundwork for the importance of domestic factors in whether sanctions are threatened, but as mentioned earlier, he fails to provide a theory for when and how those domestic factors will be important. Smith also fails to consider how domestic factors will affect decisions by the target of sanctions. He only considers how domestic demand in the target for sanctions will increase the likelihood that the sender will impose sanctions. The theory presented in the following chapters of the dissertation fills this void by explaining the importance of domestic factors for targets and senders in uses and threats of sanctions.

The final contribution of Smith’s work to this study is that the formal model presented in this dissertation follows the convention established in Smith’s model of using one-sided incomplete information with the target’s value for continuing its policy cast as private information while the sender’s type is common knowledge.

The second theoretical work on threats of sanctions relevant to this study is Morgan and Miers (1999). Morgan and Miers argue that the conventional wisdom that sanctions are ineffective is based on empirical analyses of failed sanctions cases. Because of this, empirical conclusions reached based on this type of analysis may suffer from selection bias.

They present this problem as a weakness in the sanctions literature because “only cases in which sanctions were actually applied have been examined” (Morgan and Miers 1999:1). Thus, “it is distinctly possible that in those cases where sanctions would bring about a change in the target state’s behavior, the threat of sanctions alone might be sufficient to produce the desired effect” (Morgan and Miers 1999:1). This could lead to only seeing sanctions used in cases where they are least likely to succeed, which would produce a serious selection effects problem for empirical analyses resulting in sanctions appearing to be much less successful than they actually are. However in another work, Morgan and Schwebach (1997:46) come to the exact opposite theoretical expectation regarding the empirical effect of selection bias on observed cases of sanctions. They conclude that “If policy makers are aware that sanctions can rarely have an impact (and they should be) then sanctions should occur only in those instances in which there is a fair chance that they would ‘work.’...This would imply that sanctions are even less useful as an instrument of policy than indicated in most previous empirical analyses” (Morgan and Schwebach, 1997: 46). This theoretical contradiction in expectations regarding the influence of excluding threats of sanctions from empirical analysis, reveals a pressing need for empirical analysis of the type performed later in this dissertation to investigate the importance of threats.

Morgan and Miers (1999) also develop formal game theoretic models with complete and perfect information and one-sided incomplete information. As in Smith’s (1997) model and this dissertation, the key variables in their model determining the effectiveness of sanctions are the value of the economic relationship and the value of the issue under dispute (for both the sender and target). The key findings of there work are



that in the complete and perfect information model, sanctions should never be observed because being able to look ahead and see the outcome; either the sender or the target would back down before the actual imposition of sanctions.

When incomplete information is introduced, so that the sender does not know if the target is of the type that would stand firm once sanctioned or the type that would back down, they find that any of the game's four outcomes can be reached in equilibrium<sup>10</sup>.

Threats of sanctions have been considered in theoretical analyses of sanctions (although very infrequently compared to other questions addressed by sanctions research), most importantly by Morgan and Miers (1999) and Smith (1997), but to this point they have not been assessed empirically. There are two ways to empirically consider the cases of sanctions that did not occur. The first is to analyze all interstate dyads and use a "selection model" to determine if factors leading to the initiation of sanctions are related to the success of sanctions. This was done in an earlier analysis by Nooruddin (2000). Nooruddin's analysis demonstrates whether observed rates of success in sanctions are biased due to a selection effect, but it does not tell us much about the success or failure of threatened sanctions.

A second way of solving this empirical problem is to actually include cases of threats of sanctions directly into the empirical data. However, threat data is very difficult to acquire because it requires the recording of what most consider non-events, such as cases where sanctions did not occur. To overcome this problem, in chapter 5 I perform

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<sup>10</sup> The four possible outcomes are: 1. Sender achieves her policy goals and Target does not, and no sanctions are imposed. 2. Target achieves his policy goals and Sender does not, and no sanctions are imposed. 3. Sender achieves her policy goals after sanctions have been imposed temporarily. 4. Target achieves his policy goals and the economic disruption created by the imposition of sanctions attains its maximum level.

an empirical analysis on a specific sanctions policy that has threats built into it. In chapter 4 I return to this topic and discuss the theoretical issues further before specifying a formal model of sanctions threats.

### **Scope of the Influence Attempt (Sanctions Success)**

The second component of economic sanctions is the scope of the influence attempt. This can also be thought of as the goal to be achieved through the use of sanctions, or against what standard should sanctions success be measured. There is an unmistakable link between the goals of sanctions and the success of sanctions. Whether sanctions are deemed to be successful depends in a large part on how one defines the goals of sanctions, and thus the criteria for success. For example, narrowing the definition of sanctions so that it only includes uses of economic force to achieve political changes (as I have in my definition) makes it less likely that sanctions will be successful. Success, by this definition, requires fungibility of power in the sense that economic power is being used outside the economic realm.

Lindsay (1986) classifies the criteria for successful sanctions by grouping the aims of sanctions into 5 categories: **Compliance**: Forcing the target to alter its behavior to comply with sender preferences. The goal here, according to Lindsay, is to make the costs exceed the benefits that the target government gets from whatever the policy in dispute is. **Subversion**: The goal is to remove the current leadership in the target or overthrow the entire regime. **Deterrence**: The goal is to dissuade the target from repeating a particular action. The sender may also be attempting to dissuade other governments from taking similar actions or simply to show your ability to inflict

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economic pain if you want to. **International symbolism:** The goal is to send a message to other countries in the system. **Domestic symbolism:** As in diversionary theories of war, the goal here is for the sender to increase domestic support or thwart internal criticism of its foreign policies by acting decisively.

In a similar vein, Barber (1979) organizes the goals of sanctions into primary, secondary and tertiary objectives. Primary objectives are concerned with the actions and behavior of the state or regime against whom the sanctions are directed – i.e., the target state. Secondary objectives relate to the status, reputation, behavior and expectations of the government imposing the sanctions – i.e., the sender state. Finally, Tertiary objectives are concerned with broader international considerations, relating either to the structure and operation of the international system as a whole or to those parts of it that are regarded as important by the sender state.

However one classifies the goals of sanctions, it is crucial that the goal against which the success of sanctions is being measured is clear. Looking at the above classification system of the goals of sanctions makes one aware of how varied the demands on sanctions success can be. There is a big difference between being successful at “increasing domestic support or thwarting internal criticism of foreign policies” and “forcing another sovereign state to alter its policy.” This can lead to a great deal of confusion in determining whether sanctions are a generally successful or unsuccessful policy.

Both Barber and Lindsay, by explicating the various goals of sanctions, are able to show that sanctions are more likely to achieve certain goals than others. Thus, sanctions that do not achieve compliance from the target (primary goals in Barber’s terminology)

should not automatically be deemed a failure. Secondary and tertiary goals of sanctions may be achieved while at the same time exerting pressure that at least keeps the possibility open for the achievement of primary (compliance) goals.

Perhaps the most commonly used measure of the success of a sanction episode comes from Hufbauer, Schott, and Elliot's definition. They use the following two part definition of success "The success of an economic sanctions episode – as viewed from the perspective of the sender country – has two parts: the extent to which the policy outcome sought by the sender country was in fact achieved, and the contribution made by the sanctions (as opposed to other factors, such as military action) to a positive outcome" (Hufbauer, Schott, and Elliot 1990: 41).

A problem that Drezner identifies with the coding of success in HSE and other studies is that "success is narrowly defined as the extent to which the policy outcome sought by the sender country was in fact achieved<sup>11</sup>" (Drezner, 1999; p.107). While this definition captures whether the target conceded to the sender's demand, it omits the importance of the original demand. Thus Drezner combines Hufbauer, Schott, and Elliot's success variable with their demand variable to create a variant, which he refers to as "concession size." Drezner prefers this operationalization because he argues, "A proper measure of concession magnitude should take into account both the size of the demand and the degree to which the target met the demand" (Drezner, 1999; p.107).

Perhaps even more importantly, some argue that sanctions have to reach their stated policy goal to achieve success while others say that sanctions may be successful without achieving the stated policy goal. For some, sanctions can be deemed successful if

they simply impose punishment on the target in the form of economic hardship. Others (Nossal, Barber) would go even further and say that sanctions can be successful even if there is no economic hardship imposed (or only economic hardship and no policy change) as long as the target is identified as having violated some norm of international behavior.

One of the most serious challenges to the notion that sanctions can be successful comes from Pape (1997). Pape finds serious flaws with what he calls the “new conventional wisdom” regarding sanctions, which acknowledges the limitations of sanctions but still believes they are often an effective policy instrument for achieving important policy goals. (Pape, 1997) Pape attacks the idea that sanctions can be successful on both inductive and deductive grounds. Inductively, he argues that the primary database used for empirical research (Hufbauer, Schott, and Elliot, 1990) is seriously flawed and as a result overestimates the success of sanctions. “...economic sanctions have little independent usefulness for pursuit of non economic goals. The HSE study is seriously flawed. Practically none of the claimed 40 successes of economic sanctions stands up to examination” (Pape, 1997:93). Pape’s inductive critique and subsequent recoding of the Hufbauer, Schott, and Elliot database to include only 5<sup>12</sup> success out of 115 cases has received a great deal of attention and must be addressed by those using the Hufbauer, Schott, and Elliot data for analysis (as I do in chapter 3). Consistent with what I have presented earlier in this chapter, I argue that the debate introduced by Pape is really nothing more than a difference of opinion regarding the

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<sup>11</sup> Quoted from HSE (1990), p.41.

<sup>12</sup> Originally Hufbauer, Schott, and Elliot code 40 successes

definition of an economic sanction and the criteria for their success. Consider this outline for Pape's criteria for successful sanctions:

1. The target state conceded to a significant part of the coercer's demands.
2. Economic sanctions were threatened or actually applied before the target changed behavior.
3. No more credible explanation exists for the target's change of behavior.
  - a. And... **"Military conquest, when it occurs, is always a more credible explanation than economic sanctions because the target's failure to concede before military defeat is in itself evidence of the failure of coercion."** (97) If 'economic pressure' weakened the target's military capabilities and lead to military conquest this should count as a success of **"economic warfare."** But, it is not evidence that the target would have conceded a policy goal without the presence of the military conquest.
  - b. Assassination or military coup is also evidence of the failure of coercion against the deposed government.

The first two criteria for success are not substantially different from Hufbauer, Schott, and Elliot's definition for success (presented earlier), but Pape's third criterion *defines away* many of the successful cases of sanctions found in Hufbauer, Schott, and Elliot. In Part 3a of his requirements for sanctions success, Pape claims that whenever military force is used sanctions cannot be successful, and that successful cases of what he terms "economic warfare" should not be counted as successful cases of economic sanctions. There is obviously room for disagreement with Pape's decision to separate economic warfare from economic sanctions and with his claim that use of military force necessitates sanctions failure.

For example, just because Germany did not surrender in World War II as a result of allied attempts to isolate Germany from trade does not necessarily mean that trade restrictions were a failure. The fact that Germany was unable to obtain adequate medical supplies and particularly, enough oil with which to fuel its army played a role in the allied

victory. Why would trade restrictions, which helped keep Germany from obtaining adequate medical supplies and oil, not be deemed successful? Gilbert (1989) describes the effect of dwindling supplies on Germany's ability to continue the war in the spring of 1945.

“Germany's last hope of an adequate fuel supply to make war was lost. A counter-attack that day in the Ruhr, led by General Student, had to be postponed because of a lack of tank fuel; this fact was known to the Allies through Ultra. Not only fuel oil, but essential medical supplies, were now virtually unobtainable within the dwindling confines of the Reich; on April 2 the head of Germany's medical services, Dr. Karl Brandt, warned Hitler personally that one fifth of all medicines needed no longer existed, and that stocks of two-fifths would run out completely in two months. (Gilbert, 1989: 657)

Thus, contrary to Pape's argument that these economic restrictions were a failure, I would cast them as a success.

Although it generally receives less attention, the deductive part of Pape's argument is equally interesting. Pape argues that the deductive logic of sanctions theory, that increased economic punishment will lead targets to change policy, is flawed. Pape states, “The key reason that sanctions fail is that modern states are not fragile.” (Pape, 1997:106) And following the logic of Galtung's (1967) ‘rally around the flag effect’ he says, “Even in the weakest and most fractured states, external pressure is more likely to enhance the nationalist legitimacy of rulers than to undermine it” (Pape, 1997:107). If modern states can withstand firebombing (Germany and Japan during WWII) and strategic bombing (North Korea, Vietnam, Iraq) without causing their populations to rise up against the leaders, Pape asks, why should sanctions be expected to accomplish that task?

## **The Determinants of Successful Sanctions**

In the second half of this dissertation I develop and test a model of the success of sanctions. In this section I review the important elements of successful sanctions found in previous works and used in my model. Empirical studies have consistently found two elements of a sanction episode to be essential in determining the success of economic influence attempts. These areas are the cost of sanctions, and the value of the policy at dispute. Not coincidentally, these are also the two areas that the previous theoretical models by Smith and Morgan and Miers focused on and the areas focused on by the theoretical and empirical model used in this dissertation. Each of these areas can be subdivided to include the costs and value to the sender and the target. Furthermore, as hypothesized in this dissertation, a critical element in determining the costs and value of sanctions are the domestic political arrangements in both targets and senders of sanctions. Since the deductive model builds on these concepts and the empirical model operationalizes them and tests their importance, I will discuss some of the results of previous empirical models that have included each of these variables. Thus, this section provides the grounding in the literature for the components included in the theoretical model of chapter 4 and the subsequent empirical analysis of chapter 5.

After reviewing previous findings on the importance of each of these elements, I provide a brief summary of the findings of the empirical chapter on sanctions success from this dissertation. While the findings regarding success are generally consistent with previous literature, they are able to provide valuable new incites regarding the importance of threats to the achievement of success. The dissertation also tests the importance of concepts previously found to be important, only using a newly developed data set. This is



particularly important for the study of sanctions as virtually all previous empirical studies of sanctions have tested their hypotheses against the same set of data from Hufbauer, Schott, and Elliot.

### **Economic Cost of Sanctions**

A fundamental characteristic of a sanction episode that has been related to its success is the amount of economic cost imposed on the target of the sanctions. Since the primary tool in economic coercion is to restrict some type of economic activity it is thought by many that hurting the target economically is essential to the achievement of success. Van Bergeijk states that “A sanction simply cannot be successful, if for example, no damage can be done” (van Bergeijk, 1994:25). And, moreover, he claims that it should not be surprising that sanctions should fail when this fundamental theoretical condition for success is not met. Therefore, if the amount of trade between target and sender of sanctions is low as a proportion of the target’s GDP we should expect to see sanctions fail.

Table 2.1: Success and Potential Cost of Sanctions

Trade Linkage %	Successes 1	Failures 2	Success rate % 1/1+2
0-1	5	22	19
1-2	6	10	38
2-4	7	11	39
4-10	6	8	43
>10	8	9	47
Total	32	60	35

Proportional trade linkage is defined as the bilateral trade flow between sender and target as a percent of the target’s GDP and is measured in the year prior to the sanction.

The table, from van Bergeijk (1994), shows that sanctions tend to fail if the proportional trade linkage is not substantial. What is also interesting is that having a

substantial trade linkage is not sufficient for success. One reason for this might be that sanctions, which impose greater economic costs to the target, also impose more potential harm to the sender's economy.

In later work van Bergeijk (1995) performs a logit analysis using the Hufbauer, Schott, and Elliot (1990) data set and finds that absolute trade linkage (relating the bilateral trade flow between sender and target to the target's total trade flow) and proportional trade linkage (the sender's trade flows to the target, as a percentage of the target's GNP) both are positively and significantly related to success.

All of the following authors find empirical support for the idea that increased economic harm to the target leads to greater success of sanctions. Morgan and Schwebach (Using Hufbauer, Schott, and Elliot's (1985) *cost to sender* and *cost to target* variables, which are based on economic costs) found that "...as the cost to the target increases, the probability that the sanctioner will obtain a favorable outcome also increases" (Morgan and Schwebach, 1997: 44). Furthermore, Morgan and Schwebach found empirical support for the idea that greater economic costs to the sender decrease the probability of success. "Likewise, as the costs to the sanctioner increases, its ability to obtain a favorable outcome decreases" (Morgan and Schwebach, 1997: 44)

Drury (Also using Hufbauer, Schott, and Elliot's (1985) cost variable) in his 'revisiting' of Hufbauer, Schott, and Elliot's empirical analysis found that "...the greater the cost of sanctions to the target, the greater the likelihood they will succeed" (Drury, 1998:508). Also using Hufbauer, Schott, and Elliot's cost variable, Dashti-Gibson et. al., found similarly that "Substantively, the model suggests that sanctions are likely to succeed the greater the costs imposed..." (Dashti-Gibson et. al., 1997:613). Dehejia and

Wood find that “the cost of sanctions to the target country...are positively related to the probability of success of sanctions” (Dehejia and Wood, 1992:79). Finally, Hufbauer, Schott, and Elliot (1990) in their logit analysis of success find that “cases that inflict heavy costs on the target country are generally successful.”

Based on these empirical findings I include economic costs to the sender and target in the theoretical model of chapter 4 and operationalize the concepts (with data other than the Hufbauer, Schott, and Elliot cost variables) for testing in the empirical model of chapter 5. The empirical findings of chapter 5 are consistent with the findings of previous studies. When the expected costs of sanctions are high to the sender they are less likely to make threats of sanctions and are more likely to back down from the threats if they do make them. Targets are more likely to comply at the threat stage when the expected economic costs are high to them and if the sanctions actually are imposed, higher costs to the target lead to a greater probability of success.

### **Value of the Policy at Dispute**

Empirical support for the effect of the value of the policy at dispute on the probability of sanctions being successful has been mixed. This is however, not altogether surprising since if the issue is of great value to one country it is likely to be of great value to the other country as well. Thus, increasing the value of the policy at dispute increases the incentive of both sides to prevail in the dispute and the effects are likely to cancel out in empirical models. Both Nooruddin (2001) and Bolks and Al-Sowayel (2000) included different policy goals as independent variables in their model specifications without finding significant results.

However, as Drezner argued in his creation of a success variable that incorporates the size of the concession it should be harder to achieve major policy concessions from targets with sanctions than minor ones. Dashti-Gibson et. al., looking at the distinction between sanctions that are simply designed to punish and those designed to elicit a substantial policy change, conclude that “the factors which determine the effectiveness of sanctions depend upon the goal of the sender” (Dashti-Gibson et. al., 1997:615).

Similarly, Dehejia and Wood find support for the idea that the size of the demand matters. They conclude “...governments are more likely to capitulate to sanctions when the issue at stake is not of vital national interest and, hence, when the political costs of doing so are tolerable” (Dehejia and Wood, 1992:80).

Based on contingency table analysis and bivariate region models, Hufbauer, Schott, and Elliot provide the strongest support of the convention that major policy objectives are harder to achieve than minor ones. They state, “...the success rate importantly depends on the type of goal sought” (Hufbauer, Schott, and Elliot, 1985: 80). “...attempts to disrupt military adventures, to impair a foreign adversary’s military potential, or otherwise to change its policies in a major way, generally fail” (Hufbauer, Schott, and Elliot, 1985: 80).

The empirical model of this dissertation includes an operationalization for the value of the policy at dispute to both the target and the sender. Because of the nature of the model, coefficients are obtained for the importance of the value of the policy to both the sender and target individually in the decision to become involved in a sanctions dispute and the subsequent success of the episode. Although the results are explained in detail in the later chapter, I will mention here that in the model senders are more likely to

threaten sanctions when the issue is important to them, but perhaps realizing the difficulty in achieving concessions when the stakes are high, they are also more likely to back down from the threat without actually imposing sanctions. Targets, on the other hand, are seen to be less likely to be coerced with a mere threat when the issue is important to them. In the end, as in other studies, the value of the policy was not found to have a significant affect on the probability of sanctions being successful.

### **Domestic Political Factors**

Domestic political factors have also been shown to play an important role in determining the success or failure of sanctions. Most of the work on the importance of domestic factors to sanctions success has been at the theoretical level. In the theory developed later in this chapter and the deductive and inductive models presented in later chapters, domestic factors play an essential role. The theoretical literature on the importance of domestic institutions is reviewed in the next section. Here, I will review some of the findings of existing empirical work.

In one of the first empirical analyses of sanctions to address domestic political considerations, Dehejia and Wood (1992) reanalyzed previous econometric models by Hufbauer et al (1990) and Lam (1990) with an additional variable in the model described as the “virtual invulnerability to domestic opposition” of the target government. They reasoned “a regime that is vulnerable to domestic opposition from various sources is more likely to be in a position where the hardship resulting from sanctions could be transmitted to the rulers themselves” (Dehejia and Wood, 1992: 74). Dehejia and Wood find full support for these expectations in their empirical model. “The a priori expectation of the importance of these variables has been fully justified by the results

which suggest that invulnerable governments are intrinsically more likely to resist sanctions, the intuition being that they are invulnerable to political pressure from the domestic groups most affected by sanctions<sup>13</sup>” (Dehejia and Wood, 1992: 80).

Hart (2000) analyses the importance of domestic institutions in the sender of sanctions and concludes “The hypothesis that domestic regime type has an impact on the success of economic sanctions is well supported by this analysis” (Hart, 2000: 280). Hart argues that because democracies are better able to generate domestic costs for actions taken in foreign policy, they will be better at using economic sanctions as signals of resolve. This forces democracies to be more careful in their foreign policy and explains his empirical finding that democratic senders are significantly more likely to be successful in their use of sanctions.

In a complete reversal of perspective from Hart’s analysis of the sender country’s domestic institutions, Bolks and Al-Sowayel (2000) analyze the importance of the target country’s domestic institutions. They argue that target states can play a part in determining the length and probability of success of sanctions by the countermeasures that they take to defend against the economic effect of sanctions. Their empirical analysis supports the hypothesis that domestic systems that have fewer constraints will allow leaders a freer hand in making policy decisions that can counter the effect of sanctions. Thus they conclude that “...more closed and autocratic regimes better withstand economic sanctions pressure as leaders in these systems have more ability to implement countermeasures autonomously” (Bolks and Al-Sowayel, 2000: 255)

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<sup>13</sup> The unfortunate thing about this analysis is that the authors do not fully explain how they operationalize the variable “Invulnerable”

Like Bolks and Al-Sowayel, the empirical analysis relating to the success of sanctions performed in this dissertation focuses on the effect of different domestic regimes in the target of sanctions. The empirical analysis of the initiation of sanctions includes the influence of domestic institutions in both sender and target states, but the analysis of success focuses on the United States as the exclusive sender of sanctions so there is only variation in the institutions of the target states. The findings of chapter 5 show that when the United States is the sender and the target is a democracy sanctions are significantly less likely to occur because both the sender and the target are more likely to back down at the threat level. This fits well with a signaling argument, because democratic targets should be less likely to bluff thus they are more likely to have to back down when threatened with sanctions. Likewise, when a democratic sender like the United States meets up with a democratic target that resists the initial threat of sanctions, it should be more likely to back down since the target is more credible. However, once sanctions are imposed they are not significantly<sup>14</sup> more or less likely to be successful against a democracy.

This insignificant finding on implemented sanctions is not unexpected giving the contrary expectations of theoretical explanations of the importance of democratic institutions. On one hand, signaling models expect democracies to be more credible in their commitments because they face greater audience costs for backing down, thus if democracies resist threats of sanctions they should be less likely to give in at the implementation of sanctions. On the other hand, if democratic leaders are more

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<sup>14</sup> The coefficient on target democracy level indicates that sanctions are less likely to be successful against democracies, but not at a statistically significant level.

susceptible to economic harm imposed by sanctions because they are held accountable to their public then democracies should be more likely on average to give in once sanctions are implemented. The insignificant finding may simply be a result of these two factors canceling each other out.

### **Stability of the Target Government**

Another way that Domestic factors have entered into empirical studies of sanctions success is through the stability of the target government. I incorporate this concept in the empirical model of chapter 5 by including a variable that indicates the presence of internal conflict. The presence of internal armed conflicts while not necessitating regime instability should generally be associated with higher levels of instability. Most other empirical studies have operationalized this concept with the highly subjective Hufbauer, Schott, and Elliot indicator of the level of distress in the target regime. Hufbauer, Schott, and Elliot's indicator is ordinal with three levels of distress as follows:

**Distress:** “a country with acute economic problems, exemplified by high unemployment and rampant inflation, coupled with political turmoil bordering on chaos”

**Significant Problems:** “a country with severe economic problems, such as a foreign exchange crisis, coupled with substantial internal dissent”

**Strong and stable:** “a country with the government in firm control and an economy experiencing only the normal range of inflation, unemployment and similar ills”

(Hufbauer, Schott, and Elliot, 1985:37).

Based on the use of the Hufbauer, Schott, and Elliot indicator, Bolks and Al-Sowayel conclude from their empirical analysis that “the target's political structure and



regime stability are determinants of sanction duration<sup>15</sup>” (Bolks and Al-Sowayel:261) Their primary empirical finding is that “the target state's features, especially its institutional structure and the political vulnerability of its regime, significantly impact the duration of sanctions episodes” (Bolks and Al-Sowayel:241). Also using Hufbauer, Schott, and Elliot’s indicator, Drury found that “distressed targets tended to succumb to sanctions more often than strong, healthy targets, but this relationship was marginally significant at best” (Drury, 1998:507).

Drezner, in his Boolean analysis of sanctions found that “If the sanctions impose significant costs on the target regime, then that regime’s domestic stability is a crucial factor in determining the outcome” (Drezner, in Chan and Drury, 2000:228). Finally, van Bergeijk (1995) also finds in his logit analysis of sanctions cases between 1946 and 1989, that sanctions against politically unstable targets are more likely to be successful. (van Bergeijk, 1995: 89)

The empirical analysis performed in this study found that internal conflict in the target had a significant impact on threat behavior, but was not significantly related to the likelihood of successful sanctions. Targets embroiled in internal conflicts were found to be significantly less likely to back down at the threat of sanctions. However, the United States was also found to be significantly less likely to back down after it made a threat against a nation involved in internal conflict. While threats were no more or less likely to be made against states involved in internal conflict, the threats made were more likely to be carried out.

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<sup>15</sup> They equate shorter durations with greater success.

## **Value of the Existing Relationship Between Target and Sender**

The final issue to be considered regarding its affect on the success of sanctions is the existing relationship between senders and targets of sanctions. Drezner has argued that sanctions tend to work when they are imposed against allies, not expecting future conflictual relations. He argues that adversaries care about the long-run implications of making concessions because they anticipate future clashes and are thus, reluctant “to behave in ways that could strengthen the sanctioner’s future bargaining position and establish their own reputation for acquiescence.” (Drezner, 1998: 2) Adversaries prefer short-term economic losses to long-term harm to reputation. On the other hand, sanctions imposed against allies or friends are rarer, but far more successful” (Drezner, 1998:2). According to Drezner, allies have lower expectations of future conflict, so they will be less concerned about the reputational consequences of acquiescing.

Hufbauer, Schott, and Elliot operationalize a variable indicating the value of the relationship between senders and targets based on prior between the countries. This is an ordinal variable taking on the following values:

**Antagonistic:** “the sender and target countries are in opposing camps”

**Neutral:** “the sender country does not have strong ties to the target, but there is a workable relationship without antagonism”

**Cordial:** the sender and target countries are close friends and allies” (Hufbauer, Schott, and Elliot 1985:38).

They explain the importance of this concept to sanctions behavior in the following manner “Against belligerent countries, forceful sanctions may be needed to coerce the target government into yielding, especially since the domestic political consequences of

“backing down” can be damaging. On the other hand, a friendly country will often consider the importance of its overall relations with the sender country before fashioning a response to economic sanctions” (Hufbauer, Schott, and Elliot, 1985: 37). Similar to Drezner’s conclusion regarding the importance the value of the existing relationship, Hufbauer, Schott, and Elliot find that “Economic sanctions seem most effective when aimed against erstwhile friends and close trading partners. By contrast, sanctions directed against target countries that have long been adversaries of the sender country, or against targets that have little trade with the sender country are generally less successful” (Hufbauer, Schott, and Elliot, 1985: 84). In one additional study of note, Dehejia and Wood also find that cordial prior relations between sender and target nations increase the likelihood of success. (Dehejia and Wood, 1992: 79)

The empirical findings in the dissertation were similar to the findings of these previous studies. Several different variables were used to capture the economic and political elements of the value of the existing relationship. First, senders were found to be less likely to threaten those countries with whom they have valuable existing economic relationships, and targets whose trade with potential senders makes up greater amounts of their overall GDP are more likely to back down when threatened. Politically, the value of the existing relationship is operationalized in this study through regime similarity. Thus I am only able to partially test this aspect of the relationship because the sender is always the United States and always a democracy. Therefore regime similarity is seen whenever the target is a democracy. As noted earlier, the United States is less likely to sanction a fellow democracy, but unlike the findings of the three previous studies reviewed cordial relations do not make sanctions any more likely to be successful.

However, there is another variable included in the empirical analysis that also captures the theoretical concept of the value of the existing relationship. Given the importance of the United States' political and economic relationship with regional countries the value of the relationship between the United States and countries in South and Central America should be very high. Therefore, as in previous studies we would expect the United States to be more likely to be successful in its economic influence attempts with these countries. This is exactly what we see in the empirical analysis. The United States is more likely to threaten these countries, and less likely to back down after making a threat. Furthermore, the United States is more likely to see success at both the threat and implementation level against these countries.

#### **Domain of Influence Attempt (Sanctions Theory)**

The importance of domestic factors in determining the success of sanctions is also an important area of consideration from a purely theoretical perspective. Theoretically, this issue deals with the domain of the influence attempt, or who the sanctions are designed to hurt. Thus, as in studies of war, considering domestic factors forces analysts to open the 'black box' of the state and devise theories of how different types of states will respond to economic coercion attempts.

Traditionally, scholars studying economic sanctions have focused on the ability of sanctions to affect the target country's economy as a whole and equated that with the ability to achieve policy goals. This logic is typically referred to as the *Instrumental* or *Naïve Approach* to sanctions study. "The greater the economic pain inflicted, the more the political gain realized. According to this theory, when sanctions exercise sufficient "bite," citizens in the targeted country will exert political pressure on their government to

force either a change in policy or a removal of wrongdoers from office" (Cortright and Lopez, 2000:19). What this theory is lacking is an explanation of the mechanism by which economic hardship is translated into political change. Cortright and Lopez aptly criticize this logic as assuming a "societal transmission belt" able to smoothly convert economic costs into political change.

In the next section, the main theoretical argument of the dissertation will be presented to show the importance of domestic importance of different domestic political institutions in the use and expected success of sanctions. This theory brings together the public choice theory of sanctions and an institutional theory of the democratic peace from the conflict literature.

### **Domestic Institutions and Economic Sanctions: An Institutional Explanation of How Sanctions Work**

Previous research on domestic institutions and the use of economic sanctions finds its logic in what can broadly be defined as the public choice approach to the study of economic sanctions. The logic of the public choice approach as applied to sanctions is most clearly and thoroughly presented in the works of Kaempfer and Lowenberg (1988a, 1988b, 1989, 1991, 1992, 1995). Kaempfer and Lowenberg describe this field in economics in the following way "Public choice economics explores state behavior from the perspective of rational, individual decision-making on the part of participants" (Kaempfer and Lowenberg, 1994; p.105). Kaempfer and Lowenberg's work is theoretical in nature and focuses on both the sender and target of sanctions. They argue that

government policies, including economic sanctions, are the result of an endogenous process in which the redistribution of domestic wealth is a key factor<sup>16</sup>.

Although Kaempfer and Lowenberg are not studying the importance of democratic institutions on the use of economic sanctions, there are two conclusions from their body of work that take on great importance for those interested in the influence of domestic institutions on the use of economic sanctions. First, they show that the sender nation's sanctions policy will arise out of competition between domestic groups in the sender country. The type and level of sanctions will not necessarily be the most economically efficient policy, but will be the policy that satisfies the strongest domestic interest group. Second, in order for sanctions to be successful, they show that they must hurt supporters of the policy in the target nation at greater levels than they hurt potential opposition to the policy. Sanctions that hurt both supporters of the policy and opposition groups in the target at equal levels will result in a reduced national welfare, but will not lead to a decrease in the level of the policy supplied.

Kaempfer and Lowenberg note that most economists who have studied sanctions have concluded that they are not very successful because they are unable to impose enough economic harm on the target. They identify this group of researchers under the instrumental approach to sanctions success. The logic of the instrumental approach "relies on massive economic pressure being applied and suggests that only the most imposing economic bullies will have much of a chance at being successful sanctioners" (Kaempfer and Lowenberg 1994: p.103).

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<sup>16</sup> They cite Stigler (1971) and Peltzman (1976) as providing the economic foundation on the economics of regulation that they build on in their analysis.

This “instrumental approach” is similar to what Galtung (1967) describes as the naïve theory of sanctions. Naïve theory, as described by Galtung, suggests simply that the more value deprivation sanctions can bring to a country the greater the amount of political disintegration will result. Galtung is critical of this theory because he says it disregards the simple theory of adaptation. His main point is that value deprivation creates the social conditions under which much more sacrifice is possible so that the limit for political disintegration will be reached much later than what naïve theory would predict. This occurs because “human beings and social systems change when exposed to crisis” (Galtung, 1967: p.407). Galtung says that a society, when worked upon by the forces of cohesion, may draw on reservoirs of strength and ability not only to resist stress but also to act creatively -- qualities that lie latent in quieter periods. However, Galtung theorizes that this will not last indefinitely because there will be a breaking point at which citizens will no longer wish to do without.

Part of the problem with achieving success in the use of sanctions according to those who take the instrumental approach is that there are many alternative sources of trade for a country. Because of this, the more that sanctions “bite” in terms of reducing the target's terms of trade the greater the opportunity for gain to any country willing to maintain trade with the target. This explains why there are so many countries willing to bust sanctions and trade with the target even when the countries may be political enemies.

However, the biggest problem for the instrumental approach, according to Kaempfer and Lowenberg, is that the instrumentalists do not identify the mechanism for how the economic damage brought about by sanctions is transferred into political change in the target. Public choice theory helps identify the mechanism that translates economic

sanctions to political change. Their counter-intuitive finding is that “the impacts of sanctions on policy processes in the target country are not primarily channeled through the economic damage created by sanctions” (Kaempfer and Lowenberg, 1999: p.46). Further, they state that “We will identify a *direct* link between sanctions and policy change in the target which bypasses the economic effects altogether, and which helps to explain the surprisingly strong political effects of sanctions that do not have major economic effects” (Kaempfer and Lowenberg, 1999: p.46).

Kirshner (1997) presents a theoretical treatment of the success of economic sanctions in the public choice tradition. Like Kaempfer and Lowenberg, Kirshner argues that the success of sanctions depends not on how much the target country is hurt economically, but on how much the right groups within the target are hurt. Kirshner identifies two groups within the target of sanctions that must be identified if maximum pressure is to be exerted on the target government. These groups are “the central government, and the core groups whose political support allows the regime to remain in power” (Kirshner, 1997; p.42). “The greater the sanction hurts the central government directly, the greater the chance is that it will influence policy. Beyond this, the success of sanctions depends on whether or not core support groups are affected” (Kirshner, 1997; p.46).

While there are many similarities between the logic of Kirshner’s explanation and that of Kaempfer and Lowenberg there is an important, but subtle, distinction that can be made. Kaempfer and Lowenberg build their theory on the dichotomy between supporters and opposers of the sanction policy in the target and the sender of sanctions. They argue that a successful sanctions regime must hurt supporters of the policy in the target more



than they hurt opposers of the policy. Kaempfer and Lowenberg's work is influenced by the experience of the UN sanctions against the apartheid policies of the South African government and they use this case to illustrate how their theory works in practice. In order to reduce the level of the objectionable policy (apartheid in South Africa), the result of the sanctions must be that the black minority in South Africa (the opposer of the policy) is made stronger in relation to the government (the supporter of the policy). If both groups are hurt equally, there should be no change in the overall level of the policy – only a resulting decrease in the overall welfare of both groups.

Kirshner's distinction is between those who have the power to change the policy (the government and its core group of supporters) and those who do not (everyone else in the country). Thus it does not matter if a minority group who opposes the policy is made to gain relative to those who support the policy as long as the opposing group is unable to influence political decisions in their country.

There is a building consensus in the sanctions literature regarding the importance of domestic interest groups in the success of sanctions<sup>17</sup>, but it does not provide a theoretical explanation for the identification of which groups in a target nation will be important to leaders in different types of countries. While these works provide the theoretical underpinnings for a theory of the importance of domestic institutions to economic sanctions, they lack an explanation for which segments of the population will make up the "core support groups."

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<sup>17</sup> Along with the above-cited literature on the subject, see Becker's (1983,1985) work on the importance of pressure groups, and Bonetti (1997) and Spindler (1995).

It is at this point that I turn to a theory developed to explain the empirical findings of the democratic peace, which focuses on identifying the core group of supporters in different countries with different institutional arrangements.

Bueno de Mesquita et al's (1999) institutional explanation for the democratic peace is based on the following logic.<sup>18</sup> First, the assumptions supporting the theory are that leaders will choose the policy and effort that maximizes their expected utility and the primary goal of all leaders, democratic or autocratic, is to remain in office. Building on these assumptions, they posit that the sizes of two political institutions, the winning coalition and selectorate, explain the variation in foreign policy across states. The winning coalition is the group of people that must be satisfied in order for any leader to be reselected to office, while the selectorate is the group of citizens who possess the ability to choose the leader. When the winning coalition for reelection is large (as in a democracy), leaders will try to keep as many services as possible available to the voting public. When the winning coalition is small (autocracy), leaders will try to keep as many resources as possible channeled to a small group of elites making up the winning coalition. This follows because autocratic leaders are able to satisfy their smaller winning coalitions through the distribution of private goods enjoyed specifically by members of the winning coalition. Conversely, in democracies the winning coalition is larger (usually over 50% of the selectorate) so the amount of private goods enjoyed per member of the winning coalition is much smaller than in an autocracy. Therefore, public goods attained

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<sup>18</sup> The institutional explanation of the democratic peace is not necessarily superior to the cultural explanation. Rather, as argued by Russett and Oneal (2001) the institutional and cultural "explanations are really complementary: culture influences the creation and evolution of political institutions, and institutions shape culture" (2001: 53).

through successful policy are relatively more important in democracies versus autocracies.

Linking the logic of the public choice perspective of economic sanctions with this institutional explanation for international conflict provides a fuller explanation of the use of economic sanctions than can be achieved with either separately. The public choice argument tells us that sanctions have to satisfy a core group of domestic supporters in the sender while simultaneously hurting the core group of government supporters in the target of the sanctions. The institutional theory provides valuable cues regarding the size and composition of these core groups based on the different institutional rules for the selection of leaders.

### **A Public Choice Example**

While the following chapter provides large N empirical tests of the institutional theory of sanctions, shows how some of these ideas function within a single case of economic coercion. Bastos (1994) provides valuable incites on how threats of United States sanctions worked against Brazil in the mid 1980's over Brazil's protectionist information technology policies. Bastos makes two points that are central to this study. First, she emphasizes the importance of threatened sanctions. "I contend that the *threat of economic sanctions* was the central strategic tool that moved the players to the conclusion of the conflict" (Bastos 1994; p.381, emphasis on threat added). Second, she contends that the effectiveness of the threat of sanctions was not only related to the economic losses that they could have caused but also to the "political effects upon previously uncommitted interest groups within Brazil" (381). It is for this reason that I include Bastos in the public choice tradition. She clearly is not taking an instrumental or naïve

approach, since she attributes the success of the United States threats not to economic losses but to mobilizing certain interests groups within Brazilian society.

These two points are crucial because she argues that the threat of sanctions caused contention to develop between different political groups within the country. Groups that were previously united were now pitted against each other and distinctions were drawn that were not previously made drawing previously uncommitted groups into the battle. She states, "While opposition to the policy grew within the state apparatus, dissatisfaction with the policy within the private sector was mounting. These two trends had a significant impact on the position of the Brazilian government and particularly SEI (SEI is the Special Secretariat for Informatics, the Brazilian agency in charge of implementing the IT policy). The Brazilian 301 case added powerful new critics to the group of industrialists in opposition to the policy.

"Producers of industrial goods such as orange juice, shoes, textiles, plywood steel products, and aircraft, whose interests and activities had never before been disturbed by the policy, were led to oppose it because of the American threats of economic sanctions against their exports" (394). "Thus for the first time in the IT policy's short history, the conflict pitted the local IT sector against the whole Brazilian economy" (394).

This is exactly what the theoretical approach I have outlined would predict is necessary to get policy changed. Sanctions have to sway influential supporters of the regime to oppose the policy. It is not as important to consider whether sanctions help or hurt the existing supporters or opposition to the policy. Rather, sanctions must sway undecided and influential members of the target to oppose the policy in question.

Bastos' conclusions clearly support this idea. She states that "The effectiveness of the threat of trade sanctions against Brazilian exports to the United States market was not

due...to the concentration of losses on groups benefiting from the IT policy. Rather it was because the sanctions were directed to previously uncommitted interest groups" (383).

## **Chapter 3**

### **The Initiation Of Sanctions<sup>19</sup>**

A large body of research in international relations deals with the effect of domestic institutions on inter-state relations. One rather ubiquitous finding is that there is a certain and separate peace that exists between pairs of states with democratic institutions that does not exist between pairs of states where one or both states do not have these institutions in place.<sup>20</sup> What is less clear, however, is the effect democratic institutions have on the initiation of lower levels of coercive force, like the initiation of economic sanctions, to achieve political goals.

This portion of the analysis is motivated by the question of whether domestic institutions will have an affect on the use of economic force that is consistent with their influence on uses of military force. For instance, are countries with certain political systems more likely to impose economic sanctions than countries with other types of political systems? Will democracies avoid using economic sanctions to coerce fellow democracies? Are some political systems more or less susceptible to economic coercion? The answers to these questions are important to the study of international relations and more specifically to the importance of domestic institutions on international conflict. Given the overwhelming empirical evidence that two democracies will not engage in (serious) military conflict, this analysis seeks to understand if these findings hold up at lower levels of conflict like in the use of economic sanctions.

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<sup>19</sup> This chapter of the dissertation has undergone substantial revisions and is currently under review for publication as a separate coauthored article with Mark Souva.

<sup>20</sup> The literature on the democratic peace is now too numerous to cite all relevant pieces. Recent reviews of this research program include Russett and Starr (2000) and Ray (1995, 1998).

Scholars studying military conflicts have explored the effect of regime types on the initiation, duration, severity and outcomes of wars. Until very recently, this has not been the case for those studying the use of economic force. Kim Richard Nossal, a leading sanctions researcher, notes that scholars studying sanctions "...have tended to overlook one important variable: the impact that regime type has on the success or failure of international sanctions as an instrument of global governance" (Nossal 1999; p.127). Thus, this portion of the study builds on and extends the small, but growing, body of work on the effects of domestic institutions on the use of economic force (Bolks and Al-Sowayel, 2000; Dehejia and Wood, 1992; Dorussen and Mo, 2001; Hart, 2000; Kaempfer and Lowenberg, 1988; Kirchner, 1997; Lektzian and Souva, 2001; Morgan and Schwebach, 1996; Nossal 1999).

In addition to their role in the use of military force, it is argued here that domestic institutions also influence the use of and responses to economic coercion attempts. I extend Bueno de Mesquita, Morrow, Siverson, and Smith's (1999) institutional theory of the democratic peace to the use of economic sanctions. Based on this theory, I also derive additional logical expectations for behavior between states regarding the use of economic coercion.

Further, I argue and find, that the institutional structure of democracies leads them to use sanctions as a foreign policy tool more often than other types of political regimes. However, while democracies use sanctions more, an emphasis on successful foreign policy and greater sensitivity to audience costs make a democracy less likely to impose sanctions on another democracy. The institutional differences between democracies and autocracies also provide an incentive for these regime types to use different types of

sanctions. Democracies, being more responsive to broad domestic interests, prefer to impose more targeted financial sanctions as they cause less harm to the sender's general public. I also find that the greater incentive in a democracy to have more successful public policies leads democracies to pursue minor goals more often than autocracies. In short, this research provides an analog for the democratic peace proposition substituting the use of economic force for the use of military force.

Bueno de Mesquita et al derived several testable implications regarding regime types and war from their institutional theory of state behavior, all of which are consistent with the empirical findings of the democratic peace research program. In the paragraphs that follow, I extend the logic of the institutional theory to the use of economic sanctions, as defined above. I also discuss the empirical implications of these extensions and state them as testable hypotheses.

### **Monadic Analysis**

In the same way that the democratic peace encompasses both dyadic and monadic expectations and empirical regularities, I argue that the influence of domestic political institutions on the use and effect of economic sanctions also has monadic expectations. More specifically, the influence of the size of a nation's winning coalition and selectorate, and in turn, a state's relative emphasis on public or private goods also impacts the use and type of economic sanctions. As mentioned earlier, democracies have larger winning coalitions than autocracies. Given the diversity of preferences and plethora of interests in any particular society, a large winning coalition will be the sum of many interest groups. Kaempfer and Lowenberg argue that "sanctions are designed specifically to benefit interest groups in the sanctioning countries," and that "majoritarian democratic politics



will tend to overproduce such special interest legislation” (Hansen, 1992: 43). Similarly, Hansen has shown that “industries seek regulation in order to increase their wealth,” and that a “regulator will seek to satisfy politically strong groups in society at the expense of politically weak groups” (Hansen, 1990: 26, 27). The above argument, combined with the simple assumption that all leaders, democratic or autocratic, seek to remain in office, results in democratic leaders having greater motivation to use sanctions as a foreign policy tool than their autocratic counterparts. In other words, the relationship between the winning coalition and particular interest group pressures motivate the imposition of sanctions against other nations. Compared to democracies, autocracies have smaller winning coalitions and correspondingly fewer interest groups to satisfy. Thus, autocratic governments are expected to use sanctions less than democratic regimes. This leads to the first monadic hypothesis: *Democracies impose sanctions more often than other regime types.*

While the theoretical model leads to the expectation that democracies will use sanctions more often, it also predicts that democracies will be more sensitive to potential welfare losses brought about by the use of sanctions. This leads to specific expectations regarding the type of sanctions a state will impose given the size of a state’s winning coalition and selectorate. All trade sanctions, whether import or export, generate welfare losses for both the sender and the target. A brief analysis of the welfare effects of sanctions illustrates this point.

When sanctions are imposed, closing off the exportation of goods, a surplus is enjoyed by consumers of exportable goods, resulting in a reduction in the price of exportable goods. Therefore, consumers of exportable goods realize a net gain while

producers of exportables do not fair as well. When sanctions prevent imports, supply lags behind demand and price rises. This results in a loss to consumers of imports. However, at the new, higher price, domestic producers of imported goods stand to gain by increasing their production and selling at a higher price<sup>21</sup>.

This analysis of the welfare effects of sanctions applies to both senders and targets of sanctions and points to the inescapable conclusion that sanctions should bring about welfare losses, not only in the sanctioned country, but also in the sanctioning country. Table 3.1 summarizes these expectations for initiators of export and import sanctions. The table illustrates that there will be domestic winners (highlighted in bold) and domestic losers (in bold italics) for any trade sanctions imposed.

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<sup>21</sup> See Black and Cooper (1987) for a more detailed discussion.

**Table 3.1: Cross cutting cleavages activated during trade sanctions**

	Producers			Consumers		Special Interest Groups
	Exportable goods	Domestic goods	Imported goods	Domestic exportable goods		
From Sender Perspective						
Restrict exports from target to sender	Not Directly Affected	<b>Economic Gains</b>	<b>Economic Losses</b>	Not Directly Affected	<b>Policy Gains</b>	
Restrict imports to the target from sender	<b>Economic Losses</b>	Not Directly Affected	Not Directly Affected	<b>Economic Gains</b>	<b>Policy Gains</b>	

Since the welfare losses will be felt across broad crosscutting domestic coalitions, it is expected that a democracy would rather not impose either export or import sanctions as a rule. Additionally, if one considers *sanctions as trade restrictions* that distort normal trade flows, allowing leaders to divert rents to political supporters, I would expect autocracies to use trade sanctions more than other types of regimes.

So how do democracies deal with these contradictory internal forces, one force pushing them toward the use of sanctions to satisfy domestic interest group pressure and the other pulling them toward the welfare benefits of free trade? The answer lies in the fact that all sanctions policies will not affect a democratic leader's core group of supporters equally. Thus, democratic leaders will constantly seek a policy option able to simultaneously satisfy the demand of interest groups for action while not harming their domestic business community. One such option lies in the use of what have been referred to as 'smart sanctions,' and which include the use of financial sanctions<sup>22</sup>. The primary advantage of financial sanctions is that compared to the trade sanctions described in table one, which alternately hurt domestic consumers and producers, financial sanctions have relatively few domestic costs to the sender. Hufbauer, Schott, and Elliot are clear regarding the expectation of the diminished costs of financial sanctions, "In the first place, if the financial sanctions entail a reduction in official aid or credits they are not likely to create the same backlash, from business firms at home and allies abroad, as the interruption of private goods" (Hufbauer, Schott, and Elliot, 1985: p.59).

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<sup>22</sup> Cortright and Lopez (2002) is an edited volume providing a thorough treatment of this subject.

This is not to say that financial sanctions are without high costs to their targets. This is particularly true in terms of the long-term effect of financial sanctions on a target country's ability to attain future credit. Hufbauer, Schott, and Elliot are also clear about this expectation when they say "...private financiers who might provide an alternative source of credit [to the target] must anticipate a longer-term relationship with the target country, and long-term relations are unsettled when financial sanctions are in the air" (Hufbauer, Schott, and Elliot, 1985: p.59).

States have a broad array of types of sanctions that can be used, all of which fit the definition of economic sanctions in that they use economic means to extract political change from a target. Kirshner identifies five types of economic sanctions: "actions which disrupt trade, aid, finance, currency, and assets of the target state. Trade sanctions are further broken into export and import sanctions. There is a clear distinction between trade sanctions, of which the negative welfare effects were just discussed, and the other four types of sanctions (which I group together as financial sanctions), which are unlikely to produce negative welfare effects in the user of the sanctions. Because of this distinction I argue that democracies will use sanctions more often than autocracies (as a response to domestic pressure), but the particular sanctions instrument they choose is more likely to be financial sanctions.

Autocracies, on the other hand, are more likely to use trade sanctions. Trade sanctions have the dual benefit for an autocracy of pressuring the target nation to change an unwanted policy while at the same time allowing the autocratic leader to manipulate the rents of the trade distortions to benefit key groups of supporters domestically. This leads to the second monadic hypothesis: *Democracies prefer to impose financial*

*sanctions alone, rather than combinations that include import or export sanctions. By contrast, autocracies will be less reserved in their sanctions policy, preferring comprehensive packages of sanctions including both import, and export sanctions.*

The institutional differences that lead democracies to focus on the public health and welfare of their public also make democracies more likely to pursue minor political goals via sanctions. Because democratic leaders are more likely to be punished for failed public policy, they have to be careful about selecting the type of disputes over which to impose economic sanctions. Since eliciting a major policy change from a target nation is expected to be more difficult than coercing minor policy changes, democracies are expected to be less likely to attempt sanctions over major policy goals than autocracies.

Therefore, although democracies are more likely to impose sanctions, they will be less likely than autocracies to impose sanctions over a major policy issue. This leads to monadic hypothesis three: *Democracies are more likely than autocracies to impose minor sanctions.*

### **Dyadic Analysis**

Although the democratic peace involves a number of monadic regularities, its most robust support is at the dyadic level. Indeed, the “democratic peace” is a dyadic phenomenon. Jointly democratic dyads are significantly less likely to experience war or other less intense forms of militarized conflict than other types of dyads. I argue that the same reason democracies rarely, if ever, fight wars with other democracies also makes them less likely to impose sanctions on democracies compared to autocracies.

The institutional explanation says that since democracies are responsive to a larger constituency, when they are engaged in wars they will try harder to keep their country

from experiencing losses brought about by the war effort. This makes democratic countries less likely to fight wars with other democratic countries for two reasons. First, democratic leaders need to enact successful policies to remain in office. Second, a democratic leader knows that other democratic leaders also need to conduct successful policy. These two effects work together to make it extremely rare, but still possible, for two democratic countries to fight a war. In other words, a democracy makes a very poor target for another democratic state.

Another implication of these two points that leads to the same conclusion is that democratic institutions facilitate the communication of resolve, thereby increasing the likelihood of settling a dispute, economic or military, in the negotiation phase. Strategic models of international relations characterize disputes between nations as a process (Bueno de Mesquita and Lalman, 1992; Fearon, 1994; Schultz, 1998, 1999). Since there are always potential disputes between nations, owing to different preferences on any number of issues, this formulation of disputes as a *process* begs the question of why some disputes escalate and some disputes do not? The general answer given by strategic models is that disputes escalate due to uncertainty surrounding the resolve of a nation. Factors, such as democratic institutions and the accompanying audience costs that enhance the ability of an actor to signal resolve reduce the likelihood of a dispute escalating. Therefore, once again, jointly democratic institutions make it extremely unlikely for a dispute to escalate to war.

I argue that the factors, a greater reliance on successful public policies and a greater ability to send more clear signals, that make democracies less likely to engage in warfare also make democracies less likely to impose economic sanctions against one

another. While I believe the war analogy identifies the appropriate causal mechanisms, the analogy is imperfect. The cost of using sanctions is lower than the cost of warfare. However, since the costs involved in economic sanctions are less than in military conflicts, the correlation between joint democracy and the use of sanctions is not expected to be as perfect as the correlation between joint democracy and the use of military force. But, if the theoretical linkages of the institutional democratic peace are correct they should continue to operate during economic coercion attempts

As in uses of military force, given the inherently strategic nature of international relations, initiators of economic force must consider the likely response to their actions. Thus, the leader of a democratic country may consider using economic sanctions to attain successful public policy, but is not likely to reach the point where it puts sanctions in place against another democracy. There are two reasons for this. First, the public choice perspective tells us that sanctions need to hurt the core group of government supporters to be successful. The institutional logic tells us that the core group of supporters for a democratic leader will be large and most efficiently supplied by successful broad based public goods. Therefore, the target of sanctions, being a democracy, will take all necessary means to offset or counter the sanctions in an effort to continue providing a stream of public goods to members of its broad winning coalition. If the target effectively counters any negative effects of the sanctions, the sender will be perceived to have initiated a failed policy and will suffer domestic costs. Thus democratic leaders who rely on successful public policies to satisfy their winning coalitions are not likely to use sanctions against other democracies.



The second explanation focuses on the costly signaling argument made above. The realization of a sanctions episode requires both that the sender of sanctions decides to sanction and the target decides to let itself be sanctioned (i.e. it decides not to comply with the demands of the sender). In other words, the decision to implement sanctions is a process during which negotiations occur. If the target decides to allow itself to be sanctioned this can be a strong signal of resolve. Backing down and complying once sanctions have been initiated is an option but does not come without audience costs. Since the theory posits that democratic leaders will face greater audience costs for backing down and admitting a failed public policy, the signal sent by a democratic target will be more credible than that sent by an autocratic state. Thus, a potential democratic sender of sanctions that observes this signal of resolve from a democratic target is less likely to initiate sanctions. If the signal comes from an autocratic state, there is a greater possibility that the autocratic leader is bluffing and will back down once sanctions are implemented. This leads to the first dyadic hypothesis: *Jointly democratic dyads will experience fewer episodes of sanctions than other types of dyads.*

The essence of the above argument is that policies that detract from the public good jeopardize a democratic leader's hold on the reins of power, and that a successful foreign policy is a public good. Put differently, democratic leaders need to avoid unsuccessful foreign policies or risk losing political office. Nossal (1999) argues that both of these factors are relevant to an analysis of sanctions. "Sanctions interrupt normal economic intercourse," writes Nossal, "and in so doing, they deprive political communities of the good things necessary to sustain life and community; faced with such disruptions in the supply of good things, rational governors of a sanctioned community

will do whatever is necessary to continue to have access to those good things and will alter their behavior in such a way as to stop the sanctions” (Nossal: 130).

Nossal also posits a liberal democratic corollary to this argument. If leaders of sanctioned states do not make the rational choice of changing their policies to escape sanctions, they will be replaced through the will of those who are governed and are suffering from the economic effects of sanctions (Nossal, 1999). Kirshner describes the same expectations. He states that “Pressure on core support groups creates indirect incentives by motivating those groups to pressure the government to change course, and by raising fears that dissatisfaction among such groups will cause them to conclude that their interests can be better served under new leadership” (Kirshner, 1997). Following this logic, one can see how the motivation for leaders to remain in office functions as a kind of limit on how much economic harm a country will withstand before it changes its policy to escape sanctions. This is true for the sender of sanctions as well as for the target. Leaders of a sanctioning country will only be able to maintain a failing sanctions policy for a limited amount of time before they face the threat of expulsion from office for their failed policies. Also, leaders who practice poor policies will be less likely to be in office at any given time.

Since democracies are more dependent than autocracies on the provision of public goods, I expect that economically harmful sanctions in a democracy will increase the probability of a shift in support from the current regime to a challenger. As Bueno de Mesquita et al note, challengers in a democracy compete largely over the provision of public goods; as a result, if sanctions are imposed on a democracy, challengers are likely

to rise up. Likewise, democratic leaders whose policies make them continuous targets of harmful sanctions are also likely to face an increased threat of removal from office.

However, this process is significantly altered when the governed do not have the institutions in place for the oversight of ineffective leaders. If the segment of the population affected by sanctions is not part of a leader's winning coalition for retaining office, then he/she has no motivation to lift ineffective sanctions or change a policy that is attracting sanctions from other countries. In effect, this leads to both longer and more damaging sanctions when an autocracy is involved. In other words, since autocratic leaders are generally beholden to a small cadre of elites for their political survival, sanctions against autocracies may be able to lead to a general decline in the national welfare with little chance of eliciting the desired policy change. Therefore, as long as sanctions are not directly affecting the welfare of political elites, autocratic leaders are expected to be able to withstand the negative welfare effects of sanctions for longer periods than democracies. This leads to the second dyadic hypothesis: *Jointly democratic dyads will experience shorter and less severe sanctions than other types of dyads.*

In summary, the institutional explanation of economic coercion provides a sound framework for understanding much of what has previously been regarded as the puzzling behavior of nations regarding sanctions, and the theory leads to the following monadic and dyadic hypotheses.

### **Monadic Hypotheses**

**H1: Democracies impose sanctions more often than other regime types.**

**H2: Democracies prefer to impose financial sanctions alone, rather than combinations that include import or export sanctions. By contrast, autocracies**

**will be less reserved in their sanctions policy, preferring comprehensive packages of sanctions including both import, and export sanctions.**

**H3: Democracies are more likely than autocracies to impose minor sanctions.**

### **Dyadic Hypotheses**

**H1: Jointly democratic dyads will experience fewer episodes of sanctions than other types of dyads.**

**H2: Jointly democratic dyads will experience shorter and less severe sanctions than other types of dyads.**

### **Research Design**

I use Hufbauer, Schott, and Elliot's (Hufbauer, Schott, and Elliot, 1990) sanctions dataset to analyze all cases of economic sanctions between 1950 and 1990. While this work has garnered some criticism, most of the critiques have focused on their coding of success, potential bias toward large states in case selection, and their analysis of the data (see e.g. Pape, 1997; Drezner, 1999). As a source of sanctions cases throughout the world, it is the best available.<sup>23</sup> The dataset consists of 109 cases of dyadic sanctions. Some cases in the HSE data set involve multiple senders or targets. As the unit of analysis is the dyad-year, I disaggregate these into multiple cases. For example, HSE note that the United States and Great Britain both imposed sanctions against Uganda in 1972. I code sanctions as occurring for both the United States-Uganda dyad and the Great Britain-Uganda dyad in 1972. Similarly, HSE record that the United States instituted sanctions against both India and Pakistan in 1971. I again code this as two cases of sanctions, one for the United States-India dyad and one for the United States-Pakistan dyad. Following Lektzian and Souva (2001), I do not include cases in which the sender or target is only identified as an institution or conglomerate of nations. Thus, I do not

include the Arab League sanctions against Canada in 1979, nor do I include cases in which the United Nations is the sole initiator.

To test the first hypothesis, that democracies impose sanctions more often than other regime types, I identify for each case whether the sender is a democracy or not. The coding of democracy is based on Bueno de Mesquita et al's discussion of winning coalition size.<sup>24</sup> A state is coded a democracy if it's winning coalition score is five. Table 3.2 provides a preliminary look at the propensity for different polities to use economic sanctions.

**Table 3.2: Initiators of Sanctions By Regime Type, 1950-1990**

Regime Type	Number of Nation Years Without Sanctions	Number of Nation Years With Sanctions
Non-Democracies	5556	19
Democracies	1012	90

Chi-Square: 350.95,  $p < .01$

This table provides strong evidence for pursuing the question further. From Table 3.2, I observe that there is a statistically significant relationship between regime type and sanctions initiation. Democracies impose sanctions far more often than one would expect based on their percentage of the population. While democratic states make up less than 20% of the sample, they impose sanctions more than 80% of the time. Conversely, non-

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<sup>23</sup> Drezner (1999) analyzes Russia's attempts between 1992 and 1997 to coerce states that were once members of the Soviet Union.

<sup>24</sup> See Bueno de Mesquita and Root (2000: 72-73) for details on how to construct this variable. The winning coalition measure is composed of four components from the Polity index. A winning coalition score of 5 indicates that the regime is not a military regime, has competitiveness and openness in executive recruitment, and has competitiveness of participation. Winning coalition scores of 5 correlate highly with Polity democracy index scores of 10.

democratic states are far less likely to use sanctions than their proportion of the population would lead one to conclude.

Although the evidence in Table 3.2 is consistent with the hypothesis that democracies are more likely than other regime types to use economic sanctions, I do not argue that regime type is the only influence on the use of sanctions and Table 3.2 does not include any control variables. I conduct a more thorough analysis of whether democratic regimes are more likely than non-democratic regimes to initiate sanctions by conducting a regression analysis on all states from 1950 to 1990. This permits the inclusion of other relevant factors that may influence the initiation of sanctions. I choose an event count model over a logistic model as states may choose to initiate sanctions more than once in a given year.<sup>25</sup>

The dependent variable in this analysis is the number of times a state initiated sanctions in a given year. Regime type is the central independent variable of interest. Democratic states are coded one. In addition to regime type, I control for economic and political factors that may influence the use of sanctions. Economic factors that may influence the likelihood of imposing sanctions include the wealth and trade dependence of a state. Sanctions are an effort to use economic force to make another state change a policy. If a state is very poor, then it is not likely that it will attempt to use sanctions. The recourse to sanctions depends in part on the potential leverage a state can muster; thus, I expect wealthier states to use sanctions more often than poor states. Moreover, wealth may be correlated with democracy, therefore, I control for the wealth of states in

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<sup>25</sup> I also ran a logistic model where a state either initiates or does not initiate sanctions in a given year. The substantive results are the same: no variables change in sign or significance.

order to isolate the effect of democracy on initiation. I measure wealth as gross domestic product per capita, using data from the Penn World Tables (Summers and Heston, 1991).

Trade dependence, though it creates an opportunity to exercise leverage, should reduce the willingness of a state to use sanctions. As discussed earlier, sanctions harm, though not always greatly, a nation's economy. Perhaps more importantly, the recourse to sanctions may make firms in other states less willing to conduct business with firms in states that employ sanctions. To protect their own economy and to demonstrate their commitment to commercial exchange, the more dependent a state is on trade, the less likely it will be to initiate economic sanctions. I measure this variable with the Penn World Tables openness variable (Summers and Heston, 1991). Openness is the sum of a state's exports and imports divided by gross domestic product.

Next, I expect Major Powers to be more likely to use sanctions than other states. Major powers not only have broader interests in international events, they also enjoy a range of options that are not available to lesser powers. Because major powers have the ability to respond, their inaction sometimes comes at great cost. When a great power chooses not to respond to events around the world, their inaction can send a signal of disinterest in the matter, or an inability to respond (potentially seen as a decline in power), or approval for the actions taken by the foreign country. Thus, the fact that major powers have the ability to respond is a compelling force to take some action. Major powers are also more likely to use sanctions because they are more likely to try to impose their ideology on other states and to try to keep their client states in line. For similar reasons, the United States has had a greater incentive to use sanctions in the post-World War II period. As the dominant power in the international system, the United States has

had an incentive to mold the international system according to its wishes. I use the COW coding to determine which states are major powers. In the post-World War II period, the COW coding includes the United States, the Soviet Union/Russia, France, Britain, China.

While I expect these other factors to influence the use of sanctions, I do not expect them to nullify the importance of political institutions. Indeed, these other factors establish an appropriate baseline for the use of sanctions. If the arguments are correct, I should observe that institutional factors exert a statistically significant influence on the initiation and content of sanctions even in the presence of non-institutional opportunity and willingness factors.

Statistically, I employ a general estimating equation (GEE) to analyze the onset of sanctions. A GEE model permits the analyst to specify a variety of within group correlation structures. As the data set is similar to Oneal and Russett's (1997, 1999, see also Russett and Oneal, 2001) analyses of militarized disputes, I follow their lead and specify an AR(1) correlation structure.<sup>26</sup> Zorn notes that population-averaged models, such as GEE, are "valuable for making comparisons across groups or subpopulations" (Zorn, 2001: 475). Since the substantive focus of this research is on the general likelihood of a state initiating sanctions, a population-averaged approach is an appropriate statistical method.

The multivariate analysis of the initiation of sanctions indicates that democracy is a statistically significant and positive influence (see Table 3.3). This supports the hypothesis (monadic hypothesis 1) that democracies are more likely than other regime

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<sup>26</sup> I also ran the analyses using alternative correlations structures, such as AR(2) and AR(3). The results are the same.



types to impose sanctions. Substantively, the influence of democracy is great. Changing a state from a non-democracy to a democracy, holding all other variables constant, increases the probability that a state will initiate sanctions by 184% (see Table 3.3, Column 3)!

**Table 3.3: Determinants of State Initiation of Sanctions, 1950-1990**

<b>Variable</b>	<b>Model 1: Monadic Analysis</b> $\beta$ s.e.	<b>First Differences <sup>a</sup></b>
Democratic Initiator	1.044 *** .333	+ 184%
Monadic Trade Dependence/Openness	-.030 *** .012	-70.85%
GDP per capita	.0002 *** .00003	+ 89.39%
Major Power	2.214 *** .385	
USA	.763 * .426	
Constant	-5.391 *** .520	
N Wald *** p < .01 ** p < .05 p-values reflect one-tail tests.	4228 245.60 ***	

<sup>a</sup> The first differences reflect changes in the predicted probability of event occurrence relative to a baseline model where democracy, USA, and major power are set equal to zero and openness and GDP per capita are set at their mean values.

The economic control variables also operate as expected. Greater trade dependence is statistically significant and reduces the likelihood that a state will initiate sanctions. The effect of economic openness is substantively meaningful. Increasing a state's economic openness by one standard deviation decreases the likelihood of sanctions by 70% (Table 3.3, Column 3). Consistent with the argument that as the vulnerability of

a state decreases it is more likely to impose sanctions than other states, I observe that states with higher gross domestic product per capita are more likely to impose sanctions.

The opportunity control variables, major power status and the United States dummy variable, also function as expected. Major powers are more likely than other nations to impose sanctions, and the United States, in particular, is more likely than other states to initiate sanctions. Perhaps what is most important about these variables is the fact that the other more theoretically meaningful variables are still statistically significant and operate as hypothesized even in the presence of these statistical controls.

The second hypothesis concerns the type of sanctions that will be imposed, trade sanctions, financial sanctions, or some combination of the two. For this analysis, I classify the type of sanctions (export, import, or financial) implemented for each sanctions case using the Hufbauer, Schott, and Elliot data. I argue that, while democracies are willing to use trade sanctions, they are more likely to use financial sanctions because financial sanctions cause less damage to the sender's economy. Table 3.4 reveals that even though democracies use sanctions more often than non-democracies, regime type also influences the type of sanctions imposed.

**Table 3.4: Type of Sanctions by Regime Type**

Regime Type	Trade Sanctions Only	Financial Sanctions Only	Trade and Financial Sanctions
Non-Democracies	5	0	7
Democracies	12	28	35

Chi-square: 8.26,  $p < .05$

In particular, democracies use financial sanctions *more* often than one would expect; in fact, non-democracies never use financial sanctions alone in the sample. On the other hand, about 56% percent of the time a non-democracy uses sanctions, it imposes

comprehensive financial and trade restrictions, whereas democracies resort to comprehensive sanctions packages only about 46% of the time. Overall, Table 3.4 is consistent with the expectations regarding the type of sanctions a particular regime is likely to implement.

Next, I conduct a test of monadic hypothesis three: democracies are more likely than autocracies to impose minor sanctions. To assess this argument, I recode HSE's five sanctions goals into a dichotomous indicator of major and minor goals. This dichotomous recoding is based on the arguments of Drezner (1999) and Hart (2000). Table 3.5 shows that there is a statistically significant difference in the type of goals democracies and non-democracies pursue.

**Table 3.5<sup>27</sup>: Goal of Sanctions by Regime Type**

<b>Regime Type</b>	<b>Minor Goal</b>	<b>Major Goal</b>
<b>Non Democracy</b>	4	14
<b>Democracy</b>	48	38

Chi-Square = 6.72,  $p < .05$

Democracies are significantly more likely to pursue a minor sanctions goal than are non-democracies, even controlling for the greater use of sanctions by democratic states. This difference between democracies and non-democracies regarding the type of sanctions goal pursued is consistent with the institutional argument. The institutional incentives to promote the public welfare encourage democracies to pursue goals that are less likely to damage their own welfare.

One of the most important and robust empirical trends in international relations is that democracies do not enter into war against other democracies. Based on a similar

causal logic, I posit that jointly democratic sanctions, that is when both the sender and target are democracies, are less likely to occur than sanctions in either mixed or jointly autocratic dyads. Table 3.6 shows that there is a statistically significant difference in the onset of sanctions between jointly democratic and other types of dyads.

**Table 3.6: Sanctions by Dyadic Regime Type**

Dyadic Regime Type	Number of Cases Without Sanctions	Number of Cases With Sanctions
Dyads with at least one non-democracy	31229	103
Joint Democratic Dyad	3919	5

Chi-square: 4.63,  $p < .05$

Democratic dyads experience fewer cases of sanctions than their proportion of the population would lead one to expect. Given that the cost of sanctions is not as great as the cost of war, I do not expect the sanctions relationship to be as robust as its military force analog. Indeed, there are five cases of democracy versus democracy sanctions in the dataset. However, democracies are frequent users of sanctions, having sanctioned non-democracies 85 times.

The analysis in Table 3.6 does not control for other relevant influences on the use of sanctions. To better determine whether joint democracy reduces the likelihood of sanctions, I conduct a multivariate analysis on the determinants of economic sanctions for all politically relevant dyads between 1950 and 1989. Whereas the previous analysis in Model 1 (Table 3.3) focused on the monadic determinants of sanctions initiation, this analysis emphasizes the dyadic influences of sanctions onset. To the best of my knowledge, this is the first test of this type with regard to economic sanctions.

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<sup>27</sup> There is a slight difference in the number of cases between Table 4 and 5 do to incomplete

As before, the dependent variable is whether or not sanctions were initiated in a particular dyad-year. Similarly, the substantive focus of this analysis is on the general likelihood of a dyad experiencing sanctions; therefore, I employ a general estimating equation, which assesses population averages, with an AR(1) correlation specification.

In terms of independent variables, I posit that many of the same factors that influence the decision to initiate war also influence the decision to impose sanctions on another state. First, I contend that sanctions will be less likely to occur in jointly democratic dyads than they will be in other types of dyads. I code a dyad as democratic if both states have winning coalition scores of four or five.

I also believe that many “realist” factors influence the onset of sanctions. Based on the insights of power transition theory, I contend that as power becomes more equal in a dyad, the likelihood of sanctions occurring increases. Power parity creates a greater opportunity for sanctions. In dyads with a highly asymmetric power distribution, the weaker state has little reason to believe that it can prevail in a crisis bargaining situation so it is more likely to yield to the demands of the stronger state. I measure relative capabilities using the COW composite capabilities index, taking the natural log of the ratio of the stronger state to the weaker one.

Next, I expect that foreign policy preference similarity reduces the likelihood of imposing sanctions. States with similar preferences have less to fight over, thus sanctions are less likely to occur. To capture this effect, I code whether or not two states are allies. Although allied states do not have identical preferences, research has shown that they are

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information on sanctions type.

less likely to have militarized conflict, an effect that is particularly strong in the post-World War II era (Russett and Oneal, 2001).

I also anticipate that political leaders prefer to sanction states with whom they are less economically dependent as this will likely involve lower costs to the home, i.e. sanctioning, state. In other words, a state does not want to sanction a state that it conducts a lot of trade with as this state then has the ability to inflict a similar amount of damage on it. Thus, as trade interdependence increases, the likelihood of sanctions decreases. For similar reasons, the greater the distance between two states, the more likely sanctions are to occur. I measure interdependence as exports plus imports divided by gross domestic product. I measure distance as the great circle distance between each state's capital.<sup>28</sup>

Finally, a significant number of the sanctions episodes in the HSE data set involve the United States. Whether this is the result of a systematic bias or forces peculiar to the United States that impel it to use sanctions is unclear. To err on the side of caution, I include a dummy variable that takes on a value of one if the United States is a member of the dyad.

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<sup>28</sup> Trade interdependence data comes from Oneal and Russett, and I use EUGene (Bennett and Stam, 2000; v. 2.4) to calculate state-to-state distance.

## Results

The empirical results in Model 2 (Table 3.7) support my primary hypothesis.

**Table 3.7: Determinants of the Onset of Dyadic Sanctions, 1950-1990**

Variable	Model 2: Dyadic Analysis $\beta$ s.e.	First Differences <sup>a</sup>
Joint Democracy	-0.707 ** 0.337	-50.69%
Dyadic Trade Dependence, weak link	-211.155 ** 88.016	-77.41%
Ln Relative Capabilities	-0.515 *** 0.091	-59.61%
Allies	0.672 ** 0.333	
Ln Distance	0.094 0.089	
USA	3.724 *** 0.542	
Constant	-6.382 *** 0.490	
N Wald *** p < .01 ** p < .05 p-values reflect one-tail tests.	26514 136.83 ***	

<sup>a</sup> The first differences reflect changes in the predicted probability of event occurrence relative to a baseline model where democracy, USA, and major power are set equal to zero and openness and GDP per capita are set at their mean values.

Jointly democratic dyads are less likely to experience sanctions than other types of dyads.

The pacifying effects of democratic institutions, then, extend beyond the military realm and into the economic. Moreover, this analysis provides additional support for the idea that democracies have less to fight over. In other words, democracies have fewer militarized disputes because they have fewer non-militarized disputes.

I also find that economic interdependence reduces the likelihood of sanctions. States are more likely to sanction a nation with whom they have low levels of trade than a nation with whom they have extensive trade ties. Given that sanctions are a two-edged sword, this is not surprising. Sanctions necessarily entail losses for the sanctioning state, as well as the target state; thus, a state motivated by welfare desires will prefer to sanction a state with whom it does not have much trade.

In addition to the effects of democratic institutions and economic interdependence, I find little support for 'realist' influences on the occurrence of sanctions. Contrary to expectations, the presence of an alliance increases the likelihood of economic sanctions occurring. An analysis of the data suggests that this is largely due to the United States sanctioning a number of Latin American countries. Indeed 22 of the 31 cases in which an allied is sanctioned are cases in which the United States is sanctioning a Latin American nation.

One of the most robust results in research examining the onset of militarized disputes concerns the pacifying effects of power preponderance. I find that an asymmetric power distribution also reduces the likelihood of sanctions. To some extent this effect is mitigated by the statistically significant and positive influence of the United States dummy variable. Not surprisingly, dyads that involve the United States are more likely to experience sanctions than other dyads. Since most of these dyads have an asymmetric power distribution, the pacifying effects of power preponderance appear to be limited to non-United States dyads.

Overall, the multivariate analysis not only supports the argument that democratic dyads are less likely than other types of dyads to experience sanctions, the analysis rules



out competing explanations. For instance, the institutional theory improves on substitutability arguments. A general substitutability argument might suggest that states substitute sanctions for military force in situations where the cost of using force would be too high. By including a measure of the balance of power in a dyad I am able to address this issue. If the use of sanctions is primarily a substitute for military force, then I am unlikely to observe a statistically significant difference across dyadic regime types, especially while controlling for the power relationship in a dyad. This is not to suggest that sanctions are never used as a substitute for military force. In some situations sanctions may be substitutes for force, though they are more likely to accompany the use of force. More importantly, the empirical analyses suggest that internal political dynamics exert a far greater influence on the use of sanctions than external balance of power politics.

Finally, I present a preliminary and limited test of dyadic hypothesis two by examining the mean length of sanctions across dyad type. Although democracies may occasionally sanction other democracies, I expect the mean length of jointly democratic sanctions to be shorter than the mean length in other dyad types. As mentioned earlier, the importance democracies attach to the public welfare makes them more likely to accede to sanctions demands. Autocracies, however, face a smaller incentive to give in to sanctions demands, so I expect that sanctions against an autocracy, whether imposed by a democracy or not, will be longer. Table 3.8 indicates that the mean length of sanctions in jointly democratic dyads is almost half the length of sanctions in jointly autocratic dyads. Consistent with the hypothesis, jointly democratic dyads also experience shorter sanctions than mixed dyads.

**Table 3.8: Length of Sanctions by Dyad Type**

<b>Dyad Type</b>	<b>Mean Length of Sanctions in years</b>
Jointly Democratic	5.0
Mixed Dyads	6.42
Jointly Autocratic	9.8

### **Conclusions Regarding the Initiation of Sanctions**

The thesis of this paper is that the influence of democratic institutions in international relations extends beyond the military realm and into the economic. I broaden Bueno de Mesquita, Morrow, Siverson, and Smith's (1999) institutional theory of military conflict to explain the use of economic sanctions in world politics. I find that democracies are more likely to initiate sanctions than other regime types, even while controlling for other relevant influences. Nonetheless, democracies are less likely to impose sanctions against a democracy than they are to impose sanctions on a non-democracy. The pacifying influence of jointly democratic regimes, then, extends into the economic domain. This theory generates additional foreign policy expectations. When democracies do impose sanctions, they are more likely than autocracies to utilize financial over trade sanctions and aim for minor foreign policy goals. Both of these hypotheses are confirmed by the empirical record.

The essence of the theory is that political institutions affect the incentives of leaders, and therefore, the foreign policies of states. Democratic leaders are expected to be more sensitive to hardships placed on the general population. However, this expectation is not reached based on an assumption of greater morality among leaders of democratic nations. All leaders are assumed to be acting on their own selfish interests to

remain in office. It is the institutional arrangements that provide the incentive for democratic leaders to be responsive to economic losses brought about by sanctions (Bueno de Mesquita et al., 1999; p. 793). The work of Immanuel Kant provides the philosophical grounding for this idea.

A problem like this [perpetual peace] must be capable of solution; it does not require that we know how to attain the moral improvement of men but only that we should know the mechanism of nature in order to use it on men.... We can see, even in actual states, which are far from perfectly organized, that in their foreign relations they approach that which the idea of right prescribes. This is so in spite of the fact that the intrinsic element of morality is certainly not the cause of it. (A good constitution is not to be expected from morality, but, conversely, a good moral condition of a people is to be expected only under a good constitution.) Instead of genuine morality, the mechanism of nature brings it to pass through selfish inclinations, which naturally conflict outwardly but which can be used by reason as a means for its own end, the sovereignty of law, and, as concerns the state, for promoting and securing internal and external peace (1957: 30-31).

The 'mechanism of nature' for assuring the morality of men that Kant speaks of is, in international relations, the presence of democratic institutions.

## **Chapter 4:**

### **Threats, Success, and United States Drug Sanctions Policy**

In the remainder of the dissertation the emphasis is shifted from factors affecting the initiation of sanctions to factors affecting their success. However, this is not a typical treatment of sanctions success. Typically, researchers examine cases of sanctions that have occurred and attempt to determine why some of them have been successful while others have not. Most of these studies concluded that sanctions are an ineffective policy instrument because of the low probability of coercing a target nation to change its policy once sanctions have been initiated (Preeg, 1999; Renwick 1981; Strack, 1978; Knorr, 1975). For the most part, this conclusion has been reached based on a simple observation of the percentage of observed sanctions cases that achieve their stated policy goal. Since even the most optimistic of estimates has sanctions succeeding only about 35% of the time (Hufbauer, Schott, and Elliot, 1990), many of these researchers have been puzzled by why states would choose sanctions.

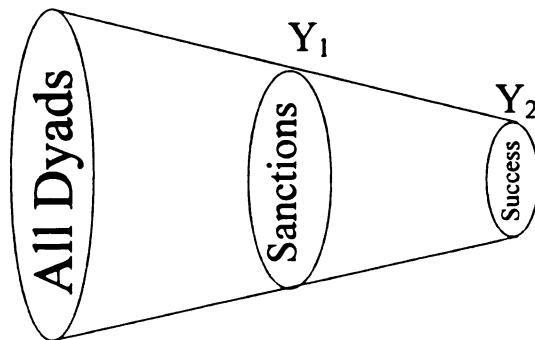
In this work a different approach will be taken to solving the puzzle of why sanctions are so frequently used even though their success rate is generally considered to be low. The central part of the argument made here is that observed cases of sanctions should have a much lower rate of success than threatened sanctions. Most cases of successful sanctions may be occurring at the threat stage, never making it into typical empirical analyses of sanctions. If this is true, then estimates of sanctions success based solely on observed cases of sanctions will suffer from selection bias that prejudices findings toward failure.

Whenever sample selection is based on certain criteria there is the risk of selection bias occurring. In other words, the results of the study could be biased by the selection of cases being examined. “The logic is that if the sample is not representative of the larger population, then even if the inferences are valid for the sample, they may not be for the larger population” (Signorino, 2001; p. 5). Without accounting for this selection bias, one must assume that the cases under examination are not significantly different from the entire sample, which we cannot observe. However as pointed out above, and shown formally below, there are strong reasons to believe that this assumption is untenable. In other words, if some countries are giving in to the mere threat of sanctions, then there are good reasons to believe that the group that does not give in at the threat stage may be substantively different from the general population of states.

One way to determine if those cases being studied (i.e. cases where sanctions actually occur) are in fact different from the general population of potential sanctions cases is to use a unified model that looks at factors affecting the onset of sanctions and factors affecting the success of sanctions (see Lemke and Reed 2001 for an application of strategic censoring to rivalry studies, see also Reed, 2000). If the two events are significantly correlated, then one can conclude that whether sanctions are imposed is due in part on the likelihood of success in sanctioning.

The application of the unified model to sanctions can be thought of as shown in the following figure, where  $y_1$  and  $y_2$  are two separate dependent variables showing when sanctions occur and when they are successful, respectfully. In this diagram, the analysis starts with all dyads. Moving to the right,  $Y_1$  indicates which of those potential dyads chose sanctions.  $Y_2$  measures which of those observed sanctions cases were successful.

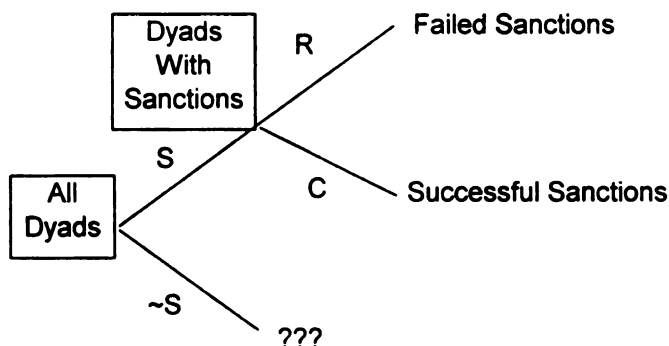
**Figure 4.1: Selection Diagram**



Given that estimates of models of this type (Nooruddin, 2002; Lektzian and Souva, in progress) have found that factors affecting the success of sanctions are influencing the decision to implement sanctions, a closer inspection of this relationship is warranted. If this selection process is taking place, then one has to be concerned with the process through which it occurs.

By a closer inspection, I am primarily interested in why some cases do not make it into the observed cases of sanctions. A typical simplified selection model would look something like this:

**Figure 4.2: Basic Selection Model of Sanctions**



But there is more than one way that a case can make it into the non sanctions ( $\sim S$ ) branch of this model. First, there may have been no dispute between the two countries in the first place, which is probably the least interesting but also probably makes up the majority of cases that fall under the  $\sim S$  branch. For instance, in all observed years, Armenia and Bougainville fall into the  $\sim S$  branch of this diagram because they simply had no reason to even considering sanctioning one another. There are at least three other ways that a dyad could fall into the  $\sim S$  branch that are theoretically more interesting because they start by assuming that states are having a dispute and sanctions are considered but never carried out. First, the potential threatener of sanctions could be deterred from making a threat. Second, sanctions could be threatened with the threatening state backing down and last; the threatened state could back down before sanctions are actually implemented.

Thus, it is at this threat stage of sanctions where potential selection problems arise. If the selection process is at work, states that expect to be sanctioned successfully may be more likely to simply give in to the demands of the sender at this stage. Having gotten its way, the sender no longer needs to impose sanctions and history never records a sanction having taken place. On the other hand, a target that stands firm at this stage may be signaling to the sender nation that it will not be coerced into changing its behavior through economic sanctions. In this case, the sender may decide that it will be unsuccessful in using sanctions and back down from its threat. Again, history records no use of sanctions, although a failed attempt at using economic force to coerce political behavior has certainly occurred.

The finding of the two selection modes<sup>1</sup> performed on this question to date (Noorudin, 2002; Lektzian and Souva, in progress) suggest that the first part of this explanation may be occurring with greater frequency than the second part. Targets are selecting themselves out of potential sanctions episodes where they expect to fail. In other words, sanctions that would be successful are less likely to occur. However, senders are not selecting themselves out with as great of a frequency when they expect to be unsuccessful. Thus, the subset of sanctions cases that are observed are those that are most likely to fail. The expected impact on empirical studies is that estimates of sanctions success will be biased downward.

While analyzing the process with a selection model is not without merits, it also presents some conceptual problems. First, by looking at dyadic outcomes like, sanctions/no sanctions or success/failure, it misses the strategic nature of decisions by the potential sender and target of sanctions. Second, it does not explicitly address threats of sanctions. It shows if sanction initiations and successful sanctions are correlated, but it does not tell us why sanctions that are likely to be successful do not occur. (i.e., it does not help identify whether the observed selection bias is a result of senders not threatening when they expect to be unsuccessful, or threatening and backing down, or targets backing down after threatened).

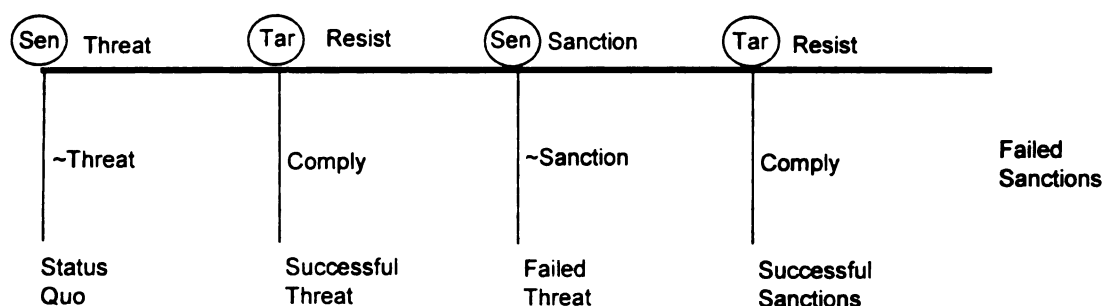
Thus, a more direct way to examine the process involved in the selection of the subset of cases that become sanctions is to modify the selection model presented above in two ways. First, I include strategic decision-making, and second, I focus on both the factors affecting the success and failure of *threats* of sanctions and factors affecting the success and failure of observed sanctions cases. By doing this we can learn more than



from the typical selection model which has told us that factors affecting success are negatively related to the imposition of sanctions.

With perfect information, if sanctions were going to be successful after they were implemented, we would expect targets to always give in at the threat stage of sanctions. By doing this targets avoid the negative effects of being sanctioned and then having to give in at a later point. Logically, if the target knows that it cannot withstand the costs of sanctions it might as well give in without sanctions and avoid the economic loss.

**Figure 4.3: Threats of Sanctions With Complete Information**



In Figure 4.3, the basic selection model presented earlier is expanded to include strategic behavior by potential senders and targets of sanctions as well as adding threats of sanctions. By extending the basic selection effects model back two stages, I have identified more precisely what I mean by Not Sanction ( $\sim S$ ). Now instead of  $\sim S$  being dyads without sanctions, it is identified as cases of failed threats of sanctions. And, in the preceding branch, cases of successful threats are identified. This allows us to look more closely at why the sanction did not occur. It could have not occurred because the Sender was able to achieve its goal with the mere threat of economic sanctions, or it might have

not occurred because the Sender was deterred from carrying out its threat of sanctions. Going back one step further, reveals that the sender may have even been deterred from making a threat in the first place<sup>29</sup>.

In the next section of this chapter on threats of sanctions, I will present a theoretical explanation of how differing domestic institutions in senders and targets of sanctions affect the likelihood of sanctions being threatened or implemented. Following that I will present an explanation of the United States sanctions policy against countries that are deemed not to be cooperating in the fight against international drug trafficking. In the future I will frequently refer to this policy simply as the United States drug sanctions. This information is presented prior to the specification of the formal model because the formal model, while general in form, is designed with the intent of testing it on data from the United States drug sanctions. Following the brief explanation of this policy, a formal theoretical model of threats of sanctions is presented. Theoretical and testable hypotheses are derived from this model, which are operationalized and tested in the next section with data from the United States drug sanctions.

### **Threats of Sanctions and Domestic Institutions**

In the previous section I introduced the logical groundwork for incorporating threats into a theoretical model of sanctions. Extending the extensive form game tree back two stages, also helps us in formulating theories about why events end up in the 'Not Sanction' or the 'Not Threat' branch of the game.

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<sup>29</sup> This logic could be infinitely regressed backward. For example the sender might not have threatened because the target capitulated before the threat was necessary. At this point though, there must have been an implicit threat of sanctions that caused the target to give in. Otherwise, it would not be considered in the realm of this or other research on sanctions.

Bueno de Mesquita (2000) refers to the form of punishment associated with the threat of sanctions as “anticipatory punishment.” According to Bueno de Mesquita, “...costs associated with credible threats are generally smaller than those that accrue when a punishment is actually meted out. Creating the anticipation of punishment may avoid significant costs while still being effective” (Bueno de Mesquita, 2000; p.178). Therefore, in terms of economic sanctions, if the exercise of power to coerce a nation to change its behavior can be accomplished with the mere threat of a break in trade, then economic power *has* been used to coerce political behavior and an argument can be made that a sanction has occurred and succeeded. In fact, successful threats represent a more unqualified success than the successful implementation of sanctions because the goal is achieved at a smaller cost.

Therefore, potential senders of sanctions should have frequent occasion to consider bluffing, since successfully bluffing allows the sender to achieve its goals at very little cost. However, since potential targets know that senders have an incentive to bluff, those targets have an incentive to occasionally challenge threats – even when they, themselves, are bluffing and would be forced to back down if challenged.

The problem for states with bluffing is that they may be called on their bluff and being called on a bluff and having to back down does not come without costs. These costs are generally referred to as audience costs and are thought to occur at varying degrees depending on the type of domestic political institutions in a state. “In general, leaders of democratic states are most vulnerable to domestic fallout from failed foreign policies and autocrats are least vulnerable. This is true because democratic leaders are

more likely to be thrown out of office when their policies fail than are autocrats or dictators” (Bueno de Mesquita, 2000; p.181).

Considering these differing rates of audience costs in conjunction with the theoretical perspective developed in chapter 2 of this dissertation regarding the importance of domestic institutions in economic sanctions, I would propose that sanctions are best conceptualized as a type of signaling game. After the sender threatens sanctions, the target can either comply with the sender’s demands and avoid the sanctions (Successful Threat), or it can send some signal about its ability to resist if the sender imposes sanctions. If the target’s signal is compelling enough, the sender will back down without imposing sanctions. If the signal is not believable, the sender will call the target’s bluff by imposing sanctions. As in previous work on the credibility of signals in international relations (Bueno de Mesquita, 2000; p.181), I propose that countries with democratic regimes will face higher costs for backing down once they have made a commitment to a policy. Therefore, they will be less likely to back down after sanctions have been initiated, and will in effect give a more credible signal of their intentions.

Against a democracy, assuming that its threat to resist imposed sanctions is credible, one would expect sanctions to be successful at the threat stage or not at all. Against an autocracy that faces fewer costs for bluffing and backing down, sanctions may be less successful at the threat stage (because autocracies will be more likely to resist by bluffing) but more likely to succeed when sanctions are actually implemented (because bluffing autocracies can back down at less cost to them). Given this logic, democracies should be much less likely to bluff. Therefore, all else equal, sanctions should have a tendency to be more successful against democracies at the threat stage but should be very

unlikely to be successful once implemented. As expected in the literature on military conflict, democracies should choose their fights very carefully and should be highly likely to be successful when they choose to make a stand.

It is important to note that this logic is contrary to the expectations and findings of other studies on the effect of democracy on sanctions success. Other studies have concluded that sanctions that are implemented should be more successful against democracies than autocracies because, among other things, democracies will have a harder time withstanding the economic costs of sanctions. See Bolks and Al-Sowayel (2000), and Nossal (1999) for these arguments. However, both of these studies have methodological issues that make their conclusions less than certain. For example, Nossal only looks at cases of sanctions success and then shows that most of the successes were against liberal democracies. He says nothing about the regime types in cases of failed sanctions, which makes this less of a test and more of a descriptive narrative. Bolks and Al-Sowayel, on the other hand, include both success and failures, but define success based on the duration of the sanction, which seems less than intuitive. In fact, looking at 111 disaggregated sanctions episodes since 1948, taken from Hufbauer, Schott, and Elliot's data, shows that sanctions are just about as likely to be successful against autocratic targets as democratic targets. Sanctions were successful 15 out of 31 times against democracies and 39 out of 80 times against autocracies. Although the objective of this paper is not to test its hypotheses against the Hufbauer, Schott, and Elliot data, there is some evidence found in that data set to support the idea that democracies are less likely to back down once they have made a foreign policy decision. Of the 15 successes against democracies 66% occurred within the first year. Whereas 75% of the success

against non-democracies occurred after the first year. It appears that democracies that bluff are likely to back down very quickly, before audience costs have built substantially, while autocracies might not be as sensitive to audience costs, making them more likely to back down even after the dispute has been going on for some time.

In the general chapters that were presented earlier it was shown that democracies are less likely to sanction other democracies than they are to sanction autocracies. This research asks whether this finding may also be due to selection effects. In the theoretical portion of this paper, it is proposed that democracies may be more likely to comply with the demands of other democracies at the threat stage, thus leaving less actual cases of sanctions implemented against democracies.

An additional hypothesis that follows directly from this signaling argument is that we should see more sanctions actually imposed against autocracies since they will send noisier signals than democracies. Also, since democracies are more likely to be sensitive to economic losses brought about by sanctions, they are more likely to give in at the threat stage. Democracies will not be likely to bluff about their ability to withstand these losses since they face greater audience costs for bluffing and backing down. On the other hand, autocracies are less likely to be hurt by the additional losses imposed on them by economic sanctions. Therefore, in the data set of observed sanctions we should see many more actual impositions of sanctions against autocracies than against democracies. In the chapter of this dissertation on the initiation of sanctions, that expectation was borne out, although in that chapter a more traditional theoretical explanation was offered for the finding.



Since targets of sanctions will have to face additional costs for bluffing and backing down, one would expect sanctions to be successful at the threat stage or not at all. This is particularly true for sanctions imposed against democracies since they pay such a high cost for threatening and then backing down. The above discussion leads to the following three hypotheses about threat behavior.

*H1: Sanctions that are threatened against democracies should be more likely to be successful than those threatened against other regime types.*

*H2: Sanctions that are imposed against democracies should be less likely to be successful than those imposed against other regime types.*

*H3: In general, senders should be more successful at using economic force to coerce targets to cooperate at the threat stage than at the implementation stage.*

### **The Observation of Threats of Sanctions: United States Policy Toward International Narcotics Trafficking**

The United States' sanctions policy against countries that traffic in illegal narcotics, which went into place operationally in 1988, is ideally suited for this analysis of threats of sanctions because the structure of the policy has a legislated and observable threat stage. During the life of the policy, there have been very few instances where sanctions have been imposed and the target country has responded by being more cooperative with the United States' goals regarding the trafficking of illicit narcotics. However, in many cases, after the United States threatens a country with sanctions, the target takes actions that result in no actual sanctions being imposed.



Thus, in this policy, we have the unique opportunity to observe threat behavior in the area of economic sanctions. This is particularly interesting for sanctions because, as discussed in previous sections, there are sound reasons to expect that much of the success of sanctions will take place at the threat level and not the implementation stage. Furthermore, if this is true, empirical studies focusing on implemented sanctions may be entirely missing the biggest portion of sanctions successes.

Putting this one single policy under a microscope also has distinct advantages for the empirical analysis to follow. To analyze threats and uses of sanctions within a unified (theoretical-empirical) model, threats of sanctions must be operationalized. Naturally it is a difficult task to record events that did not occur. Thus, the observation of sanctions that were threatened but were never implemented poses a difficulty for empirical analysts that has yet to be overcome. Since this policy is far reaching in scope, affecting more than 30 countries over its 15 year history (See appendix 1 for a list of countries affected), and explicit in when a threat has been made and when the threat was or was not carried out, it is ideally suited for empirical analysis.

There are also good reasons to expect that any losses in generality associated with this smaller set of observations will be minimal and the gains from including threats will greatly outweigh those losses. First, in the data set used for virtually all empirical studies of sanctions, (Hufbauer, Schott, and Elliot, 1990) over 70 percent of the sanction cases are initiated by the United States, and an even greater percent is comprised of countries that would be similar to the United States on country specific indicators used in most empirical analysis (i.e., they are large economically industrialized democracies). Therefore, it is not unreasonable to assume that an explanation of United States sanctions

behavior is similar to an explanation of all countries that use economic sanctions.

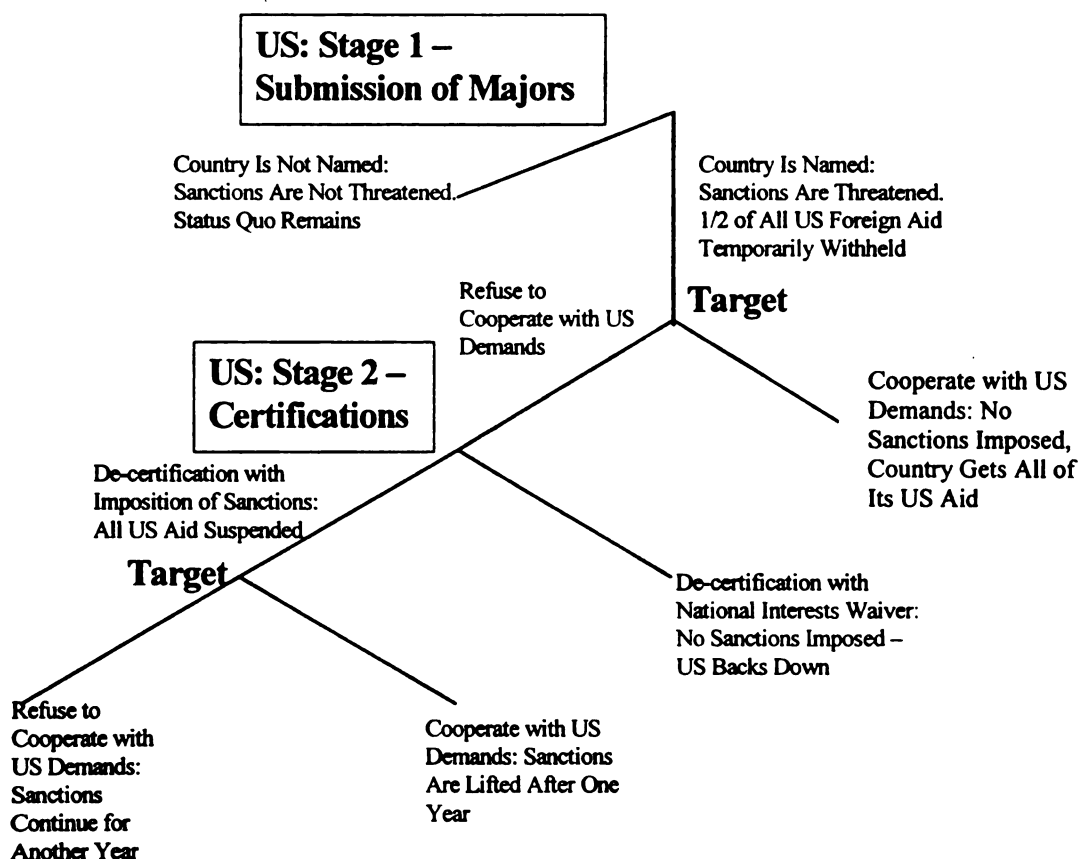
Second, almost every major empirical study of economic sanctions has relied on the Hufbauer et. al. (1990a 1990b) data set. Introducing new data sets of sanctions cases, like the one developed here, or Drezner's (1999) analysis of Russian coercion attempts among the newly independent states, is a valuable contribution to the sanctions literature. Third, as Drezner (1999) notes, large sample studies of economic sanctions such as the Hufbauer et. al. study have the problem of comparing demands and concessions across events.

Drezner states "It is difficult to contrast the significance of El Salvador's 1987 concession to the United States to improve its human rights regime with the import of Israel's 1982 agreement to halt its invasion of Lebanon" (Drezner 2001: 222). By focusing exclusively on the United States drug sanctions policy, the type of demand, and the type of sanctions threatened remain constant across the data (although the perceived level of demand varied by target state). The final advantage of analyzing this one sanctions policy by the United States is clear since it has an explicit threat stage incorporated into it that allows the identification and analysis of threats versus implementations of sanctions.

Part of what makes the United States' efforts to combat drug trafficking so appropriate for this analysis is the legislation passed by Congress, which governs United States actions in this area. In 1986, the United States Congress amended the Foreign Assistance Act (FAA) of 1961 under sections 489-490 in order to better address the issue of international narcotics trafficking. Under this amendment the president is required to submit an annual report to Congress listing all of the major illicit drug producing and transit countries. As the first step in a two-stage process (See Figure 4.4), this list must be submitted to Congress no later than November 1st of each year. Once a country is

placed on this list, also known as the “Majors” list, half of most United States government foreign assistance is temporarily withheld from listed countries until the president determines whether each of the countries on the list should be “certified” as cooperating in the fight against drugs. With half of their aid temporarily suspended, and the rest hanging in the balance, foreign countries can be sure that the United States is serious in its demands for cooperation. Thus, when a country finds itself placed on the list of majors, it faces a clear threat of economic sanctions if it does not take certain actions demanded by the United States.

**Figure 4.4: US Drug Sanctions Process**



Stage two of this process, submission of the president's certification decisions to Congress, must be completed by March 1st of each year. The two-stage process, with four months between the stage one threat and the stage two certifications, makes this legislation ideally suited for the study of the response of nations to the threat of sanctions. During the period between being listed and being certified, countries have an opportunity to respond to the demands of the United States and take positive steps to signify their cooperation with the United States in combating the production and trafficking of narcotics in and through their country. This is what has occurred in several instances, with reports of stepped up border controls, the widespread burning of drug crops, and the implementation of new task forces and policy initiatives during this period.

It is important to understand that being included on the list of named countries does not necessarily mean that a country *supports* the transit of illicit narcotics. Being named only means that there is a large quantity of illicit narcotics produced in or transiting through the country and the United States is concerned that the country is not doing all it can to prevent this. As defined by the United States Department of State in the "Legislative Basis for the INCSR" a major illicit drug producing country is one in which:

- A. 1,000 hectares or more of illicit opium poppy is cultivated or harvested during a year;
- B. 1,000 hectares or more of illicit coca is cultivated or harvested during a year; or
- C. 5,000 hectares or more of illicit cannabis is cultivated or harvested during a year, unless the president determines that such illicit cannabis production does not significantly affect the United States. FAA § 481(e)(2).

And a major illicit drug-transit country is one:

- A. that is a significant direct source of illicit narcotic or psychotropic drugs or other controlled substances significantly affecting the United States; or
- B. through which are transported such drugs or substances. FAA § 481(e)(5).

While the above definitions are fairly explicit, the decision of the United States to include a country on the list of majors is not as straightforward as it might seem. Many countries are major thoroughfares (U.K., Germany, Italy) or end points for illicit narcotics traffic, but have never been named under the United States policy. This might imply that these countries, while perhaps fitting the definition of a major in terms of the quantity of drug traffic through their country, are making every effort to prevent this problem. However, the issue of how the United States determines which countries will and will not be named under this policy is a point of contention for some critics of the policy because it is the point where 'politics as usual' enter into the policy. Consider this quote from a recent story published by the United Press International. "The problem, according to its [the drug policy] critics, is that the process allows the president to waive all of these penalties for America's friends even if they are willfully neglecting their responsibilities to apprehend drug smugglers" (UPI 2001). As will be argued in the theoretical explanation and shown in the empirical analysis, there appear to be factors other than the central issue of narcotics traffic that are affecting the United States decision to threaten, impose and find ultimate success or failure in the use of these sanctions.

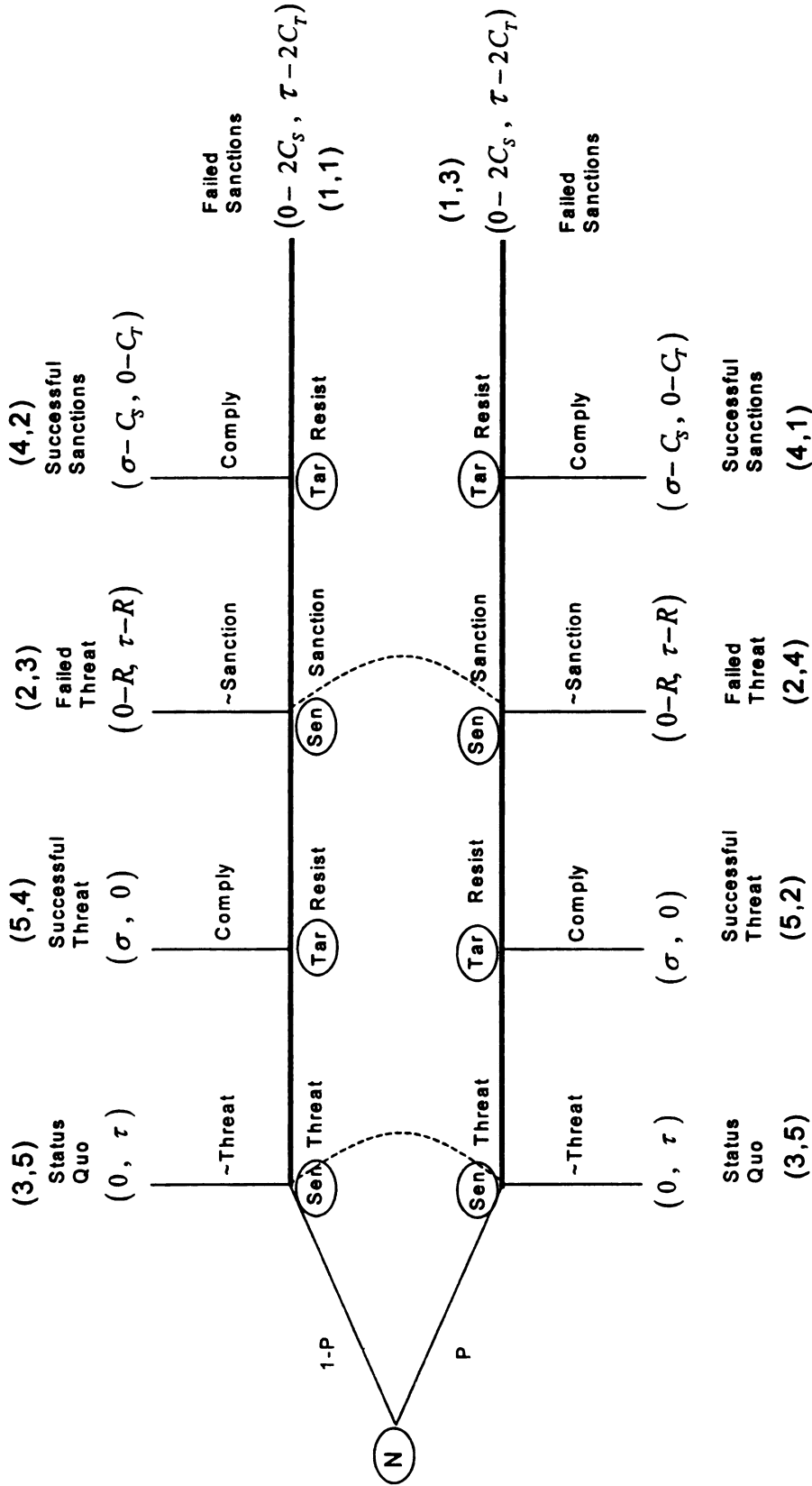
In the next section a generalized formal model of threats of sanctions is presented. As the general model is presented, it should be clear how each step in the United States drug sanctions policy fits into the general threat model.

## **Developing A Formal Theoretical Model of Threats of Sanctions**

In the chapters that follow, a formal theoretical model is developed and transformed into a statistical model for estimation following the work of Signorino (1999A, 1999B, 2001) and Leblang (2001) on strategic probit models. Since the actions of senders and targets of sanctions are considered to be strategic in nature (i.e., the sender's expected utility for different outcomes is influenced by the actions of the target and vice versa) the model is estimated in a strategic probit framework provided in STRAT, a program for analyzing statistical strategic models, provided by Signorino (2001b).

In this section, a formal strategic model is presented and solved that shows the conditions under which sender states will be expected to threaten and/or use economic sanctions. This model was developed with the idea of testing it using a data set of all cases of United States sanctions against countries that are found not to be cooperating in the war against illegal drug trafficking. Consistent with past theoretical work on economic sanctions (Smith 1997, and Morgan and Miers, 1999), the main elements of the game are the value of the policy under dispute, the cost of sanctions to the sender and the target, and the value of relationship between the sender and target.

Games of complete information are presented for a "resolute" and "irresolute" target along with an incomplete information game where the sender does not know the target's level of resolve. Figure 4-5 shows the incomplete information version of the game.



**Figure 4.5: Sanctions Game With Incomplete Information**

For each actor, I designate the outcome at which it concedes the policy issue to its opponent and no sanctions are imposed as providing zero utility

Looking at the top and bottom branches of the game separately the complete information version can be seen. The top branch of the game in figure 4.5 has the cardinal payoffs for an irresolute target, which has a lesser value for a sanctions stalemate than the resolute target seen in the bottom branch of the game. Based on differences in audience costs for democratic and autocratic regimes discussed in the previous section, resolute targets are those with democratic regimes and irresolute targets are those without democratic regimes.

Substantively, the most important elements of the game are the cost of sanctions, the value of the policy at dispute, and the type of political institutions in the target country. Smith (1997) shows that domestic factors as well as economic factors are important in determining the overall value of using sanctions. Smith discusses the implications of domestic costs associated with sanctions for senders, but does not take up the issue of domestic costs in the target of sanctions. In this analysis, domestic factors in both the sender and target are considered by incorporating domestic factors as well as economic factors into the cost of sanctions.

In the incomplete information version of the game the sender does not know the target's resolve for standing up to the sender's sanctions. The target's resolve is determined by how much the target values the policy which the sender is trying to change relative to the size of the cost that the sender is able to impose on the target for not complying. The cost of sanctions is determined not only by the value of the economic commerce that is interrupted, but also the effect of those losses on political leaders' ability to retain office.



The essential elements represented in this analysis are:  $\tau, \sigma, R, C_T, C_S$ .

$\tau$  represents the value of the policy at dispute for the target. This represents the importance the target places on the issue over which sanctions are threatened or imposed. For example, if sanctions are threatened or imposed over nuclear weapons proliferation, then this continued policy has some value for the target.  $\sigma$  represents the value to the sender of altering the policy under dispute. For example if the sender threatens sanctions and gains compliance from the target, the sender achieves value  $\sigma$  without paying the costs of imposing sanctions.  $R$  represents the value of the relationship between the sender and the target. Countries with similar ideological preferences in international relations have a higher amount of value for the existing relationship and face greater reputation costs in terms of  $R$  from the failed threat of sanctions. Thus, there are costs involved in sanctions at the threat stage, not related to the economic costs of the imposition of sanctions.  $C_T$  and  $C_S$  represent the cost of sanctions to the sender and the target of the imposition of sanctions. Sanctions are not a costless policy option to the target or the sender of sanctions. The very nature of sanctions, which restrict normal trade patterns between targets and senders, is to force firms to choose sub optimal patterns of trade. Van Bergeijk makes this case in his discussion of the costs of sanctions. He states, "The most obvious and visible direct costs entail additional financial and real outlays that are immediately related to the imposition of sanctions. Examples are rising transport costs due to the fact that trade may only be possible with more distant markets (for long sub-optimal routes) and risk premiums that are to be paid to middle men and sanctions busters" (van Bergeijk, 1985: 450). While these costs are deliberately imposed on the target country, they are also, by necessity, imposed on firms operating within the sender

nation as well. The other relevant factor in the game, which is normalized to 0, is the value of the status quo with no sanctions imposed. This is the value that the sender gets if it chooses not to impose sanctions and accept the current situation, or the value that the target gets if it complies immediately with the sender's threat to sanction.

These essential elements to the game can be grouped into three categories of importance to sanctions mentioned above: the cost of sanctions, the value of the policy and the value of the relationship. The cost of sanctions is specific to the target and sender nations and represented in the game by  $C_T$  and  $C_S$ . The value of the policy is also specific to the sender and the target and is represented by  $\sigma$  for the sender's value and  $\tau$  for the target's value. The value of the relationship between the sender and target is dyadic in nature and is meant to capture the country's similarity of preferences in international relations. The value of the policy to the sender and target and the costs that sanctions can impose are meant to capture the potential asymmetric nature of the relationship, while  $R$  is meant to capture similarity in preferences.

There are five potential outcomes that can be reached in the game with the following payoffs to the target:

$$\tau, 0, \tau - R, 0 - C_T, \tau - 2C_T$$

These values represent the following outcomes:

$\tau$  = The sender makes no threat and the target continues its policy.

0 = the target or sender concedes the issue with no sanctions imposed. Normalized to zero.

$\tau - R$  = The target continues its policy but only after the sender threatens sanctions and then backs down. Thus the target gets the value of the policy minus any reputation costs for being indicted as a violator of international norms.

$0 - C_T$  = The sender imposes sanctions and after suffering one period of sanctions the target gives in and changes its policy. Thus the target gets the normalized value for not achieving its goal minus the costs of enduring one period of sanctions.

$\tau - 2C_T$  = The sender imposes sanctions and the target stands firm. Thus, the target gets the value of maintaining its policy minus the cost of sanctions. In annual data on sanctions (like is used in the following empirical analysis), even though sanctions have one start date and one end date, the sanctions policy could end or continue during any year. Therefore, you can think of sanctions in two-year moving blocks. The two-year block is arrived at in the following way. When the target chooses not to comply with the demands of the sender, sanctions will automatically be imposed for the following year. Thus even in the successful sanctions case, once sanctions are imposed they will last for one year. If the target changes its policy some time in the next year, sanctions will be lifted at the end of that year. Therefore, a country that is not swayed to change its policy during the first year of sanctions will not have the sanctions lifted in the following year either – Until the decision date comes up again. This makes the multiplier two for sanctions that are only considered (or observed) annually. If the target does not change its mind and sanctions are imposed again the following year that new sanction will also be imposed for at

least two years if the target does not change its mind during the first year of the new sanctions.

### **Restrictions Over Preferences**

The first restriction is that a rational target must prefer getting to maintain its policy with no added cost better than any other outcome:

$$\tau > (0, \tau - R, 0 - C_T, \tau - 2C_T).$$

Next, complying with a threat of sanctions must be preferred to bluffing and then being forced to comply after suffering some period of sanctions. This should be true even if the sanctions are of a very short duration:

$$0 > 0 - C_T \text{ and } \tau > 0 > 0 - C_T.$$

It must also be true for any rational target that maintaining its current policy after being threatened by sanctions is preferred to maintaining that policy and actually being sanctioned:

$$\tau - R > \tau - 2C_T \text{ and } \tau > \tau - R > \tau - 2C_T.$$

One last restriction is that the target must value maintaining its policy after being threatened by sanctions more than it does losing its policy after a short period of sanctions. This has to be true because in both instances the target suffers the ill effects of being singled out as violating some international norm, but in the latter case the target also suffers any economic loss of the sanctions themselves. This is compounded by the fact that in the latter case the target has to eventually change its policy, while in the former, the target is allowed to maintain its policy:

$$\tau - R > 0 - C_T.$$

Given these logical restrictions over preference orderings for the target, it is clear that the only room for variation is in whether the value of the policy minus costs associated with being a target ( $\tau - 2C_T$ ) or potential target ( $\tau - R$ ) of sanctions is greater than or less than the value of losing the policy (0), or losing the policy after a struggle ( $0 - C_T$ ). When the value of the policy is low and the costs imposed by sanctions are high, targets are more likely to prefer losing the policy without a fight to maintaining the policy and facing the costs imposed by sanctions. Thus, targets who value the attainment of their policy more than conceding the issue, regardless of the cost that the sender can inflict through sanctions, are characterized as resolute targets. Irresolute targets, on the other hand, would rather concede the issue, even after brief sanctions than face the costs of continuing sanctions. Even the reputation costs alone are greater than the value of maintaining the policy for irresolute targets. Thus, compliance at the threat of sanctions is preferred to any outcome implicating the target as a violator of the policy in question.

Target Preference Orderings Over Outcomes (5 is most preferred and 1 is least preferred)					
Target Type	5	4	3	2	1
Target Irresolute (I-P)	$\tau$	0	$\tau - R$	$0 - C_T$	$\tau - 2C_T$
Target Resolute (P)	$\tau$	$\tau - R$	$\tau - 2C_T$	0	$0 - C_T$

Since the sender is always the United States in this game (Remember, the game is designed for testing on US Drug Sanction data), I will assume that the target has perfect information regarding the sender's payoffs for the possible outcomes (following the convention of Smith 1997). Further, I will assume that there is only one type of sender. The United States' preference orderings are characterized as follows. The best outcome for the sender will always occur when the target gives in at the mere threat of sanctions

$\sigma$ . The second most preferred outcome for the sender comes from using sanctions and forcing compliance from the target  $\sigma - C_s$ . In this outcome the sender achieves the value of the policy, but at the cost of imposing sanctions for one period. The next most preferred outcome for the sender is the status quo outcome, which is normalized to 0. The sender must prefer this to threatening sanctions and then being forced to back down and receiving the payoff  $0 - R$ . The least preferred outcome for the sender is a prolonged stalemate where the target does not change its policy and sanctions remain in place indefinitely  $0 - C_s$ . Thus, the sender's preference orderings are as follows:

$$\sigma > \sigma - C_s > 0 > 0 - R > 0 - 2C_s.$$

These preference orderings reflect the assumption that the value of the policy is large relative to the cost of sanctions for the sender. Thus, the value of the policy minus the costs of imposing sanctions is assumed to be greater than the value of just looking the other way and doing nothing. This assumption is particularly relevant to the sanctions policy undertaken in the following chapter because the sender is always the United States – a powerful trading state that likes to play an active role in world politics. While this is a somewhat limiting case (just looking at the United States as the sender), the typical sender of sanctions tends to fit this classification (economically powerful, internationally active.) In other cases, where the sanctions are more severe and the economies of the sender and target are more evenly matched, this restriction on preference orderings may need to be loosened. This would allow for instances where achieving the desired policy change from the target is not worth the cost incurred from sanctions.

## **Solving the game with complete information**

Solving for the equilibrium when the target is resolute or irresolute and the sender has complete information over the target's type shows that under these conditions sanctions will never occur. When the target is resolute, and the sender knows it, the sender will never make a threat. This holds because, for the resolute target, the strategy (Resist, Resist) weakly dominates all other strategies. The best reply to this strategy by the sender is any strategy that involves not making a threat, either (no threat, sanction), or no threat, no sanction). This outcome can also be reached by using backward induction. At the last decision node, if a resolute target were sanctioned it would prefer to resist the sender's demands and hold out. Moving backward, the sender would prefer to back down from its demand rather than sanction with no hope of gaining compliance. Knowing that the sender would back down, the target will resist the sender's initial threat of sanctions. Finally, realizing that if it threatens sanctions, it will be forced to back down later, the sender will choose not to even make the threat of sanctions.

When facing an irresolute target, sanctions also never occur in equilibrium, but in this game the sender gets its way at the mere threat of sanctions. The full set of equilibria for the game are: (T,S; C,R), (T,S; C,C), (T,~S; C,R), (T,~S; C,C). In this game, cooperate on the first move is a weakly dominant strategy for the target whether it cooperates on the second move or not. Thus, given that the irresolute target will always cooperate on its first move, the sender will always threaten on its first move. Since the target will always cooperate at its first move and the sender will always sanction (threat, cooperate) is the only outcome on the equilibrium path. This can also be easily shown through backward induction as was demonstrated in the case of the resolute target.

On the face of it, the complete and perfect information results do not appear to be particularly useful. We know, for example, that sanctions do occur in the real world, but in these games sanctions never occur. As will be demonstrated, though, in a situation that more closely resembles the real world with incomplete information, any outcome is possible with some probability. The lesson to be taken from these games of complete and perfect information is that the vast majority of disputes in which sanctions might be used probably are resolved at the threat level. Based on these results, there is also no reason to assume a priori that this should bias the success rate of the sample of sanctions cases observed in any particular direction. Based on the equilibria of this game, some cases of sanctions are not observed because the target backs down at the mere threat of sanctions, while others are not observed because the sender backs down after threatening sanctions. The likelihood of an observed sanctions case being a success should be biased upward because when the sender does not think it will be successful it backs down at the threat stage. On the other hand the success rate of observed sanctions should be biased downward because targets that think they will be forced to comply with sanctions once they are imposed will back down after being threatened. The actual direction of bias, if any, is an empirical question that will be investigated in this study.

### **Solving the Game With Incomplete Information**

Figure 4-5 gives the extensive form of the sanctions game. The two actors are the sender (Sen) and the Target (Tar). The sender has the first move in the game and must decide to threaten sanctions or not to threaten sanctions. If the sender does not threaten, the status quo persists. If the sender does threaten sanctions, the target must decide to resist the threat or comply with the demands of the sender. Resisting the threat leaves the



sender with the decision to back down from its threat or to carry out the threat by imposing sanctions. Backing down prevents sanctions from being imposed, but at the cost of losing the value of the disputed policy plus additional “loss of reputation” costs.

The preference orderings for each side are the same as described in the complete information version of the game. The incomplete information in this game arises because rather than make an assumption about the target’s resolve for sanctions (i.e., its utility for sanctions), the model makes it uncertain. The first move in this model is assigned to nature and determines T’s type. This, in turn, determines the preference orderings for the target. The lower branch of the tree is the case of a resolute target, which occurs with probability P. As explained earlier, the resolute target has the following preference orderings:  $\tau > \tau - R > \tau - 2C_T > 0 > 0 - C_T$ . The upper branch is the case of the irresolute target. This occurs with probability (1-P) and produces the following preference orderings for the target:  $\tau > \tau - R > 0 > 0 - C_T > \tau - 2C_T$ . The target knows the outcome of the chance move (and thus, its type), but the sender does not. The information sets in the game represent the sender’s lack of knowledge regarding the target’s resolve, which it updates as the sanctions game progresses. Initially, the sender’s belief that the target is resolute is the same as the probability of the lower branch in the initial move by nature; P denotes this probability. This is true because “Beliefs must be consistent with the structure of the game, including chance moves” (Morrow, 1994; p.201). It may seem odd to think of nature determining whether the target of the sender’s potential sanctions is resolute or not, when in reality the target is either resolute or it is not. A better way to think of this is that the chance probabilities represent the uncertainty

in the sender's mind. The sender has to consider both the possibility that it is facing a resolute and an irresolute target.

In the complete and perfect information versions of this game we saw that when the target is irresolute, it will always comply with the sender's threat and the sender will always make the threat. The resolute target, on the other hand, has a dominant strategy to resist any threats of sanctions. This leads the sender not to make a threat in equilibrium. When the sender has incomplete information regarding the target's type, an irresolute target may have an incentive to resist the sender's initial demand in the hope that the sender will back down in the mistaken belief that the target is resolute. This, in turn, leads the sender to occasionally consider sanctioning a target that resists the sender's threat in order to test whether the target is truly resolute or just an irresolute target that is bluffing. Since the sender can be expected to misjudge the target's true type with some probability, we can expect to see sanctions occur with some probability. Another way to think of this is that, as a potential target of sanctions, even if you are irresolute and know it you may want to test the sender from time to time by bluffing.

The game is solved using the Bayesian equilibrium technique. This constitutes a strategy and a set of beliefs for each player at every node. Equilibrium is attained if each player's strategy is a best reply to the other player's strategies in each sub game.

A resolute target will always employ the pure strategy (resist, resist) since it weakly dominates all other strategies regardless of the strategy played by the sender. However, the sender and the irresolute target will adopt mixed strategies in this game. The sender will adopt a mixed strategy designed to make an irresolute target indifferent between resisting and complying at its first decision node. The irresolute target will also

mix its strategy to make the sender indifferent between threatening and not threatening sanctions. Therefore, if the game reaches the Sender's second decision node, it is uncertain whether the potential target of sanctions is a resolute target that will not give in to sanctions or if it is facing an irresolute target that is bluffing and will comply with the sender's demands once sanctions are imposed. The sender will impose sanctions if its expected utility for sanctioning exceeds its expected utility for backing down. In order to determine its expected utility for sanctions, the sender must take account of its updated belief that the target is resolute. The sender's updated beliefs are indicated by  $\bar{P}$  and  $(1 - \bar{P})$ . The bar above the P indicates that it is an updated belief. The critical belief,  $\bar{P}_{crit}$ , occurs when the sender is indifferent between backing down and sanctioning. This critical belief is found by equating the sender's expected utility from backing down to its expected utility for sanctioning. Regardless of which type of target it is facing, the sender achieves 0-R for backing down. The sender will only choose to sanction if  $\bar{P} < \bar{P}_{crit}$ .

$$\begin{aligned}
&\bar{P}_{crit} (0 - 2 C_s) + (1 - \bar{P}_{crit})(\sigma - C_s) = 0 - R \\
&-2 C_s \bar{P}_{crit} + \sigma - C_s - \bar{P}_{crit} \sigma = -R \\
&-C_s \bar{P}_{crit} - \bar{P}_{crit} \sigma = -R + C_s - \sigma \\
&\bar{P}_{crit} (-C_s - \sigma) = C_s - R - \sigma \\
&\bar{P}_{crit} = \frac{C_s - R - \sigma}{-C_s - \sigma}
\end{aligned}$$

If  $\bar{P} > \bar{P}_{crit}$ , the sender prefers backing down to sanctioning. This result matches expectations that the higher the sender's belief that the target is resolute, the less likely it will want to use economic sanctions.

Proceeding through the game backward brings us to the target's decision to resist or comply with the sender's threat to sanction. All targets will prefer the sender backing down from its initial threat to complying with the threat. Resolute targets will also prefer a sanctions deadlock to complying with the sender's threat so they will always resist at this stage. As noted earlier, the target has complete information so the target knows its own resolve for sanctions. Knowing this, a resolute target will always employ the pure strategy (resist, resist) since it weakly dominates all other strategies regardless of the strategy played by the sender. The irresolute target does not have a dominant strategy so it must judge the response of the sender. If the sender will back down the irresolute target wishes to resist. If the sender will carry out its threat and impose sanctions, it wishes to comply with the threat and end the dispute with no further costs of sanctions imposed. Now we must find the probability,  $r$ , of the sender's carrying out its threat that will make an irresolute target indifferent between resisting the threat and complying with the threat. The irresolute target gets the normalized value of 0 for complying with the sender's threat. If it resists and the sender does not sanction, the target gets  $\tau - R$ . If the sender does sanction the target, knowing that it is bluffing and will comply with sanctions once instituted, will get  $0 - C_i$ . Thus, I solve for  $r$  as follows:

$$0 = r(\tau - R) + (1 - r)(0 - C_i)$$

$$0 = r(\tau - R) - C_i + rC_i$$

$$r(\tau - R) + rC_i = C_i$$

$$r(\tau - R + C_i) = C_i$$

$$r = \frac{C_i}{\tau - R + C_i}$$

If the probability that the sender will carry out its threat of sanctions is greater than the value of  $r$  above, then the irresolute target will comply with the sender's threat.

If it is less, then the irresolute target will resist. If the sender adopts a mixed strategy that imposes sanctions at exactly the indifference probability above, and backs down with a probability of 1-minus the indifference probability, irresolute targets will be made indifferent between resisting and complying. The sender must have beliefs that equal  $\bar{P}_{crit}$  -- the belief calculated above that makes it indifferent between sanctioning and backing down – to play this mixed strategy. Therefore, I must find the probability, q, of an irresolute target resisting sanctions that will make the sender indifferent.

$$\bar{P}_{crit} = \frac{p(T \text{ resolute}) p(r | T \text{ resolute})}{p(T \text{ resolute}) p(r | T \text{ resolute}) + p(T \text{ irresolute}) p(r | T \text{ irresolute})}$$

$$\bar{P}_{crit} = \frac{P(1)}{P(1) + (1 - P)q}$$

$$q = \frac{P(1 - \bar{P}_{crit})}{(1 - P)\bar{P}_{crit}}$$

As a final step, I can substitute into the last line of the calculation above in terms of the outcome the sender achieves given  $\bar{P}_{crit}$  and  $(1 - \bar{P}_{crit})$ .

$$q = \frac{P(1 - \bar{P}_{crit})}{(1 - P)\bar{P}_{crit}} = \frac{P(0 - 2C_s)}{(1 - P)(\sigma - C_s)}$$

So far, best reply correspondences have been found for all but the sender's first move in the game. The next question is when will the sender threaten sanctions and when will it be satisfied to live with the status quo? If the sender's initial belief P is greater than  $\bar{P}_{crit}$ , then the sender expects that the target will resist any threat of sanctions.

According to earlier assumptions, the sender prefers the status quo outcome to a sanctions deadlock, but prefers sanctions in which it gets its way after a short period to the status quo. Therefore, when  $P > \bar{P}_{crit}$  the sender will prefer to accept the status quo rather than threaten sanctions believing that it would either be forced to back down in the future or live with a sanctions deadlock. On the other hand, if  $P < \bar{P}_{crit}$  the sender will not necessarily be deterred from threatening sanctions and testing the resolve of the target. The sender will compare the value of threatening, which is calculated from the target's mixed strategy, with the value of the status quo. This results in the sender being indifferent between sanctioning and backing down when the target resists the initial threat. Since the sender is made indifferent between sanctioning and backing down in its second move I can use its utility for backing down, which is simply  $0-R$ . The sender will prefer accepting the status quo to making a threat whenever its utility for the status quo exceeds its utility for threatening. This is calculated as follows:

$$0 > P(0 - R) + (1 - P)(q(0 - R) + (1 - q)\sigma)$$

$$PR > (1 - P) \left( \left( \frac{P(0 - 2C_s)}{(1 - P)(\sigma - C_s)} \right) (0 - R) + \left( 1 - \frac{P(0 - 2C_s)}{(1 - P)(\sigma - C_s)} \right) \sigma \right)$$

$$PR > (1 - P) \left( \left( \frac{2C_s RP}{(1 - P)(\sigma - C_s)} \right) + \left( \frac{\sigma - 2\sigma PC_s}{(1 - P)(\sigma - C_s)} \right) \right)$$

$$PR > (1-P) \left( \frac{2C_s RP + \sigma - 2\sigma PC_s}{(1-P)(\sigma - C_s)} \right)$$

$$PR > \left( \frac{2C_s RP + \sigma - 2\sigma PC_s}{(\sigma - C_s)} \right)$$

$$R > \frac{2C_s R - 2\sigma C_s}{(\sigma - C_s)} + \frac{\sigma}{P(\sigma - C_s)}$$

Solving for P gives the following conditions for the sender's initial beliefs:

$$\frac{\sigma}{P(\sigma - C_s)} < R - \left( \frac{2C_s R - 2\sigma C_s}{(\sigma - C_s)} \right)$$

$$\frac{\sigma}{P} < R - 2C_s R - 2\sigma C_s$$

$$\sigma < (R - 2C_s R - 2\sigma C_s)P$$

$$P > \frac{\sigma}{R - 2C_s R - 2\sigma C_s}$$

The above analysis leads to the following equilibria:

When

$$P > \frac{\sigma}{R - 2C_s R - 2\sigma C_s},$$

$(\sim T, \sim S; r, r: p)$  with

$$p > \bar{P}_{crit} = \frac{C_s - R - \sigma}{-C_s - \sigma}$$

is a perfect Bayesian equilibrium.

When

$$P < \frac{\sigma}{R - 2C_s R - 2\sigma C_s}$$

$$\left\{ T, \left[ \frac{C_t}{\tau - R + C_t} S, 1 - \frac{C_t}{\tau - R + C_t} \sim S \right]; r, \left[ \frac{\bar{P}_{crit} - P}{(1 - P)\bar{P}_{crit}} C, \frac{P(1 - \bar{P}_{crit})}{(1 - P)\bar{P}_{crit}} r \right]; \bar{P}_{crit} \right\}$$

with

$$\bar{P}_{crit} = \frac{C_s - R - \sigma}{-C_s - \sigma}$$

is another perfect Bayesian equilibrium.

### **Implications of the formal model**

Now that the formal model has been developed, predictions can be formally derived about several issues that are of interest to this study. The primary focus of this section of the dissertation is on what occurs prior to the actual implementation of sanctions. As was discussed earlier, there are three ways that a potential sanctions case could end prior to the observed implementation of sanctions. First the sender may be deterred from threatening sanctions, allowing the target to continue its policy unabated by sanctions. Hypotheses regarding deterrence of the sender are covered in H1a-c. Second, the target may back down at the threat of sanctions allowing the sender to achieve its policy goal without implementing the threatened sanctions. Hypotheses regarding successful threats by the sender are covered in H2a-c. Third, the sender may threaten sanctions only to back down later against a defiant target. In this case the target gets to continue its policy without being sanctioned although it suffers reputation costs



associated with been threatened. Hypotheses regarding failed threats by the sender are covered in H3a-c.

These three ways of ending sanctions at the threat stage lead to three questions for the model. First, when do we expect sender nations not to threaten sanctions (the target deters the sender from making a threat)? Second, when do we expect targets to comply at the threat stage (a successful threat of sanctions)? Third, when do we expect senders to back down after they have made a threat (an unsuccessful threat of sanctions)? Within the theoretical framework for this study, I also generate hypotheses about how domestic political institutions affect these decisions. Once these fundamental questions have been answered, we can proceed to investigate how the threat stage of sanctions would be expected to affect the likelihood of success in cases of sanctions that are observed. If the target is going to comply, is it more likely to comply to a threat of sanctions or with the actual implementation of sanctions? In other words, given that a threat has been made, what factors affect the sender's decision to impose actual sanctions?

Up to this point the specification of the formal model and the discussion of the implications of that model have been purely theoretical and at a very general level. However, as explained at the beginning of this chapter, the end goal of this model is that the theoretical implications be tested empirically with historical data from the United States drug sanctions policy. Therefore, each of the hypotheses generated in this section will be presented in a theoretical form, as T-H1, 2, 3..., with a corresponding operational hypothesis noted as O-H1, 2, 3... The operational hypotheses are related to the United States Drug Sanctions policy described earlier.

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The equilibria calculated in the above analysis can be used to compute the probabilities of each of the events in the three questions above. We can start by assuming that  $P$  (the probability that the target is resolute) is distributed uniformly on  $[0,1]$ . Now from the equilibria I know that the sender will always threaten sanctions when

$$P < \frac{\sigma}{R - 2C_s R - 2\sigma C_s},$$

and will be deterred from threatening sanctions whenever

$$P > \frac{\sigma}{R - 2C_s R - 2\sigma C_s}.$$

Therefore, the probability of the sender threatening sanctions is the probability of the former condition holding. This can be represented as:

$$\Pr(threat) = \Pr(P < P^*) = \frac{\int_0^{P^*} 1 \, dx}{\int_0^1 1 \, dx} = \frac{P^*}{1} = P^*,$$

where

$$P^* = \frac{\sigma}{R - 2C_s R - 2\sigma C_s}$$

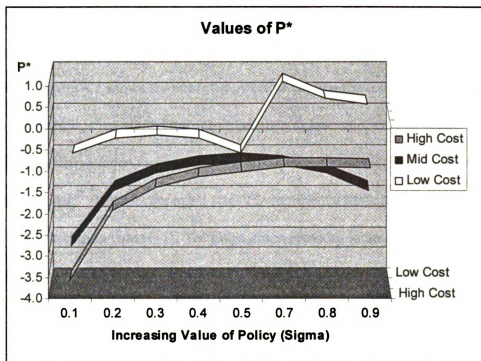
The numerator in the above integral equation is the probability that  $P < P^*$ . That is, when  $P < P^*$ , the sender's belief that the target is resolute is small enough that it would threaten sanctions with the belief that the target will back down. The denominator is simply the probability of all possible values of the target's resolve,  $P$ . Both the numerator and the denominator in this equation are calculated using definite integrals<sup>30</sup> with  $P$  assumed to be distributed uniformly on  $[0,1]$ . The probability of the sender threatening

sanctions, then, is just the fraction of  $P$ 's that are below  $P^*$ . Thus, I have an answer to the first question. I expect to see senders threaten sanctions when their initial beliefs regarding the resolve of the target are such that  $P < P^*$ , and senders will be deterred from making a threat when  $P > P^*$ .

At this point we can look further into the conditions necessary for the sender to threaten sanctions. The first thing we notice is the rather unexpected finding that the sender's decision to threaten sanctions is determined primarily by its own characteristics, not factors specific to the target. One potential reason for seeing this is that the game to this point has no history and the sender has not had an opportunity to observe any signals from the target about how it will respond to a threat of sanctions. In figure 4.6, theoretical values of the policy at dispute are varied from minimum to maximum values (scaled from 0 to 1) to see how the sender's value for the policy at dispute affects its decision to threaten sanctions. In this figure we see that the greater the sender's value for the policy the more likely it is to threaten sanctions.

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<sup>30</sup> The definite integral gives the exact area under a continuous curve  $y=f(x)$  between values of  $x$  on the interval  $[a,b]$ .



**Figure 4.6: Effect of Changing Value of Policy on Decision to Threaten Sanctions**

This graph depicts how the value of the policy is expected to affect whether the sender decides to sanction (while holding the expected economic and political cost of the sanctions constant at high, medium, or low). Recall that as the value of  $P^*$  gets larger it becomes more difficult for the target to deter the sender from threatening sanctions. As the value of the policy gets larger the value of  $P^*$  tends to get larger too. This is even more pronounced when the cost of the sanctions in political and economic terms are not expected to be very high. This seems logical since the value of the policy at dispute would have a heavier weight relative to the costs of sanctions in these cases.

*T-H1a: The greater the sender's value for the policy at dispute ( $\sigma$ ), the more likely it is to threaten sanctions.*

Operationally, this leads to the expectation that the United States will be more likely to threaten sanctions against countries that have a larger amount of illegal drug trafficking. On a more general level, when issues are of great importance to the sender nation, they are more likely to take action.

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**O-H1a:** *The United States will be more likely to threaten sanctions against countries that have a large amount of drug traffic through their country.*

Next, figure 4.7 shows the expected effect of varying the costs of sanctions to the sender while holding the value of the policy constant at low, mid, or high costs. Based on the assumption that sanctions will have a negative cost to the sender both in economic and political terms,<sup>31</sup> the costs are again scaled to represent a range from a minimum value (0) to a maximum value (-1). The helps graph provides incite into how expectations regarding costs will affect the decision to threaten sanctions. When the value of the policy at dispute is low, as the expected costs of sanctions to the sender increase from 0 to -1, the value of  $P^*$  is strictly decreasing. Recall that as the value of  $P^*$  gets smaller the sender is less likely to threaten sanctions. Therefore, as the expected costs increase the sender will be less likely to threaten sanctions when the value of the policy is of little importance. When the value of the policy is mid level, the expected costs of sanctions tend to have no deterrent effect on the sender. When the value of the policy is at its highest, varying the costs of sanctions produce a  $P^*$  that is decreasing but is always higher than the corresponding values when the value of the policy is at its lowest<sup>32</sup>.

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<sup>31</sup> As in the previous section this assumes that all sanctions are a restriction in the normal flow of trade, and hence, result in inefficiencies that will bring about negative costs to both the target and sender (Bergeijk, 1995) .

<sup>32</sup> The function for high values is discontinuous at exactly .5, so the graph shows a regression estimate fit to the true values.

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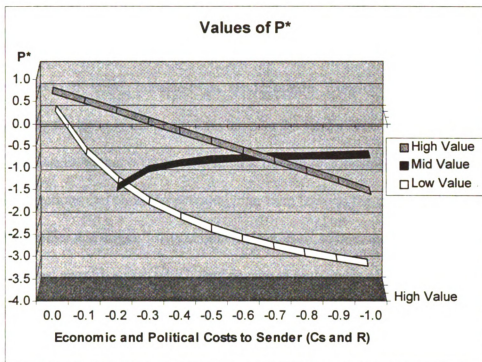
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**Figure 4.7: Effect of Changing The Expected Cost of Sanctions on the Decision to Threaten Sanctions**

Graph of how the expected economic and political cost of the sanctions are expected to affect whether the sender decides to sanction (while holding the value of the policy ( $\sigma$ ) constant at high, medium, or low). As the value of  $P^*$  gets larger it becomes more difficult for the target to deter the sender from threatening sanctions. As the expected economic and political cost of sanctions get larger the value of  $P^*$  is generally decreasing.

**T-H1b: Assuming that sanctions will have a negative economic and political cost to the sender, as the expected economic cost of sanctions to the sender increases ( $C_s$ ), the likelihood of the sender making a threat decreases.**

Sanctions tend to damage the relationship between the sender and target. The value of the relationship between potential senders and target can be thought of in both political and economic terms. This point is made by Smith (1997) and stressed throughout the theoretical portion of this dissertation. The total amount of trade between the two countries is certainly an important aspect of the economic relationship. For a sender

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nation that values the trading relationship it has with the potential target of sanctions, sanctions as a form of punishment to coerce the target to alter its policy will not only do economic harm to the target, but also to the sender nation. Consider that sanctions restrict not only the trade of the target state but also the sender state's trade with the target. Thus, assuming that countries value their trading relationships, and would rather not impose sanctions that could do potential long-term harm to the trading relationship between the sender and target,<sup>33</sup> they should be less likely to threaten and impose sanctions against countries with which they engage in high levels of trade. Therefore, the testable hypothesis corresponding to T-H1b is:

*O-H1b: The United States will be less likely to threaten sanctions against countries that it has a lot of trade with.*

The final element for consideration is how much value the sender and target place on maintaining the existing relationship. Figure 4.8 shows that the greater the value of the relationship (R), the less likely the sender is to jeopardize that relationship by threatening sanctions.

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<sup>33</sup> See Lektzian and Souva (2000) for an analysis of the time it takes for trade to return to pre-sanctions levels once sanctions have ended.

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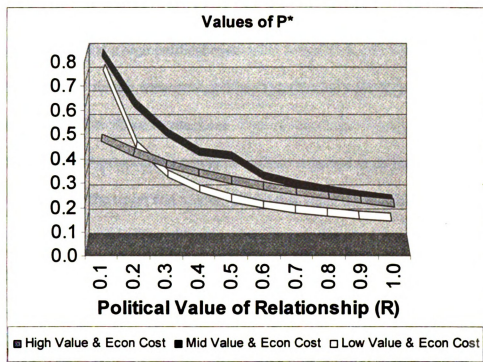
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**Figure 4.8: Effect of Changing The Value of the Relationship on the Decision to Threaten Sanctions**

The way (R) is entered into the formal model, when the sender has a high value for the relationship the target does also. This is not the case for the cost term ( $C_s$ ). The reason behind the difference is that in economic terms the sender typically has a large trading economy of which trade with the target makes up only a small element. On the other hand targets generally conduct a much larger portion of their trade with the sender of sanctions. Of course this does not have to be the case, but it serves to illustrate why economic cost to sender and target need to be separate terms.

Regarding the political value of the relationship I propose that when the two countries have similar ideological preferences they both place a high political value on the relationship. This is true regardless of the size of the economies of the two countries.

Even the most powerful of states need friends and sanctions, which may potentially harm your allies, will come at a high political cost.

*T-H1c: The more the sender values the political relationship with the potential target, the less likely it is to threaten sanctions.*

From a political perspective, sanctions are also expected to do harm to the relationship between the target and sender. States that value the relationship they have with another state should be less willing to use economic sanctions against it as a means to alter its policy. In general, states with the same political regime type can be thought of as having similar political ideals and value their relationship to a higher degree.

*O-H1c: The United States will be less likely to threaten sanctions against states with similar regime types.*

The second question addressed with this model is when would the target of sanctions be expected to back down at the mere threat of sanctions. Previously, Morgan and Meirs also addressed this question. They concluded that resolute targets that know they are resolute will never give in at the threat stage of sanctions. However, irresolute targets will sometimes bluff at this stage and sometimes they will comply. When the probability that the sender will carry out its threat of sanctions,  $r$ , is greater than the right side of the equation below

$$r = \frac{C_t}{\tau - R + C_t},$$

the irresolute target will comply with the sender's threat of sanctions. Thus, as the value of the policy to the target,  $\tau$ , increases, the right side of the equation decreases, making the target less likely to comply with the sender's threat. This leads to the following

hypothesis: As the target's value for the policy becomes larger, it is less likely to give in when threatened. A second interesting implication from this equation is that the cost that the sender expects to be able to impose on the target  $C_t$  is not expected to affect the probability that the target will comply with threat of sanctions. Finally the greater the value of the relationship between the two countries, the less likely is the target to comply with the sender's threats.

Of course, the probability that the target will back down will vary with the level of its resolve,  $P$ . Also, the target is not expected to consider backing down at all if it is resolute.  $(1-P)$  is the probability that the target is irresolute, and from the equilibria conditions calculated above,  $\left[ \frac{\bar{P}_{crit} - P}{(1-P)\bar{P}_{crit}} \right]$  is the criterion necessary for the irresolute target to back down. Therefore, I can calculate the probability that the irresolute target will back down from the threat of sanctions as

$$(1-P) \left[ \frac{\bar{P}_{crit} - P}{(1-P)\bar{P}_{crit}} \right] = \frac{\bar{P}_{crit} - P}{\bar{P}_{crit}}.$$

Now, the probability that the target will back down given that the sender has threatened sanctions can be calculated as

$$\Pr(Comply|Threat) = \frac{\int_0^{P^*} \frac{\bar{P}_{crit} - x}{\bar{P}_{crit}} dx}{\int_0^{P^*} 1 dx}$$

As I calculated earlier, the denominator of the above equation is the probability that  $P < P^*$  in the distribution and is equal to the value of  $P^*$ .

The numerator is slightly more complex, and can be solved as:

$$A = \int_0^{P^*} f(x) dx$$

$$f(x) = \frac{\bar{P}_{crit} - x}{\bar{P}_{crit}}$$

$$A = \int_0^{P^*} \frac{\bar{P}_{crit} - x}{\bar{P}_{crit}} dx$$

Now taking the definite integral on the top leaves,

$$A = P^* - \frac{P^{*2}}{\bar{P}_{crit}} \Bigg|_1^{P^*}$$

Placing this over the denominator of  $P^*$  gives

$$A = \frac{P^* - \frac{P^{*2}}{\bar{P}_{crit}}}{P^*} = 1 - \frac{P^*}{2\bar{P}_{crit}}$$

Substituting the values of the outcomes for the Sender shows us that the target will comply with the sender's threat of sanctions with probability equal to:

$$1 + \frac{\sigma(C_s + \sigma)}{2(C_s - R - \sigma)(-2C_s R + R - 2\sigma C_s)}.$$

Using Mathematica's limit function to manipulate individual parameters in this equation reveals that holding the cost of sanctions to the sender ( $C_s$ ) and the importance of the relationship ( $R$ ) constant and decreasing the value of the policy at dispute to the sender ( $\sigma$ ) to 0, causes the probability of the target complying with the sender's threat to increase toward 1.

*T-H2a: As the value of the policy at dispute to the sender ( $\sigma$ ) decreases, the probability of the target complying with the sender's threat increases.*



This hypothesis gives the theoretical expectation about the relationship between the importance of the issue to the sender and the chance that the sender will be successful at the threat stage without the imposition of sanctions. When the sender threatens sanctions over an issue that is not that important, it is more likely to gain compliance at the threat stage. In other words, as others have argued, it is more difficult to gain compliance with sanctions when the issue is of great importance. Here we see that this is also the hypothesized relationship when considering threats of sanctions.

*O-H2a: Countries with a large amount of drug traffic will be less likely to comply with the United States' threat of sanctions.*

Also, as the economic cost of sanctions to the sender increases toward infinity (while holding the other two factors constant), the probability of the target's compliance goes toward 1.

*T-H2b: As the cost of sanctions to the sender increases, the probability of the target's compliance given a threat increases.*

According to this hypothesis, when the sender expects sanctions to be costly but threatens anyway, the target is more likely to comply with the mere threat.

*O-H2b: Countries that trade more with the United States will be more likely to comply with the United States' threat of sanctions.*

When the final parameter in the equation,  $R$ , representing the value of the relationship, goes toward infinity, the probability of the target complying with the sender's threat increases toward 1.

*T-H2c: When the value of the relationship increases, the probability of the target complying with the sender's threat increases.*

According to this hypothesis, when the sender places a high value on the relationship it has with the potential target, but threatens anyway, the target is more likely to comply at the threat stage without the sender having to impose actual sanctions.

*O-H2c: Countries with a similar regime type to that of the United States will be more likely to comply with the United States' threat of sanctions.*

The third theoretical question addressed is, when we would expect to see senders back down or carry out their threat after making the initial threat of sanctions. The probability that sanctions are actually observed when  $P < P^*$  is  $\Pr(\text{Target Resists})^{34}$

$$\Pr(\text{Sender Sanctions}) = \left( \frac{P}{\bar{P}_{\text{crit}}} \right) \left( \frac{C_t}{\tau - R + C_t} \right). \text{ Since } P \text{ only occurs in the numerator of this}$$

equation, I can see that the probability of sanctions being observed increases as the sender's belief that the target is resolute grows. This occurs because the irresolute target is more likely to bluff as the credibility of its resolve grows.

The probability of sanctions occurring once a threat has been made can be calculated as the probability of sanctions, shown directly above, given that a threat occurred,  $P^*$ :

$$\Pr(\text{Sanctions}|\text{Threat}) = \frac{\int_0^{P^*} \frac{C_t x}{\bar{P}_{\text{crit}} (\tau - R + C_t)} dx}{\int_0^{P^*} 1 dx}$$

$$\Pr(\text{Sanctions}|\text{Threat}) = \frac{\frac{C_t (P^*)^2}{2\bar{P}_{\text{crit}} (C_t - R + \tau)}}{P^*}$$

$$\Pr(\text{Sanctions}|\text{Threat}) = \frac{\frac{C_t \sigma}{R - 2C_s R - 2\sigma C_s}}{2 \left( \frac{C_s - R - \sigma}{-C_s - \sigma} \right) (C_t - R + \tau)}$$

Replacing  $P^*$  and  $\bar{P}_{crit}$  with their values in terms of the outcomes gives

$$= - \frac{C_t \sigma (C_s + \sigma)}{2(R + \sigma - C_s)(-R + 2(R + \sigma)C_s)(R - t - C_t)}$$

This equation is also not easy to work with, but using Mathematica to manipulate the formula as before reveals how the probability of sanctions given a threat is predicted to change when certain parameters in the equation are taken to their theoretical limit.

First, as the economic cost to the sender goes toward infinity, the probability of sanctions given a threat goes toward 0. Also, as the cost to the target goes to 0, the probability of sanctions given a threat goes toward 0.

*T-H3a: As the cost of sanctions to the sender and target increases, the probability of sanctions given a threat decreases.*

This leads to the following operational hypothesis:

*O-H3a: When there is more trade between the sender and target, the probability of sanctions given a threat decreases.*

Next, as the sender's value for the policy at stake goes to 0, the probability of sanctions given a threat goes toward 0.

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<sup>34</sup>  $\Pr(\text{Target Resists}) = 1 - \Pr(\text{Target Complies}) = 1 - \frac{\bar{P}_{crit} - P}{\bar{P}_{crit}} = \frac{P}{\bar{P}_{crit}}$ . This includes both the probability of resolute and irresolute Targets resisting.

*T-H3b: Generally, as the sender's value for the policy at dispute decreases, the probability of sanctions given a threat decreases.*

This leads to the following operational hypothesis:

*O-H3b: When there is less drug traffic in the target, the probability of sanctions given a threat decreases.*

Finally, as the value of the relationship goes toward infinity, the probability of sanctions given a threat goes toward 0<sup>35</sup>.

*T-H3c: As the value of the relationship increases, the probability of sanctions given a threat decreases.*

Resulting in this final operational hypothesis for testing:

*O-H3c: When states have similar regime types, the probability of sanctions given a threat decreases.*

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<sup>35</sup> All of these outcomes were generated using the Limit[ ] function in Mathematica. Mathematica evaluates the equation as a particular variable moves toward the value specified.

## **Summary of Testable Hypotheses Developed in this Chapter**

### **Theoretical Hypotheses Not Generated from the Formal Model**

- H1: Sanctions that are threatened against democracies should be more likely to be successful than those threatened against other regime types.
- H2: Sanctions that are actually imposed against democracies should be less likely to be successful than those imposed against other regime types.
- H3: In general, senders should be more successful at using economic force to coerce targets to cooperate at the threat stage than at the implementation stage.

### **Stage One of Sanctions Model – Making a Threat:**

O-H1a: The United States will be more likely to threaten sanctions against countries that have a large amount of drug traffic through their country.

O-H1b: The United States will be less likely to threaten sanctions against countries that it has a lot of trade with.

O-H1c: The United States will be less likely to threaten sanctions against states with similar regime types.

### **Stage Two of Sanctions Model – Compliance with Threat:**

O-H2a: Countries with a large amount of drug traffic will be less likely to comply with the United States' threat of sanctions.

O-H2b: Countries that trade more with the United States will be more likely to comply with United States' threat of sanctions.

O-H2c: Countries with a similar regime type to that of the United States will be more likely to comply with the United States' threat of sanctions.

### **Stage Three of Sanctions Model – Implementation of Threat:**

O-H3a: When there is more trade between the sender and target, the probability of sanctions given a threat decreases.

O-H3b: When there is less drug traffic in the target, the probability of sanctions given a threat decreases.

O-H3c: When states have similar regime types, the probability of sanctions given a threat decreases.

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## **Chapter 5**

### **Threats of Sanctions: Converting the Game Theoretic Model to an Empirical Model**

In the previous section a theoretical argument was developed which describes the factors that should be influential in the study of threats and uses of economic sanctions. Several theoretical hypotheses were developed which predict how states will behave based on how these factors are expected to affect state behavior within a simple theory regarding the use of sanctions as anticipatory punishment.

One thing that should be evident from the logic of the previous section is the importance of strategic interaction between targets and senders of sanctions. What is also clear is that previous methods of modeling the sanctions process have not included strategic behavior. Previous dyadic models of sanctions make the implicit assumption that dyads are making decisions, which fails to account for sender - target strategic action.

Signorino (1999) notes that states do not act in a vacuum and shows through Monte Carlo estimates that “if observed actions are the result of (perhaps complex) strategic interaction, then it is unlikely that a simple logit functional form will capture the structure of that strategic interdependence” (Signorino 1999; p.280). Because of this, Signorino shows, “logit analysis of strategic interaction can lead to parameter estimates with wrong substantive interpretations: Fitted values and predictions of outcome probabilities can be grossly incorrect, as can calculations of the effects of variables on the changes in outcome probabilities” (Signorino 1999; p.280). Signorino (1999) demonstrates that misspecification bias is also introduced in statistical analyses by modeling strategic processes with inherently non-strategic methods of analysis.

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On more theoretical than statistical grounds, Signorino also makes the assumption that the ultimate goal of the social scientist in performing statistical analysis is theory testing. To that end, if at all possible we would like to have a direct link between the theoretical model and the statistical model we use to test it. For those reasons, in this section, I attempt to test a statistical model that comes as close as possible to the theoretical model that was presented in the previous chapter.

The game theoretic model developed in the previous chapter incorporates the strategic nature of international relations by modeling the structure of the relations between the target and sender of sanctions. That model will now be transformed into a statistical model by specifying the error component around each decision made by the actors in the model. As Signorino notes, a theoretical model should identify the actor or actors, their sequence of choices, their options, the outcomes, and their incentives for choosing particular actions or outcomes. (Signorino 2000; p.4) All of these elements are present in the theoretical model and have an analogous component in the statistical model that is developed. In essence, the statistical model used is the same as the theoretical model only with the introduction of a random component that includes a probability distribution over the outcomes, which guarantees probabilistic outcomes. This is crucial, because if the probabilities associated with any outcomes in the model are zero, maximum likelihood estimates are impossible to attain. The general likelihood function that is maximized for hypothesis testing is:

$$\begin{aligned}
 L(\beta|y) &\propto f(y_1, y_2, \dots, y_N | x, \beta) \\
 &= f(y_1 | x_1, \beta) f(y_2 | x_2, \beta) \dots f(y_N | x_N, \beta)
 \end{aligned}$$

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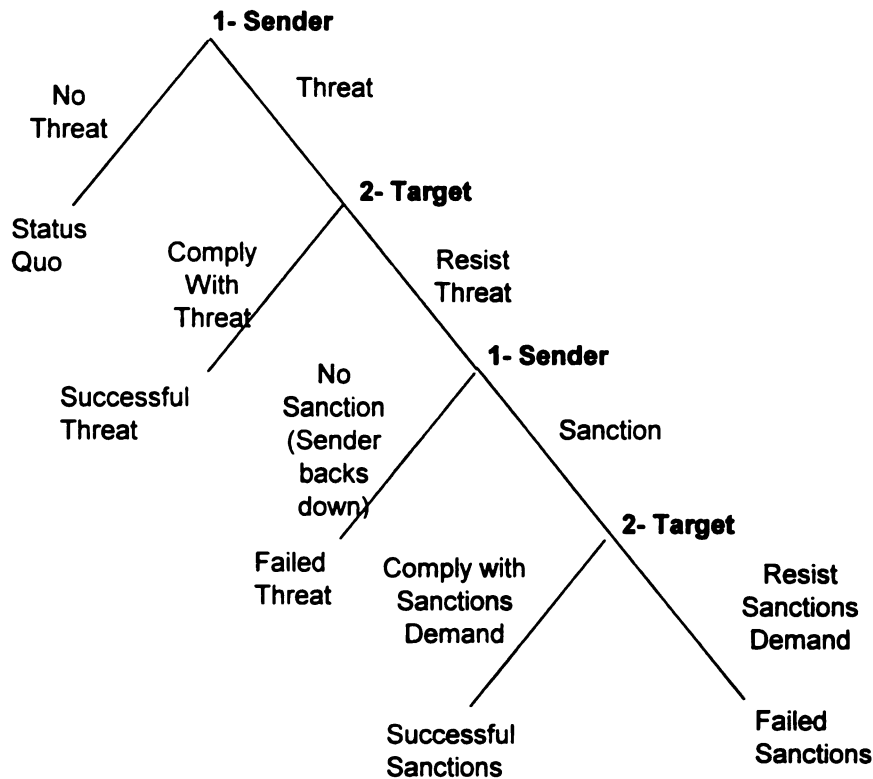
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In equation 2 it is clear that the likelihood equation will be reduced to zero if the likelihood of any event is zero. Therefore  $L(\beta|y) = 0 \forall \beta$  and maximum likelihood estimation will be impossible<sup>36</sup>.

Figure 5.1 shows a general theoretical model of threats and implementations of economic sanctions.



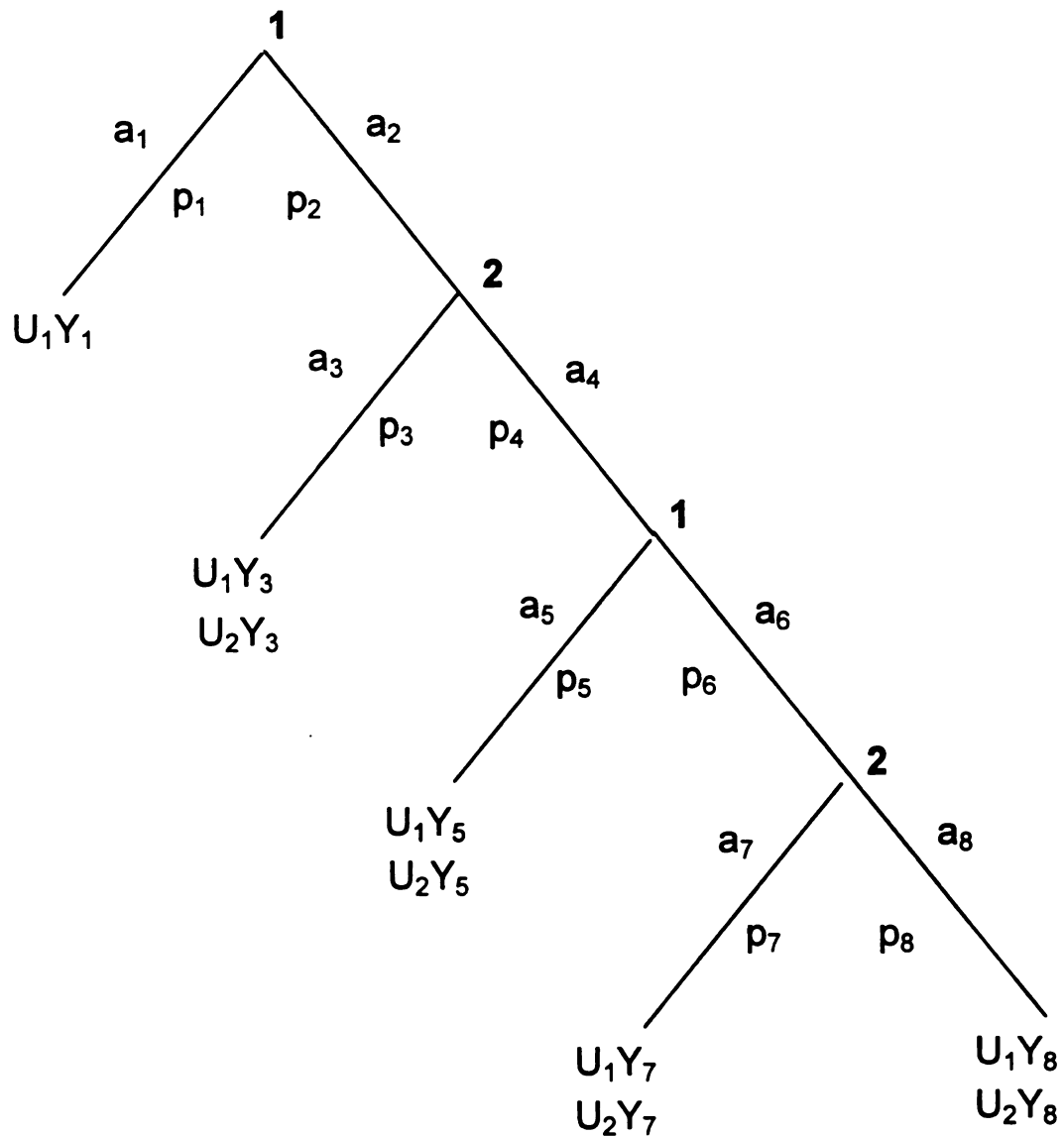
**Figure 5.1: Threat and implementation model of sanctions**

In this model, as in the game theoretic model of the previous chapter, the actors are the potential senders and targets of sanctions, their choices and outcomes are as described in the different branches of the game tree in figure 1 and their decision rule for choosing

<sup>36</sup> Although a common trick is simply to raise each probability by a miniscule amount.

between outcomes or options is that they will make the choice that maximizes their expected utility at each decision node.

Figure 5.2 shows a more general model of the structure of interaction between the sender and target of sanctions, labeled 1 and 2 respectively.



**Figure 5.2: General Structure of Sanctions Game**

In this figure, the  $a$ 's represent actions, the  $U$ 's represent true utilities for each outcome and the  $Y$ 's distinguish the outcomes at each terminal node. Assuming that each player acts to maximize its utility at each decision node, I can deduce which outcomes will result in equilibrium<sup>37</sup>. The following equations show the conditions under which each outcome of the game will be achieved:

$$Y = \begin{cases} Y_1 & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_5 > U_1 Y_8 \text{ and } U_2 Y_3 > U_2 Y_5 \text{ and } U_1 Y_1 > U_1 Y_3, \text{ or} \\ & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_5 > U_1 Y_7 \text{ and } U_2 Y_3 > U_2 Y_5 \text{ and } U_1 Y_1 > U_1 Y_3, \text{ or} \\ & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_8 > U_1 Y_5 \text{ and } U_2 Y_3 > U_2 Y_8 \text{ and } U_1 Y_1 > U_1 Y_3, \text{ or} \\ & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_7 > U_1 Y_5 \text{ and } U_2 Y_3 > U_2 Y_7 \text{ and } U_1 Y_1 > U_1 Y_3, \text{ or} \\ & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_5 > U_1 Y_7 \text{ and } U_2 Y_5 > U_2 Y_3 \text{ and } U_1 Y_1 > U_1 Y_5, \text{ or} \\ & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_5 > U_1 Y_8 \text{ and } U_2 Y_5 > U_2 Y_3 \text{ and } U_1 Y_1 > U_1 Y_5, \text{ or} \\ & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_8 > U_1 Y_5 \text{ and } U_2 Y_8 > U_2 Y_3 \text{ and } U_1 Y_1 > U_1 Y_8, \text{ or} \\ & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_7 > U_1 Y_5 \text{ and } U_2 Y_7 > U_2 Y_3 \text{ and } U_1 Y_1 > U_1 Y_7 \\ Y_3 & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_5 > U_1 Y_8 \text{ and } U_2 Y_3 > U_2 Y_5 \text{ and } U_1 Y_3 > U_1 Y_1, \text{ or} \\ & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_5 > U_1 Y_7 \text{ and } U_2 Y_3 > U_2 Y_5 \text{ and } U_1 Y_3 > U_1 Y_1, \text{ or} \\ & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_8 > U_1 Y_5 \text{ and } U_2 Y_3 > U_2 Y_8 \text{ and } U_1 Y_3 > U_1 Y_1, \text{ or} \\ & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_7 > U_1 Y_5 \text{ and } U_2 Y_3 > U_2 Y_7 \text{ and } U_1 Y_3 > U_1 Y_1 \\ Y_5 & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_5 > U_1 Y_8 \text{ and } U_2 Y_5 > U_2 Y_3 \text{ and } U_1 Y_5 > U_1 Y_1, \text{ or} \\ & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_5 > U_1 Y_7 \text{ and } U_2 Y_5 > U_2 Y_3 \text{ and } U_1 Y_5 > U_1 Y_1 \\ Y_7 & \text{if } U_2 Y_7 > U_2 Y_8 \text{ and } U_1 Y_7 > U_1 Y_5 \text{ and } U_2 Y_7 > U_2 Y_3 \text{ and } U_1 Y_7 > U_1 Y_1 \\ Y_8 & \text{if } U_2 Y_8 > U_2 Y_7 \text{ and } U_1 Y_8 > U_1 Y_5 \text{ and } U_2 Y_8 > U_2 Y_3 \text{ and } U_1 Y_8 > U_1 Y_1 \end{cases}$$

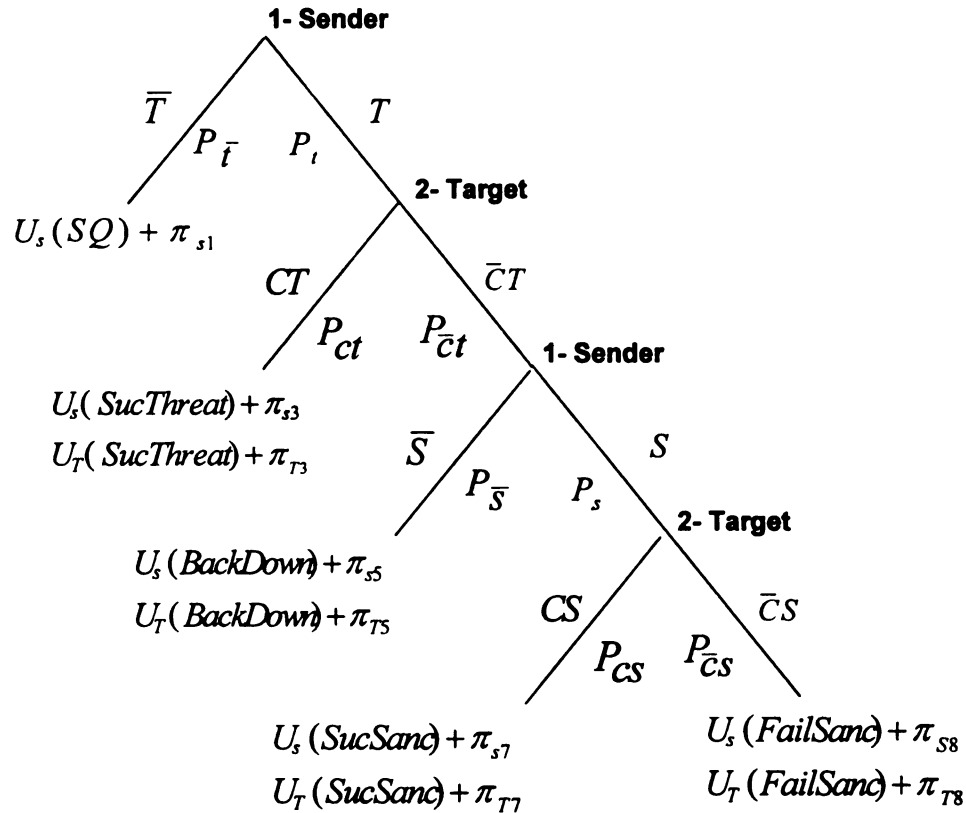
I can now formally relate the dependent variable – the actor's choice at each decision node – to the explanatory variables, which enter in as factors affecting the actor's utility for each of the outcomes in the model. If the model is specified correctly, at this point, I could precisely identify which outcomes would be reached in the interaction based on each actor choosing the action that maximizes its utility. These

<sup>37</sup> Assuming the model is estimated freely with no restrictions on preferences.

outcomes could then be compared with the outcomes achieved in the data to see how well the model fits the data.

At this point, I could solve the game depicted in figure 5.2 using backward induction, and the predicted outcome would be the subgame perfect equilibrium (SPE) outcome. Using a contingency table I could then compare the predicted outcomes of the model,  $y_{\text{hat}}$ , to the actual outcome  $y$ . However, without some random component entering the data, I cannot conduct the broader range of hypotheses tests that are desirable from a substantive perspective. For example, in this paper statistical tests of the theoretical hypotheses are developed that should be tested in a multivariate model that includes control variables for factors that are assumed not to be affecting the outcome in the theoretical model. However, it would be a practical impossibility to build an interpretable contingency table with all of the control variables in it. Also, models based on probabilistic outcomes that generate standard errors are preferred in order to make inferences to broader populations.

Thus, to transform the theoretical model into a statistical model for testing, in figure 5.3, a component of uncertainty is added to the theoretical model that assures some positive probability of each outcome occurring. I specify this uncertainty as private information belonging to states regarding their value for sanctions at each step in the sequence of moves. Other players and the analyst only know (or assume) the distribution of the outcome payoffs. The distribution of errors for this analysis are assumed to be independently and identically distributed  $N(0, \sigma^2)$ , therefore the choice probability equations take the probit form.



**Figure 5.3: Sanctions Threat Model with Uncertainty Concerning Utilities.**

The Utilities shown in the figure represent each player's true utilities, broken into their observable  $U_i(\bullet)$  and unobservable  $\pi_{ij}$  components.

The solution concept used here is game theoretic and based on random utility assumptions. The link used is probit. The concept is analogous to that developed by McKelvey and Palfrey (1995, 1996, 1998), known as logit quantal response equilibrium (LQRE), except that the LQRE assumes the errors are distributed type I extreme-value, thus using a logit link. The basic idea for both forms of this solution concept is that “players employ best responses to each other, conditioned on the knowledge that each will make mistakes according to some known (or assumed) distribution of errors” (Signorino, 1999; p.282).

As noted above, it seems unlikely that the targets and senders of sanctions are able to perfectly observe each other's utilities for the different outcomes of their interaction, and, further, it is also unlikely that analysts are able to perfectly specify the utilities of the actors in the game. Thus, Signorino (2000) assumes that the true utility for an outcome can be represented as having two components: one that is observable and one that is not.

In figure 5.3 the utility for each outcome is broken up into these two components (observable and unobservable). For example, look at the utilities for the sender and target for a successful threat of sanctions.

$$U_s^*(SucThreat) = U_s(SucThreat) + \pi_{s3}$$

$$U_t^*(SucThreat) = U_t(SucThreat) + \pi_{t3}$$

Where  $U_s^*(SucThreat)$ , is the sender's true utility for making a successful sanctions threat, but what the target and the analyst observe is  $U_s(SucThreat)$ .  $\pi_{s3}$  and  $\pi_{t3}$  represent the components of private information. The sender has private information regarding the value of  $\pi_{s3}$  while to the target and the analyst this is viewed as a random variable over which they only know the distribution. The inclusion of this stochastic component captures the idea that "more often than not, the quantities we are interested in will not be predictable in advance but, rather, will exhibit an inherent variation that should be taken into account by the model" (Ross, 1993; p. 1).

Assuming that the payoff perturbations are independently and identically distributed  $N(0, \sigma^2)$ , the probabilities for each of the equilibrium outcomes in the game depicted in figure 3 will follow directly from the action probabilities.



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Let  $P_{sq}$ ,  $P_{SucThreat}$ ,  $P_{BackDown}$ ,  $P_{SucSanc}$ , and  $P_{FailSanc}$  be the probabilities for the different outcomes available in the theoretical model presented in figure 5.3. Because of the assumption made regarding independent and identically distributed errors, the probability of any given outcome is the product of the action probabilities along that path (Signorino and Tarar, 2001). Therefore,

$$P_{sq} = P_i$$

$$P_{SucThreat} = P_t P_{ct}$$

$$P_{BackDown} = P_t P_{\bar{c}i} P_{\bar{s}}$$

$$P_{SucSanc} = P_t P_{\bar{c}i} P_s P_{cs}$$

$$P_{FailSanc} = P_t P_{\bar{c}i} P_s P_{\bar{c}s}$$

and, following the more general model depicted in figure 5.2,

$$PY_1 = P_1$$

$$PY_3 = P_2 P_3$$

$$PY_5 = P_2 P_4 P_5$$

$$PY_7 = P_2 P_4 P_6 P_7$$

$$PY_8 = P_2 P_4 P_6 P_8$$

Using figure 5.3, I can derive the choice probabilities over the actions available to the actors in the model by starting at the last decision by player 2 and working back up to the first decision. In the game depicted in the figure there are four decision nodes, which will be progressively numbered from 1-4 as the players move from the first to the last decision. Thus, at information set  $i_4$ , player 2 (the target) must choose between  $a_8$ , and  $a_7$ . The probabilities for actions  $a_8$ , and  $a_7$  at this information set are:

$$\begin{aligned}
p_8 &= \Pr[U_2^*(Y_8) > U_2^*(Y_7)] \\
&= \Pr[U_2(Y_8) + \pi_{28} > U_2(Y_7) + \pi_{27}] \\
&= \Phi \left[ \frac{U_2(Y_8) - U_2(Y_7)}{\sqrt{\sigma_{\pi_{28}}^2 + \sigma_{\pi_{27}}^2}} \right]
\end{aligned}$$

and  $p_7 = 1 - p_8$ <sup>38</sup>.

Now, because player 1 (sender) is uncertain about player 2's (target) payoffs for  $Y_7$  and  $Y_8$ , at the last information set ( $i_4$ ) he must assess the probability that player 2 will choose  $a_7$  versus  $a_8$  and use that probability in his expected utility calculation for his utility of choosing action  $a_6$ . The probability that player 1 will choose action  $a_6$  is calculated as

$$\begin{aligned}
p_6 &= \Pr[U_1^*(a_6) > U_1^*(Y_5)] \\
&= \Pr[p_7 U_1^*(Y_7) + p_8 U_1^*(Y_8) > U_1^*(Y_5)] \\
&= \Pr[p_7 (U_1(Y_7) + \pi_{17}) + p_8 (U_1(Y_8) + \pi_{18}) > U_1(Y_5) + \pi_{15}] \\
&= \Phi \left[ \frac{p_7 U_1(Y_7) + p_8 U_1(Y_8) - U_1(Y_5)}{\sqrt{p_7^2 \sigma_{\pi_{17}}^2 + p_8^2 \sigma_{\pi_{18}}^2 + \sigma_{\pi_{15}}^2}} \right]
\end{aligned}$$

and  $p_5 = 1 - p_6$ . Next, I move to player 2's choice at information set 2. Here, player 2 will base her choice on a comparison of her expected utility for taking actions  $a_3$  and  $a_4$ . In making this choice, player 2 must consider two things. First, she must consider her expected utility for taking  $a_4$  based on her expectation of whether player 1 will take action  $a_5$  or  $a_6$ . But when making this decision, she must also consider that player 1 will base his

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<sup>38</sup>  $\Phi(\bullet)$  is the standard Normal cumulative distribution function used with the Probit link function

$$\Phi = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\alpha + \beta X} \exp\left(-\frac{1}{2} Z^2\right) dZ.$$

decision regarding  $a_5$  or  $a_6$  on his assessment of the probability that player 2 will take actions  $a_7$  or  $a_8$  at information set 4.

$$\begin{aligned}
 p_4 &= \Pr[U_2^*(a_4) > U_2^*(Y_3)] \\
 &= \Pr[p_5 U_2^*(Y_5) + p_6 U_2^*(a_6) > U_2^*(Y_3)] \\
 &= \Pr[p_5(U_2(Y_5) + \pi_{25}) + p_6[p_7(U_2(Y_7) + \pi_{27}) + p_8(U_2(Y_8) + \pi_{28})] > U_2(Y_3) + \pi_{23}] \\
 &= \Phi \left[ \frac{p_5 U_2(Y_5) + p_6[p_7 U_2(Y_7) + p_8 U_2(Y_8)] - U_2(Y_3)}{\sqrt{p_5^2 \sigma_{\pi_{25}}^2 + p_6^2(p_7^2 \sigma_{\pi_{27}}^2 + p_8^2 \sigma_{\pi_{28}}^2) + \sigma_{\pi_{23}}^2}} \right]
 \end{aligned}$$

As in the previous cases  $p_3 = 1 - p_4$ .

Finally, I come to player 1's choice at the first information set. Here, player 1 will base his choice on a comparison of his expected utility for taking actions  $a_1$  and  $a_2$ . Similarly to player 2's decision at node 2, player 1 must consider all subsequent actions when consider which action to make at this decision node. In making this choice, player 1 must consider his expected utility for taking  $a_2$  based on his expectation of whether player 2 will take action  $a_3$  or  $a_4$ , whether player 1 will choose  $a_5$  or  $a_6$  and the probability that player 2 will take actions  $a_7$  or  $a_8$  at information set 4.

$$\begin{aligned}
 p_2 &= \Pr[U_1^*(a_2) > U_1^*(Y_1)] \\
 &= \Pr[p_3 U_1^*(Y_3) + p_4 U_1^*(a_4) + p_6 U_1^*(a_6) > U_1^*(Y_1)] \\
 &= \Pr[p_3(U_1(Y_3) + \pi_{13}) + p_4\{p_5(U_1(Y_5) + \pi_{15}) + p_6[p_7(U_1(Y_7) + \pi_{27}) + p_8(U_1(Y_8) + \pi_{28})]\} > U_1(Y_1) + \pi_{11}] \\
 &= \Phi \left[ \frac{p_3 U_1(Y_3) + p_4\{p_5 U_1(Y_5) + p_6[p_7 U_1(Y_7) + p_8 U_1(Y_8)]\} - U_1(Y_1) + \pi_{11}}{\sqrt{p_3^2 \sigma_{\pi_{13}}^2 + p_4^2[p_5^2 \sigma_{\pi_{15}}^2 + p_6^2(p_7^2 \sigma_{\pi_{27}}^2 + p_8^2 \sigma_{\pi_{28}}^2)] + \sigma_{\pi_{11}}^2}} \right]
 \end{aligned}$$

Assuming that the actors have maximized their true utilities at each of the decision nodes, the above probabilities represent the strategic probit choice probabilities

for the sanctions threat model presented in figure 5.3 and throughout this section. Notice in particular that these equilibrium choice probabilities reflect the logic of both the uncertainty and strategic nature of the decisions made by targets and senders of sanctions.

The numerators in the above equations represent the difference in the observed expected utility of each player for the options associated with each of the outcomes. Consider the depth of complexity required for the sender of sanctions making the initial decision to threaten sanctions or accept the status quo. This is represented in the last probability calculated above,  $p_2$ . The sender has to compare his expected utility for threatening with his utility for not threatening. However, the sender has to consider all of the potential outcomes that could be reached if he decides to threaten and the probability of achieving each of those outcomes. This is not a simple matter, as can be seen in the above probability function. This set of equations highlights the fact that early on in a dispute decision makers make decisions in a world of greater complexity and uncertainty than they do at later stages of the dispute. As an actor moves down the tree we see that decision makers are faced with less and less uncertainty in their choice probabilities because they have fewer potential responses to their actions that need to be weighed. Although in this model decision makers do not explicitly learn from the actions of other players, they do reduce their uncertainty as they proceed through the dispute, which is a type of learning.

This statistical attribute of the model captures what Nye (2003) refers to as “The Narrowing Funnel of Choices.” (Nye 2003; 79; see figures 3-4 and 4-4). Nye presents this concept as a general narrowing of available choices, so that looking back on the great conflicts (as he does) we see that initially there were infinite paths that could have been

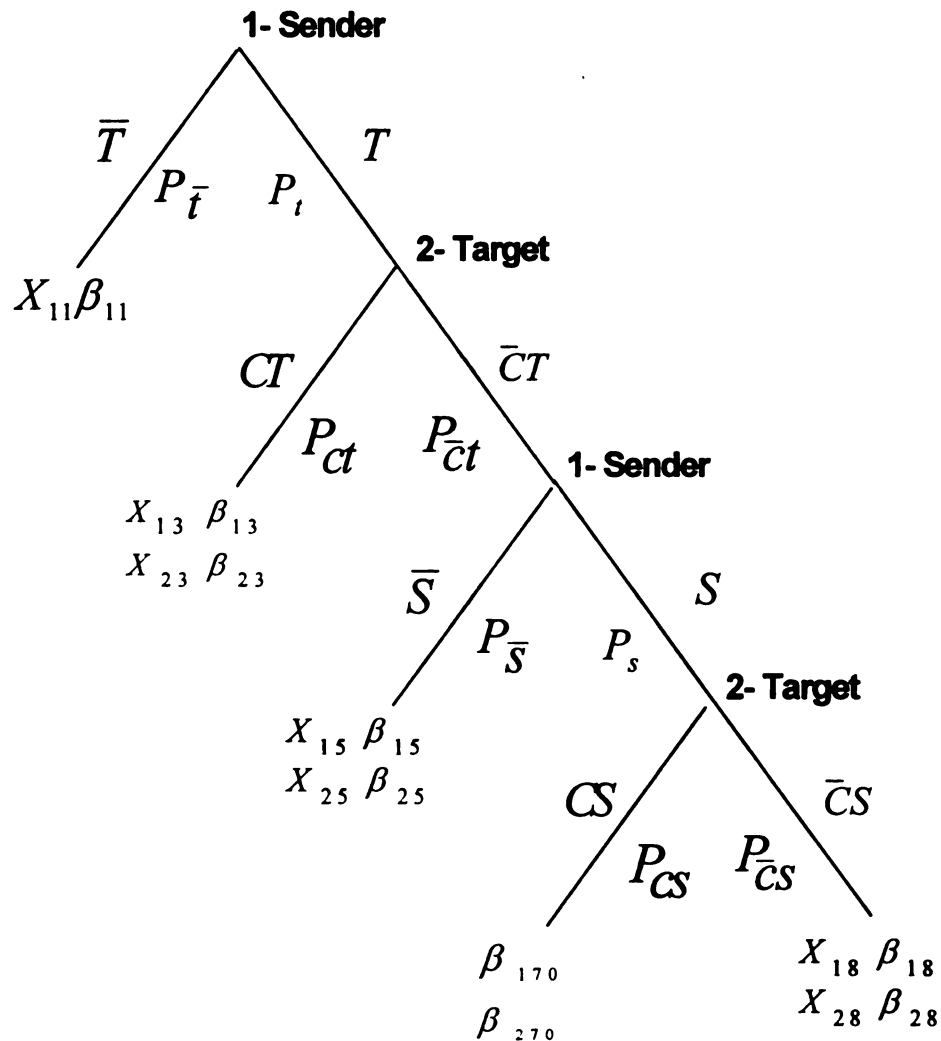
taken. However, as the dispute proceeds, the available choices shrink with each important step taken toward the conflict. Eventually, on the eve of war, there is very little room for maneuver and options that were previously available to leaders are no longer available. Of course none of this is deterministic, and the funnel can temporarily widen and contract, but at each step the probability for war becomes greater. This process is captured in the strategic probit model used here. During the last moves of the game, there are few potential responses that a decision maker must consider. At the early stages, however, a decision maker has to consider many possible responses to his moves. Then he must consider the response he would make to each of those responses and the response the other player would make to each of his responses to her responses. But when the funnel has contracted at the end of the game, the outcome from your move may be the last one that needs to be considered, thus greatly simplifying your decision.

Another important element to consider is that the denominator of each probability equation is a variance term, which reflects the amount of uncertainty regarding the unobserved component of the true utilities. (Signorino and Tarar, 2001:7) When  $\sigma^2$  is large relative to the observable utilities in the numerator, the choice probabilities at each decision node will get closer and closer to being made randomly with a 50% probability either way. When  $\sigma^2$  is small, decision makers have more complete information and decisions will be made with probabilities approaching 0 and 1. As  $\sigma^2$  approaches 0, the model is reduced to one of complete and perfect information and due to the assumption that actors will maximize their utilities at each decision node; the outcomes can be determined using subgame perfect equilibria concepts. Therefore, one of the most fundamental differences between this model and traditional game theoretic models is that



the analyst is assumed to know only the distribution of the error terms, and can therefore, only make probabilistic statements about the equilibrium choices.

Next, in figure 5.4 I show a general specification of the utilities that the sender and the target have for specific outcomes in the model, which are represented as a linear function of the  $X\beta$ 's.



**Figure 5.4: Specification of the Sender and Target's Utilities in Terms of Regressors.**



Notice that the model differentiates the sender and target's utilities for outcomes like a successful (or failed) threat of sanctions or a successful (or failed) implementation of sanctions. Also notice, that the target's utility for the status quo outcome is not specified because it does not affect the choice probabilities later in the game.

Throughout the model, the sender and target's utilities for successful sanctions are both estimated with a constant. According to Signorino and Tarar (2000) this is not necessary as long as variables different from those included in the utilities of the sender and target for failed sanctions are used. Using the same variables in the utility equation for capitulation [successful sanctions] as in the equation for war [unsuccessful sanctions] creates an identification problem (Signorino and Tarar, 2000). However, it is not necessary to include these variables, and in other strategic probit models used by Signorino (2000) and Leblang (2000) constants are used to represent one side of a decision. Since using a constant is convention, and I find no way to include a variable that makes up one's utility for failed sanctions and does not also affect ones utility for successful sanctions, I simply estimate a constant for that side of the choice.

Next, the equilibrium outcome probabilities calculated above are used as the basis for maximum likelihood estimation with respect to the  $\beta$ 's. Let  $y_{sq, i} = 1$  if the dispute in observation  $i$  results in a status quo outcome, and zero otherwise. Let  $y_{SucThreat, i} = 1$  if the dispute results in a successful threat by the sender, and zero otherwise. Let  $y_{BackDown, i} = 1$  if the dispute ends in a back down by the sender, and zero otherwise. Let  $y_{SucSanc, i} = 1$  if the dispute ends in a successful sanction by the sender, and zero otherwise. Finally, let  $y_{FailSanc, i} = 1$  if the dispute ends in a failed implementation of sanctions by the sender, and zero otherwise. Now I can specify the log likelihood to be specified as:

$$\ln L = \sum_{i=1}^N \left[ y_{sq,i} \ln p_{sq,i} + y_{SucThreat,i} \ln p_{SucThreat,i} + y_{BackDown,i} \ln p_{BackDown,i} + y_{SucSanc,i} \ln p_{SucSanc,i} + y_{FailSanc,i} \ln p_{FailSanc,i} \right]$$

According to Signorino and Tarar (2001), since one cannot generally estimate the effects parameters (i.e., the  $\beta$ 's) and the variance parameter  $\sigma$  individually,  $\sigma^2$  is normalized to one, meaning that the parameter estimates are estimates of the  $\beta$ 's and  $\sigma$  to scale.

Now that I have the statistical model in which I have assured that there is some positive probability associated with each outcome through the introduction of a specified distribution of error on the part of the actors and the analyst, I can use the theoretical model directly as a statistical model that can be estimated within a strategic probit framework. Thus, the theoretical model and its empirical test are unified. In the next section I describe the data that was collected for operationalizing the variables in the model.

### **Research Design: Operationalizing Concepts in the Theoretical Model**

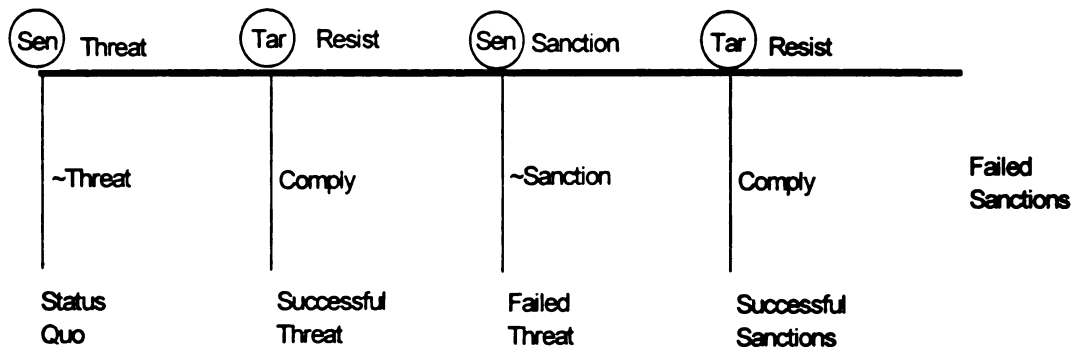
As mentioned earlier, a unique data set has been created for the analysis of the formal model of threats of sanctions. Since 1987 the United States has been threatening and imposing sanctions on countries that it feels are not giving their full cooperation in combating the international trafficking of illicit narcotics. It is interesting to note that this policy, like many other sanctions policies in the United States, has come under heavy criticism recently for its lack of observed success. In fact, there is a concerted effort within Congress to put a halt to United States sanctions under this policy because many are in agreement with the criticisms recently articulated by Sen. Kay Bailey Hutchison

(R-TeX.), who said, "The drug certification ritual results in resentment and is counterproductive" (Dewar, 2001).

Part of the problem with this reasoning is that it is based completely on the observation of the successes and failures of the cases where this policy has actually been implemented. In the 15 years since the policy was implemented back in 1987, there have been very few clear successes where sanctions were imposed on a country and it responded by reducing the amount of drugs trafficking through its country.

In this paper I propose that, as in other cases of economic sanctions, the most obvious evaluation of the policy may not be the best. Therefore, this sanctions policy may be more successful than it appears because the majority of the successes are taking place in response to the threat of the imposition of sanctions. Many of the countries that will comply with sanctions would comply when threatened rather than wait for the actual implementation of the sanctions. This should be particularly true for democracies that face high audience costs for backing down. Therefore, judging the success of these sanctions based on the success of implemented sanctions may exaggerate the likelihood of failure, while simultaneously ignoring the successes achieved through deterrence.

In this section the general model of figure 5.1 will be translated into a model specific to the data being analyzed. This "data specific" model is seen in figure 5.5.



**Figure 5.5: Drug Sanctions Model**

As the first step in this process, when the United States names a country, suspending half its aid and threatening to withhold all aid, the outcome is equivalent to the sender making a threat in the first move. If the country is not placed on the list, no threat has been made by the sender in the first move.

At the second stage of the process, after sanctions have been threatened, the United States asks for a certain type of behavior from the named countries. At this stage the named country must decide whether to cooperate with the United States' demands in the hopes that it will avoid sanctions, or refuse to cooperate and hope that the United States will back down from its threat.

It is interesting to note Baldwin's minimum requirements for a threat relationship to exist. He provides two minimum conditions "(1) B must have some idea as to what A wants him to do; and (2) B must perceive a difference between the way A will respond if b complies and the way A will respond if B fails to comply" (Baldwin, 1971; p.76). It can be argued that both of these conditions are met by the language of the United States drug sanctions policy. However, Baldwin also notes that there "are circumstances in which A might actually prefer to make vague demands on B" (Baldwin, 1971; p.76). The United States has a general idea of what it wants, at least as far as the results, but not such

a good idea of how it should be achieved. In this way, the vagueness of the United States demand for countries to cooperate in preventing the trafficking of illicit narcotics is strategically vague. Baldwin states “when A is uncertain as to what he wants B to do in the future, he may want to be less precise in communicating his demands to B” (Baldwin, 1971; p.76).

Once a country is placed on the “Majors” list and the second step in the process begins, the president must decide whether to certify each of the “named” countries. Again, for purposes of comparison with the theoretical model, the “named and certified” outcome is analogous to the sender threatening and the target cooperating in the second move of the game.

If the United States decertifies a country for non-compliance, it can still back down in the face of a resolute target by granting a sanctions waiver under an exception that allows the president to claim that sanctions would threaten the United States’ vital national interests. This occurs when the president determines that it is in the United States’ vital national interest to be “able to cooperate, provide foreign assistance or vote for assistance from the multilateral development banks despite the country’s failure to meet full narcotics certification standards” (United States State Department; p.2). If the president makes this determination, then the foreign assistance given to that country remains unchanged.

If the president decides to deny certification, and does not grant a waiver, the repercussions are serious. Most categories of economic assistance to decertified countries are cut off. Specifically, most forms of aid provided under the FAA, the Arms Export Control Act, and any financing through the Export-Import Bank are immediately

terminated. In addition to these sanctions, the law requires the United States to vote against any loans from multilateral development banks to decertified countries. This denial of certification without the granting of a waiver is analogous to the sender imposing sanctions in its second move of the game.

Cooperating with the United States' demands allows the country to avoid being sanctioned but is not a costless action. In many countries the cost to the government of standing up to powerful drug cartels is very high. In the theoretical portion of this paper, it is argued that the costs to the government will depend critically on the institutional arrangements that govern the selection of political leaders in that country. When government leaders are beholden to small groups of elites for their tenure, opposing powerful drug cartels will come at a great cost to leaders who seek to remain in office. On the opposite end of the cost spectrum lie leaders in democratic countries who seek to satisfy a broad coalition of citizens and are thus rewarded for successful public policies increasing the welfare of typical citizens.

Since the leaders of threatened countries face costs for either decision, cooperating or not cooperating with the United States' demands, it is not unreasonable to assume that these leaders perform a type of expected utility calculation for each of these decisions. The most immediate costs to these leaders are, on the one hand, the loss of United States foreign aid and a lessened potential of receiving aid from international lending agencies and, on the other hand, the costs associated with alienating leaders of powerful drug cartels in their home country<sup>39</sup>.

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<sup>39</sup> For a description of how these decision have played out with respect to one specific country, see the Laos case study in Appendix C of this dissertation.

## **Description of Data**

Throughout the 15-year history of amendment 490 to the Foreign Assistance Act, sanctions have been imposed on a number of occasions. 33 different countries have been named at one time or another as being a major producer or trafficker in illicit narcotics. The highest number of countries named in any one year was 31 in both 1996 and 1997. The lowest number of named countries was 24 occurring in each of the first 4 years of the policy's existence. Eight separate countries have been subject to sanctions during this time for 53 sanctioned country years. Thirteen different countries have received national interest waivers for a total of 41 country years, and 29 different countries have been named and certified as cooperating with United States efforts.

Of the 8 countries that have been subject to United States sanctions 7 were autocracies and only one, Colombia, was a democracy as measured by the polity index used to measure democracy in this dissertation (Colombia received a democracy score of 7 out of 10). In this case, the United States sanctioned Colombia for 2 years, in 1996 and 1997, before backing down and granting a national security waiver the following year.

### **Dependent Variable: Outcome**

The dependent variable for this portion of the analysis is coded to take on 5 different values – one value for each of the outcomes available in the theoretical model.

**Outcome 1:** Sender makes no threat. This corresponds to not being named as a major drug trafficking country.

The logic behind this coding is as follows: It is clear that if the United States does not place the target country on the “majors” list, no credible threat of sanctions has

occurred. If the country is not placed on the “majors list,” there is no provision for adding the country to the list of sanctioned countries at the time that the drug sanctions are imposed.

**Outcome 2:** Target cooperates at the threat stage. This corresponds to the target taking steps to counter illegal narcotics trafficking in/through its borders and results in the target being certified as cooperating with the United States.

The logic behind this coding is as follows: What we observe is the United States making a threat, by placing the target on the majors list and temporarily suspending half of its United States foreign aid, and then four months later certifying that the target is in compliance with the demands made in the threat (and returning all of the target’s aid). It seems logical to assume that the target did in fact cooperate with the United States threat to impose sanctions, or the target would not have received certification as a state in full compliance.

What differentiates this coding from outcome 3, where the sender is deemed to have backed down from its threat, is that in outcome 2 the sender acknowledges that the target is cooperating.

**Outcome 3:** Sender backs down after initial threat of sanctions. This corresponds to the sender deciding not to sanction a potential target after initially making a claim that the target is a major trafficker in illegal narcotics and is not cooperating with the United States to curb this traffic.

The logic behind this coding is as follows: What we observe is the United States threatening the target state, and then later decertifying the target, but granting a national security waiver to avoid the imposition of the threatened sanctions. If the United States



were in fact happy with the cooperation they received from the target, they could have certified the target as cooperating and no sanctions would have been imposed. However, by decertifying the target, the United States is acknowledging that they did not receive the cooperation they were trying to gain. Even in light of this lack of cooperation, the United States still does not impose the threatened sanctions. This can clearly be seen as a failure to carry out the threatened action even though the sender's actions make it clear that the target did not take the actions demanded.

**Outcome 4:** Target complies after being sanctioned. This corresponds to the target of sanctions cooperating with the sender's demands after a period or more of being sanctioned. This outcome is observed when the sender removes the target from its list of major narcotics traffickers, or certifies the state as cooperating to reduce traffic through its borders.

As discussed in earlier chapters, there are many ways to think about success with regard to uses of sanctions. One of the clearest operational definitions of success is whether the policy objective was achieved. There are two potential objectives of this policy. The primary objective of this policy is that the narcotics problem in the target state is reduced to acceptable thresholds as outlined in the United States Department of State Document entitled "Legislative Basis for the INCSR." This would be an ideal outcome, but is not necessary for success. Some countries may have drug problems that are too severe to be eradicated completely. In this case, a second way for this policy to achieve success is if, at a minimum, the target country shows increased effort in combating the problem.

Therefore, the logic behind the coding of success is as follows: What we observe is the United States, after imposing sanctions on the target in the previous year, taking either of two actions in the following year. First, the United States could remove the target completely from the “majors list,” thus ending the threat of sanctions completely. Seeing the United States take this action is a sign that they are no longer concerned with the amount of illegal drug traffic through or from that country. Second, the United States could leave the target on the majors list, indicating that the target country still has a problem with the trafficking of drugs through or from its country, but that the target is now cooperating with the United States to minimize this traffic. When this action occurs on the part of the sender, it is not necessary that there was an actual decrease in the amount of drug traffic through or from the target. The sender is not saying that the target no longer has a drug trafficking problem, only that the target is now cooperating to help reduce that traffic.

The first scenario mentioned above could also be an indicator of defeat for the sender. In order to consider the United States’ removal of the state from the majors list a success there should also be a clear drop off in the amount of drug traffic or production observed in the target country. If the United States removes the country from the list completely and there is no noticeable drop in drug traffic or production in that country it should be counted as a failure where the United States simply gives up.

Under this coding scheme, there are four cases that I identify as successful uses of this policy. Each of these cases is listed below. A brief description of events supporting the coding of each of the success cases of the drug sanctions policy is included in Appendix C: Justification for coding of success cases. The case study for Laos is clearly

the most developed and will serve as a template for proposed future case studies of all countries affected by this policy. The rest of the cases are superficially developed at this point and are only intended to provide enough information to support the minimum justification for having been coded as a success.

<b>Syria 1998 –</b>	Removed entirely from majors list after being sanctioned the year before.
<b>Iran 1999 –</b>	Removed entirely from majors list after being sanctioned the year before.
<b>Laos 1990 –</b>	Went from sanctioned to named and certified
<b>Panama 1990 –</b>	Went from sanctioned to named and certified

**Outcome 5:** The target does not comply with the demands of the sender even after being sanctioned. This results in continued sanctions in the following year.

The logic behind this coding is as follows: If the sanctions continue in the year after the initial sanctions were imposed, then the country can not be said to have cooperated. This is a clear indication that the sanctions did not work to change the behavior of the target during the previous year.

Coding the dependent variable in this way implies that success or failure of threats and implemented sanctions can be determined by the actions of the sender. Another way to code the outcome variable would have been to look at the amount of narcotics seizures in the countries threatened with or subject to sanctions and see if it decreased in the years following the threat or the implementation of sanctions. I chose not to use this operationalization because I do not think it captures the concept of success implied by the goals of policy. The United States is not asking the targeted states to eliminate the

trafficking of illicit narcotics through or from their states. In some cases this might be a virtually impossible task. What the United States is asking is that the targeted state's government make efforts to cooperate with the United States in combating the existing drug trade from or through their state. Because of this distinction, just looking at the actual amount of drug traffic is not a fair test of the success of the policy.

### **Independent Variables**

As shown in the deductive model that this empirical analysis tests, there are three essential elements that have to be captured to understand the threat and use of sanctions. First, the expected cost of sanctions to the sender and target must be considered. Second, the value of the policy at dispute to the sender and target has to be considered. And third, the political value of the relationship between the sender and target in political terms is considered. Along with this, there are also domestic factors of importance discussed earlier like the stability of the target regime and the type of domestic institutions in the target government. Of course, in order to focus on theoretically important concepts, there are certain elements of potential importance that may be excluded from the game theoretic model with the assumption of *ceteris paribus*. These elements cannot be assumed constant as in the deductive model, so they must be included in the inductive model as empirical control variables.

### **Building the Strategic Probit Model**

The strategic probit model analyzed in this section is designed to replicate the game theoretic model of the previous chapter. Thus, variables affecting sender and target utilities at each of the various stages of the game will be entered into the model. The following is a brief outline of the concepts included in the model and the variables used

for their operationalization. I will then discuss each of these variables in slightly greater detail before moving on to the empirical analysis.

#### **Expected Costs of Sanctions to Sender and Target: Economic Value of the Relationship**

- Target Aid % of GNI (TAPGNI)
- Target Trade % of GDP (TTPGDP)
- Trade between sender and target (LTTST)

#### **Value of the Policy at Dispute**

- Target Drug Problem (TDT)
  - Drug Seizures Plus Drug Production
- Target Drug Problem \* Target Democracy Level (LTDPTDL)

#### **Domestic Factors Affecting Decision to Comply with Sanctions Demand**

- Target Democracy Level (DEM7)
- Control Variable for Target Regime Stability: Target Internal Conflict (TIC)

#### **Political Value of the Relationship**

- Regime similarity: Target Democracy Level (DEM7)

#### **Additional Control Variables**

<b>Variable</b>	<b>Min</b>	<b>Mean</b>	<b>Max.</b>	<b>Variance</b>	<b>Std. Dev.</b>
TAPGNI	0	9.72	233.59	243.87	15.6162
TTPGDP	1.41	78.29	406.75	2385.18	48.8383
LTTST	0	5.86	12.81	7.07	2.6596
TDT	0	0.85	43.04	15.88	3.9844
DRUGSEIZ	0	0.57	28.29	6.0674	2.4632
DRUGPROD	0	0.48	32.47	7.6216	2.7607
DEM7	0	0.41	1	0.24	0.4913
LTDPTDL	0	0.39	43.041	7.76	2.7848
TIC	0	0.17	1	0.14	0.3748
SCAMERIC	0	0.21	1	0.17	0.4085

- Regional hegemony: South/Central America Dummy (SCAMERIC)

**Table 5.1: Descriptive Statistics for Variables Appearing in Empirical Analysis**

#### **Expected Costs of Sanctions to Sender and Target: Economic Value of the Relationship**

Because this model evaluates the effectiveness of threats of sanctions, the measures used here do not attempt to explicitly measure the amount of economic costs that were imposed as a result of sanctions impositions. Rather, by measuring existing levels of the economic relationship between potential senders and targets the emphasis is shifted to the ability to impose economic costs through sanctions. This is similar to the methodology used by van Bergeijk (1995) who looks at existing levels of trade linkage between senders and targets of implemented sanctions rather than using the more traditional Hufbauer, Schott, and Elliot variable measuring estimated costs of sanctions that were imposed.

**Measures of Target Costs:**

**Measure 1: Target Aid as a percent of Gross National Income**

One measure for the cost of sanctions is represented by the level of aid received by the target as a percent of GNI. This is the most direct measure of cost to the target, because the sanctions are specifically aimed at removing all foreign aid to decertified countries. The amount of aid provided specifically from the United States could also have been used here, but it would not have captured the full effect of the sanctions.

When the United States sanctions a country under this policy they not only cut off United States aid but also utilize their influence with international organizations to attempt to block all potential sources of international aid to the country. Also, countries that rely on a large amount of foreign aid will suffer additional costs from the sanctions due to increased difficulty in receiving loans and higher finance rates given they are viewed as less reliable.

**Measure 2: Target Trade with Sender as a Percent of Target Gross Domestic Product**

For many of the same reasons stated above countries that have a higher amount of Trade as a percent of GDP are expected to suffer greater costs when they are subject to the United States' sanctions policy, and hence be more likely to comply. Typically, the trade linkage between the sender and target would be of most interest here. Van Bergeijk (1992) shows that when the bilateral trade flow between the sender and the target, as a percentage of the target's GDP, is less than 1% the success rate of sanctions decreases dramatically (from 38% to 19%). However, since United States drug sanctions are directed at cutting off aid and finance as opposed to trade, a broader measure is needed.

Financial sanctions such as those imposed by this policy, which restricts aid and access to loans from international banks, are asserted by many to have implications for trade and finance in the targeted nation that go beyond the actual loss of the sanctioned aid. Weiss and Selden (1999) elaborate on the potential effects of financial sanctions, which demonstrates their ability to cause harm to targeted nations.

“Financial sanctions can be particularly effective precisely because capital is the one commodity for which most nations cannot substitute domestically. By blocking the flow of capital from the cheaper lenders, through the World Bank and the IMF the cost of capital goes up. That hurts the elite of the target country, who then have to make some hard choices about where to cut spending—or accede to the wishes of the global majority” (Weiss and Selden, 1999: 55)

Furthermore, Hufbauer, Schott, and Elliot (1995) explain how the “interruption of commercial finance will usually require the target country to pay a higher interest rate to alternative creditors...In addition, when a poor country is the target, the grant component of official financing may provide further leverage (Hufbauer, Schott, and Elliot, 1985: 28).

**Measures of Sender Costs:****Trade Between Sender and Target**

The influence of the trade linkage to the sender must be calculated in a different manner as the importance of the linkage to the target. For the sender, who is proposing to take actions jeopardizing the existing trade relationship with the target nation, it is the amount of bilateral trade as a percentage of its total economy that is relevant. In this study, since the sender is always the United States, total trade between the United States and the proposed target will be used.

Data for total United States trade with all other countries for the years 1986-1996 were obtained from Kristian Gleditsch's IMF Trade data, available at:

<http://k-gleditsch.socsci.gla.ac.uk/>.

For the years 1997-1999 the data were obtained from the University of Virginia Library Geospatial & Statistical Data Center through their web page at:

<http://fisher.lib.virginia.edu/>.

The UVA data is available from 1989-1999, so there were several years that overlapped with the Gleditsch IMF data. This allowed for a correlation test to be run on the overlapping years to ensure the data was indeed measuring the same concept. The correlation coefficient confirmed that the data are highly correlated. The Pearson correlation coefficient is .99 (nearly perfect) with a significance level better than .001.

**Value of the Policy at Dipute****Target Drug Problem: Drug Seizures Plus Production**

Indices are created for drug seizures and drug production. These indices are then added together to give the total drug problem in the target country. Essentially, the United States is concerned with high levels of both production and trafficking. Sometimes these are separate issues and at other times they are combined. For example,



Panama is a large trafficking state but is not a major producer of narcotics, while Colombia is high in both areas. Since the United States Drug policy explicitly mentions both of these areas as concerns that can result in a state being placed on the “major” drug producing and trafficking list, I include both measures in this analysis. By adding these two areas together, I capture the “double threat” that nations like Colombia represent when they are involved heavily in both trafficking and production. States that are extremely high on one or the other of the indices (For example Brazil in 1986 was a major trafficking state but not a major producing state) or at a mid level on both (Laos has fit this description in many years due to its production and trafficking in opiates) can also end up representing a large drug threat to the United States.

#### **Drug Seizures Index**

Higher amounts of drug traffic make the value of the policy higher for both the sender and the target. For the sender it is clear that higher levels of traffic indicate a higher level of the activity that it is trying to discourage. For the target, increased levels of traffic represent a greater extent to the drug problem in its country, hence a potentially greater cost both politically and economically for fighting the problem.

Following the practice of the United Nations International Drug Control Program, and the International Narcotics Control Strategy Board, seizures of illicit narcotics are used as a measure of drug traffic in a country. This data is recorded for all countries and standardized by converting all measures to Kilograms. The primary source of seizure data from 1986-1998 is the Annual Reports Questionnaire (ARQ) administered by the UNDCP. The UNDCP monitors the quality of this data and reports that “The following

additional sources of information were used in cases where reporting by ARQ was incomplete or lacking:

- (a) International Criminal Police Organization (ICPO/Interpol)
- (b) Reports provided separately by governments or other official sources
- (c) International narcotics Control Board
- (d) World Customs Organization
- (e) UNDCP field offices” (UNDCP, 1996; p.3)

Much of the data that is available from the United Nations is also available from the United States’ International Narcotics Control Strategy Report (INCSR). However, the preferred source for this study was the United Nations. The exception is that when Organization of American States (OAS) data was available and it differed from the UN data, OAS data was used (Statistical Summary on Drugs, 2001). I made this exception because the OAS has extensive drug seizure and production data, and since it is closer to the source I assumed that it would be more accurate than the UN data. In some cases, when there was a large discrepancy between the UN and OAS data, I took the largest value based on the assumption that the lower value could be do to a tendency to underreport. The last source of data was always the INCSR. Since one of the goals of this research is to investigate the use of United States drug sanctions, I must be particularly sensitive to the fact that there could be a tendency for the United States to overestimate production and trafficking figures for those states that it imposes sanctions against. However, when UN data is not available and United States data is available, the United States data is used based on the principle that it is the best available data. At the

time of this study access to UN data was only available through 1998, so all data from 1999 and 2000 come from United States estimates.

Generally speaking, high amounts of seizures can be treated as a sufficient condition to indicate a high level of drug traffic through a country. It is not possible to seize a high level of narcotics if there is not a high level transiting the border. However, high levels of seizures should not be treated as a necessary condition for high levels of drug traffic. Depending on the effort of the country's interdiction program, low levels of seizures do not necessitate low amounts of traffic. The United Nations International Drug Control Program, which is the source for the data on seizures used in this study, provides a cautionary note on this subject. First, they state in the text "Seizure data are used as an indicator for trafficking" (UNDCP, 1996; p.5). A cautionary note immediately follows regarding the interpretation of the data, "However, such information has to be interpreted with caution since seizures may also indicate efforts in law enforcement" (UNDCP, 1996; p.5). A later publication by the UNODCCP (World Drug Report 2000) includes a more detailed discussion of why seizure data is considered the best measure of underlying drug trafficking activity. The basis of this argument in favor of using seizure data is that if "seizures are a good indicator for trafficking trends, then seizures should be highly correlated with both supply and demand indicators" (UNODCCP, 2000; p. 36). And, in fact they are. "The correlation coefficient for opium production and heroin seizures and the correlation coefficient for coca leaf production and cocaine seizures over the 1980-1998 period were found to be close to .95" (UNODCCP, 2000; p. 36). Also, in the United States, "cannabis herb seizures and cannabis use among high-school students were found to correlate strongly (Correlation coefficient of  $r=0.96$  over the 1978-1998 period)"

(UNODCCP, 2000; p. 36). In interpreting the results based on this data, then, we can have a great deal of confidence that states with high seizures are also those with a large drug trafficking problem. At the low seizure end of the scale we cannot have as much confidence. Those countries with small seizure levels are more likely to also be those states without a major drug trafficking problem, but this may also be an indicator of a lack of effort on the part of the state's interdiction program. However, the available correlation evidence provides strong support that seizures are measuring drug traffic.

Computing Drug Seizure Index: For this index, seizure data are grouped into three broad categories:

- Cocaine seizures
- Opium seizures
- Cannabis seizures

Total cocaine seizures are calculated by adding the quantities of coca leaves, coca paste, and cocaine (hcl) to get the total amount of cocaine seized<sup>40</sup>. Total opium seizures are calculated by adding quantities of heroin, morphine and opium seized to get the total amount of opiates seized. Total cannabis seizures are calculated by adding the quantities of cannabis and cannabis resin to get the total amount of cannabis seized.

Next, following the procedure used to construct the correlates of war capabilities index (Singer et. al, 1972), a drug trafficking capabilities index is created. The total amount of world seizures per year in each of the three categories is computed. Then each country's yearly percent of the world seizures in that area is calculated. Next, the categories are added together and divided by three to give a total drug trafficking threat score. Using this procedure avoids having to calculate dose equivalents for each of the

types of drugs. For example, accounting for 20% of the world's traffic of opium products under this operationalization is equal to accounting for 20% of the world's traffic of cocaine products. Simply adding together the quantity of each drug being trafficked would be incorrect because 1 Kg of opium products represent a more serious threat than 1 Kg of cannabis products. But, as in the correlates of war capabilities index, by standardizing the quantities as percentages of the total world quantity adding the percentages produces a valid index. Two separate indices are created in this way: one to measure the relative amount of illicit narcotics traffic through a country and one to represent the relative amount of drug production in a country. In the next section I will discuss the creation of the drug production index.

#### **Extent of drug production**

As was the case with drug seizures, drug production data is gathered from a variety of sources. These sources included the International Narcotics Control Strategy Report (various years, 1988-2002), The United Nations International Drug Program's International Narcotics Control Board Report (various years, 1988-2002), OAS drug data from the Inter-American Observatory on Drugs (available online at: [www.cicad.oas.org/oid/](http://www.cicad.oas.org/oid/)), National Drug Control Strategy Report (2002).

The amount of illegal drug production is measured in a similar way as trafficking. First, three broad categories are created; cannabis, coca, and opium products. Within each of these categories two types of production levels are measured; cultivation and production. This produces 6 categories.

Opium cultivation  
Opium production

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<sup>40</sup> See appendix on computing estimates of cocaine seizures and production

Coca cultivation  
Coca production  
Cannabis cultivation  
Cannabis production

As with the trafficking index, the total amount of world production per year in each of the six categories is computed. Then each country's yearly percent of the world production in that area is calculated. Next, the categories are added together and divided by six to give a total drug production threat score.

#### A Note on Converting to Doses

A second way to standardize these measures would be to convert the seizures and production data into doses or standardized units. The United Nations Office for Drug Control and Crime Prevention (UNODCCP) provide a guideline for transforming quantities of each drug into standard units. "The units are assumed to reflect a typical street dose at street purity" (Global Illicit Drug Trends, 2001; p. 87). The conversion is as follows:

1 unit of cocaine = 100mg  
1 unit of heroin or morphine = 100mg  
1 unit of cannabis herb = 500mg  
1 unit of cannabis resin = 135mg

This conversion was performed, but the analysis in this project relies on the first measure for creating the drug problem index. The reason for preferring the first method is that it makes better use of the available seizure data. For example, the seizure data includes seizures of coca leaves, coca paste, and cocaine (HCL), the last of which has a dose equivalent of 100mg. Unless coca leaves and coca paste are converted to cocaine, they cannot be converted at the standardized rate of 100mg = 1 dose. However these conversions rates can differ by year and by region, depending on the potency of the leaves

and the refinement practices used for conversion from leaf to street dose. Therefore the seizure data on coca leaves and paste would have to be excluded or conversion rates would have to be estimated. Since much of the traffic in illegal narcotics takes place in unrefined goods, this would result in losing a good deal of information. The first measure avoids this problem by simply adding up the total amount of each of these illicit narcotics seized, finding the average, and then determining how much traffic in that drug went through a particular country relative to the average. By adding up the percent of the averages for each country, for each drug, we can determine the relative amount of traffic in these three areas (opium, coca, and cannabis) per country.

#### **Target Drug Problem \* Target Democracy**

The democracy-autocracy dichotomous polity indicator (described below) was multiplied by the amount of drug seizures in each of the targets. This allows an empirical test of whether democracies are more willing to cooperate with the United States when faced with a large drug problem than are non-democracies.

#### **Domestic factors affecting decision to comply with sanctions demand**

##### **Target Democracy Level**

Democracy is measured for this study using the latest version of the polity IV dataset available at [www.cidcm.umd.edu/polity/index.html](http://www.cidcm.umd.edu/polity/index.html). For this analysis the indicator for the level of democracy is dichotomized so that democracy levels greater than 7 out of a possible 10 are coded as democracies and those less than 7 are coded as non-democracies. The following excerpts from the Polity IV Dataset Users' Manual (2000) briefly explain how the measures of democracy and autocracy are generated. For greater

detail on how the polity project measures democracy the reader is referred to the original source listed in the bibliography (Jagers and Gurr, 1995) or the web page listed above.

**Polity IV's Measurement of Institutionalized Democracy:**

"Democracy is conceived as three essential, interdependent elements. One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Second is the existence of institutionalized constraints on the exercise of power by the executive. Third is the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation. Other aspects of plural democracy, such as the rule of law, systems of checks and balances, freedom of the press, and so on are means to, or specific manifestations of, these general principles. We do not include coded data on civil liberties.

The **Democracy indicator** is an additive eleven-point scale (0-10). The operational indicator of democracy is derived from codings of the competitiveness of political participation (variable 2.6), the openness and competitiveness of executive recruitment (variables 2.3 and 2.2), and constraints on the chief executive (variable 2.4)"

**Target Internal Conflict**

As many previous empirical studies have found that unstable target governments are more likely to give in to sanctions, I include a control measure in the model for the stability of the target government. To operationalize instability I use data on armed conflicts from Gleditsch, Wallensteen, Sollenberg and Strand (2002). If a country is experiencing internal armed conflict it is coded 1 and is presumed to have a lesser degree of internal stability, otherwise it is coded 0.

The operational definition of an armed conflict in the data set used is "An armed conflict is a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths" (Strand, Wilhelmsen, and Gleditsch, 2002, p.2). One advantage of this data is the relatively low battle related death threshold adopted which allows for the inclusion of more conflicts while still being "high enough for the violence to represent a politically significant event" (Gleditsch, Wallensteen,



Sollenberg and Strand 2002; p. 617). In this data set, internal conflict is defined as conflict within a country between a government and one or more opposition groups, with no interference from other countries.

#### **Additional Control Variable**

South/Central America Dummy: This is a simple dichotomous indicator with countries located in South and Central America coded 1 and all other countries coded 0.

#### **Results**

In this section, before proceeding to the results of the strategic probit analysis, two cross tabulations of the data are presented showing the difference in the United States' treatment of democracies versus non-democracies under its drug sanctions policy. The following cross tabulations show the effect of democratic regimes in the target on the likelihood of achieving compliance at the threat stage of sanctions compared to after sanctions have been imposed.

Threat Compliance – Stage One Certification Status				
		Compliance (Certified)	Non- Compliance (Decertified)	Total
DDEM7	Non-Democracy	Count	133	86
		Row %	60.7%	39.3%
	Democracy	Count	165	16
		Row %	91.2%	8.8%
Total		Count	298	102
		Row %	74.5%	25.5%

**Table 5.2: Target Compliance with Sanctions Threat**

In table 5.2, a fairly even split between democracies and non-democracies can be seen as far as being named and threatened with sanctions as a "Major" drug trafficking country (non-democracies being threatened about 55% of the time -- 219 of the 400

cases). This indicates that drugs are not a problem specific to either type of regime – or at least the United States does not perceive it to be that way. However, democracies are significantly more likely to be reported to be cooperating with the United States and receive certification after they have been named. An astonishing 91.2% of the time that democracies are named, they receive certification as cooperating in the fight against international drug traffic. This implies that even though these democracies fit the definition of a “Major” drug trafficking country, they are willing to cooperate with the threats/demands of the United States in combating the problem. By comparison, non-democratic countries are certified as cooperating only about 60% of the time. Although the main support for the hypotheses comes from the strategic probit model, this provides some additional support for Hypothesis 1, which proposes that sanctions threatened against democracies, will be more successful than those threatened against other regime types.

Non-Democracies have clearly been less likely to cooperate with the United States’ demands once they have been threatened with sanctions. This increases the probability that the confrontation will escalate to the next stage in the sanctions game when the target is a non-democracy. At the next stage the sender nation can give in after denouncing the target as not cooperating in fighting international drug traffic, or it can follow through with its threat and impose sanctions.

Looking at first stage compliance (again, from table 5.2), regardless of the polity of the target, shows that about 75% of the time (298 out of 400) the United States receives cooperation and certifies the countries that it named. Decertification includes

cases where the country was decertified and then granted a waiver for national interests together with cases where a country was decertified and eventually sanctioned.

Restricting the analysis to just the 102 cases where a country was not certified, shows the probability of the United States backing down and granting a national security waiver after decertification. Table 5.3 shows that disregarding the polity of the target, the United States does not have a very good track record of carrying out its threat at this stage.

		Waiver Status		
		Sanctions Waived	Sanctions Imposed	Total
DDEM7	Non-Democracy	Count	29	57
		Row %	33.7%	66.3%
	Democracy	Count	14	2
		Row %	87.5%	12.5%
Total		Count	43	59
		Row %	42.2%	57.8%

**Table 5.3: Does Sender Carry Out Threat**

Only a little more than half of the time (57.8%) that the United States identifies a country as not cooperating in the fight against international narcotics trafficking, does it follow through and impose sanctions. In other words, in stage 1, when the United States sends the message that the target state must cooperate or be sanctioned, there is some reason to believe that it may be bluffing. What is of great interest to us here is that the United States appears to be much more likely to carry out its threat when dealing with an autocracy than when it is dealing with a democracy.

Since 1988, 16 democracies were threatened with sanctions and failed to comply. During the same period 86 non-democracies were threatened and failed to comply. Based on the target's regime type large disparities in the United States' commitment to carry out its threatened sanctions can be seen. After decertifying the country as not cooperating, sanctions were imposed against democracies only 12.5% of the time, while 66% of the time they were imposed against non-democracies. This shows a very large discrepancy in the way the United States is administering its sanctions policy against democracies and non-democracies<sup>41</sup>. The United States seems to not be afraid to test the waters and threaten their democratic counterparts, but when push comes to shove the United States is likely to back down on its threat of imposing potentially harmful sanctions against democracies.

However, it would be incorrect to assume that this means the United States is unable to effectively use sanctions against fellow democracies. In the previous stage of the interaction we saw that democracies are much more likely to give in at the mere threat of sanctions than are non-democracies. So the United States has good reason to test the waters and threaten democracies. Many times this leads to exactly the behavior the wish for, without ever having to impose harmful sanctions. However, when facing a tough democracy that does not comply after the initial threat the United States appears to prefer to back down rather than impose damaging sanctions.

The final point to note is that as hypothesized (H1), the success rate of this policy has been dramatically higher at the threat stage than at the implementation stage. At the

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<sup>41</sup> These finding are replicated in the strategic probit model, where I see that even controlling for multiple other factors the United States is still significantly more likely ( $z < .01$  level) to back down against

threat stage approximately 75% of the cases were successful (298 out of 400), while at the implementation stage only 4 of the 59 implemented sanctions were successful (approximately 6.7%)<sup>42</sup>.

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democracies.

<sup>42</sup> See Appendix C for a brief description of the four successes.

## Results of the Strategic Probit Model

### Performance of the Model

**Table 5.4: Cases Correctly Predicted**

		Predicted					
Observed		Y1	Y3	Y5	Y7	Y8	Total
	Y1	1011	28	0	0	0	1039
	Y3	128	84	9	0	0	221
	Y5	12	19	1	0	0	32
	Y7	3	0	0	1	0	4
	Y8	18	9	0	0	0	27
	Total	1172	140	10	1	0	1323

Cases Correctly Predicted = 82.918%. Null model predicting modal category = 78.534%

The model fit statistics in table 5.4 show an improvement over what one could do simply by predicting the modal category, that the United States does not threaten sanctions. 78.5% of the time in the data, this is what occurs, so it would not be a bad guess just to predict that the United States will not make a threat. The other 21.5% of the time the United States threatens sanctions. Imposing a threat in 21.5% of the nation years under observation represents a significant amount of activity by the United States. This is particularly true when one considers the nature of the sanctions, which indict the target country as a major drug producing or trafficking country and threatens them with financial sanctions if they do not take appropriate steps to mitigate the problem. The model does a very good job of prediction outcomes at this stage of the process. Of the 1039 cases of no threat the model correctly predicts 97.3% or 1011. Once the sanctions have been threatened, 16.7% (221 cases) of the time the United States gains compliance with the threat. The model correctly predicts 38% of these cases of target compliance whereas a null model would predict none of them. In the data the sender backs down

about 2.5% of the time and the model correctly predicts only .03% of these cases. In 37.5% of the cases where the sender threatens, only to have to back down when the target calls its bluff, the model predicted that the sender would never make the threat in the first place and in the rest of the cases the model incorrectly predicts that the sender will have to back down at the mere threat of sanctions. Of course rare events are more difficult to predict and true to form the model has difficulty predicting the relatively few cases of implemented sanctions that do occur. The model only predicts .03% of the sanctions years that occur in the data, although it impressively manages to predict 25% of the sanctions successes correctly.

**Interpreting the results of the strategic probit model:**

The sender and target's utilities for each of the outcomes in the model will be affected by several elements in their utility functions. As was seen in the deductive model, these factors will have an influence on the outcomes actors would prefer at each stage of the model. The following sections will provide an interpretation of the coefficients on each element of the actors' utility functions for each outcome as seen in table 5.5.

**Table 5.5: Strategic Probit Estimates: 1-2-1-2 Model with Private Information**

Variable	Outcomes			
	No Threat by Sender <sup>√</sup>	Target Backs Down (complies with threat)	Sender Backs Down	Successful Sanction
<b>Sender's Utilities</b>		Normalized = 0		
Target Democracy (DEM7)	0.0621	.	1.2360**	
Target Drug Threat or Problem (TDT)	-0.3241***	.	.0740***	
Logged Total Trade between Sender and Target (LTTST)	0.6898***	.	1.4689***	
South/Central America Dummy	-3.1290***	.	-3.0401***	
Target Internal Conflict (TIC)	.3891	.	-2.5636***	
Constant		.		-2.8324***
<b>Target's Utilities</b>		.	Normalized = 0	
Target Democracy (DEM7)		.3115***	.	-.3083
Target Drug Threat or Problem (TDT)		-.0160*	.	-.0071
Lag Target Drug Problem * Target Dem Level (LTDPTDL)		.0016	.	-.0252
South/Central America Dummy		.3721**	.	2.4089***
Target Aid % of GNI (TAPGNI)		.0912***	.	.0555**
Target Trade % of GDP (TTPGDP)		.0017***	.	.0066***
Target Internal Conflict (TIC)		-.4452***	.	.4772

<sup>√</sup> Threat variables are lagged one period to indicate that the threat takes place in the year prior to the outcome.

N=3019; Mean log-likelihood = -0.215656; \*\*\* z<.01, \*\* z<.05, \* z<.1



## **The Importance of Regime Type**

In the previous chapter on initiation, several theoretical reasons to expect sanctions to be initiated less frequently by a democracy against another democracy were discussed. Empirically, in cases of initiated sanctions, we found in the previous analysis of observed sanctions that democracies were significantly less likely to initiate sanctions against other democracies. There are two ways that this empirical finding may come about in cases of observed sanctions. First, fewer sanctions between democracies may occur because democracies do not have as many disputes with other democracies. If this were the case we should see democracies be less inclined to threaten other democracies. Indeed this was a theoretical prediction from the formal model in chapter 4. O-H1C predicted the United States to be less likely to threaten other democracies with sanctions. However, the empirical evidence in this model does not support this argument. Target democracy level (Dem7 in the first column) is not statistically significantly related to threat initiation. Although the findings are at least in the predicted direction, the substantive significance is also minimal. Changing the target's polity from a non-democracy to a democracy only increases the probability that the United States will not threaten by a very small amount (about .58% - from .9353 to .9411).

The second way that we might arrive at fewer observed cases of sanctions between democracies is that fewer sanctions may occur because, given a threat, one or the other side backs down before sanctions are actually implemented. Interestingly, the results show that when the target of a threat is a democracy both the sender and the target

are significantly more likely to back down before sanctions actually occur<sup>43</sup>. Thus, the statistical results point to the conclusion that the empirical evidence of fewer sanctions between democracies is not a result of democracies having less to fight about. Democracies are not significantly less likely to threaten one another, which would indicate that they are probably engaged in just as many disputes as other dyad types. Rather, the fact that both senders and targets are more likely to back down when both sides are democracies points to the possibility that democracies tend to settle their disputes prior to the imposition of sanctions. Theoretically this is to be expected. Since democracies face higher audience costs for missteps in foreign policy they tend to back down at significantly higher rates when faced with a threat rather than bluff in the hope of getting the other side to back down. However, once a democracy has stood up to the threat, the democratic sender (the United States) is more likely to recognize the credibility of the target's position and back down rather than impose sanctions. This is smart behavior because at the final stage of the game, we see in the results that sanctions against democracies are somewhat less likely to be successful (although insignificantly so). While general hypothesis H2 is not supported through a statistically significant coefficient, the sign is at least in the hypothesized direction.

The results also tend to indicate that the biggest impact of target democracy level is at the threat stage. After sanctions have been threatened, they are significantly less likely to be implemented between democracies. This can help reconcile the expectation that sanctions are more likely to be successful against democratic governments but at the

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<sup>43</sup> Substantively, however, this difference is not great. Targets are about 3% more likely to back down when they are a democracy and senders are about .7% more likely to back down after threatening a



same time are empirically less likely to occur. In this case, we see empirical evidence of the United States threatening other democracies, as they should do if they expect success, but we also see that those cases involving democracies as targets are significantly less likely to ever make it to the implementation stage.

These results also provide strong support for O-H2C and O-H3C and general hypothesis H1. As predicted, countries with a similar regime type to that of the United States are found to be more likely to comply with the United States' threat of sanctions. Also, since both senders and targets are more likely to back down when the target is a democracy, states with similar regime types are found to have a smaller probability of sanctions given a threat.

#### **Value of the Policy at Dispute**

The value of the issue at dispute is another important element of the sender and target's utility functions for sanctions. Past empirical studies have concluded that larger policy goals are harder to achieve and thus sanctions are less likely to be successful when the demand is higher (Drezner, 1999; Dashti-Gibson et. al., 1997; Hufbauer, Schott, and Elliot 1985; Dehejia and Wood, 1992). The results of the strategic probit analysis in table 5.5 indicate that when the United States is confronted with a target state that has a large drug problem it is significantly more likely to threaten sanctions. However, controlling for other factors, we see that this threat tends to be somewhat hollow as senders are also significantly more likely to back down against the big drug producing/trafficking countries when they do not comply with the initial threat. Thus, we see that bluffing of this nature is not without its potential for failure. Indeed, confirming the findings of

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democracy.

previous studies, trying to achieve a larger goal with sanctions is found to be more difficult. Targets with larger drug problems are significantly less likely to back down when threatened and if sanctions are eventually imposed they are no more likely to be successful against countries with a large drug problem than those with a small one. These results are exactly what one would expect based on the signaling properties of the threat. The United States drug sanctions policy is cleverly (although perhaps inappropriately from a signaling perspective) crafted in a way that has very little cost to the United States while having the potential to be very disruptive to the target country's economy through restricting access to international financing and foreign aid. However, targets appear to be able to see through the United States' "cheap talk". When the size of the drug problem is large in targets, they are more likely to call the United States' bluff rather than taking the politically costly undertaking of challenging the existing drug producers and traffickers in their country. And when this happens, the United States' cheap talk is revealed for what it is i.e., there is a positive and significant likelihood that the United States will back when a country with a large drug problem calls its bluff.

While the previous discussion centers on levels of statistical significance, it is also important to consider substantive levels of significance. Substantively, the importance of the increasing level of the target's drug threat to the sender plays an important role. Holding all other values in the model constant at their median level and increasing the level of the drug threat by one standard deviation above its mean level produces an approximate 39% increase in the probability of the sender threatening sanctions. Figure 5.6 shows how increasing the level of drug threat from the target affects the probability of the sender threatening sanctions. As the amount of drugs produced and trafficked in

potential target countries increases there is a dramatic increase in the probability that the United States will threaten sanctions. As noted above, however, this may be a hollow threat and substantively we see in figure 5.7 that the sender is also more likely to back down from that threat as the level of drug production and trafficking in the target increases. Figure 5.7 also reveals that this propensity for the United States to back down from its threat only has substantive importance when the target is a very large producer/trafficker. Increasing the target's drug production index score by one standard deviation above the mean value only produces an increased probability of sanctions of about .1%. But as figure 5.7 illustrates, when the drug problem index reaches levels around 15-25, and then again between 25 and 40, the probability of the United States backing down from its threat begins to increase dramatically.

The deductive model of the previous chapter predicted that when the sender's value for the policy at dispute ( $\sigma$  - operationalized here through drug traffic in the target) increased it would be more likely to threaten sanctions (O-H1a). This hypothesis receives strong support both statistically and substantively. The second stage of this hypothesis (O-H2a) predicted that countries with a large amount of drug traffic will be less likely to comply with the United States' threat of sanctions. This is also supported in the empirical model by the negative coefficient on the Target Drug Threat or Problem (TDT) variable as it relates to the target's utility for complying with the sender's threat. Thus, as predicted, increasing levels of drug traffic will lead to a decreased probability of compliance. The final stage of this hypothesis is not supported. The theoretical model predicts that when there is less drug traffic in the target, the probability of sanctions given a threat will decrease. However, figure 5.7 clearly indicates that this is not the case.

## **Drugs in Democracies**

An interaction term is included in the target's utility function to see if the level of democratic institutions and the level of drug problem are interconnected in the target's utility for backing down at the threat of sanctions or after sanctions are imposed. It has been proposed that illicit narcotics trafficking presents a recognizable threat to democratic institutions (Jordon, 1999). If this were the case, I would expect democracies with a large drug problem to welcome the added pressure from the United States to help them combat the threat of drug traffickers corrupting their institutions. Under those conditions, democracies with a large drug problem should be significantly more likely to comply with the United States at the threat level. However, there is no statistical evidence of this happening. There is also no statistical evidence that implemented sanctions against democracies with a larger drug problem are more likely to be successful. Democracies with a large drug problem do not appear to be behaving any different from non-democracies.

## **The cost of the sanctions**

As proposed in the theoretical model, the other element that should have a significant impact on this interaction is the cost of sanctions. As in the other elements of the model, it is important to consider the cost of sanctions to both the target and the sender. Looking first at the sender's utility for threatening sanctions, we see that sender's are significantly less likely to threaten sanctions when they are potentially costly to themselves. This is primarily operationalized through total trade between the sender and

target<sup>44</sup>. While the sanctions are designed to be economically costless to the United States, indicting a foreign government as uncooperative in the struggle against the international trafficking of illicit narcotics certainly does not come without any cost. The negative repercussions of this action to the United States are likely to be magnified when the accusations are leveled at important trading partners. Thus, the positive coefficient on the total trade between sender and target is to be expected and shows that senders are less likely to threaten sanctions when they are expected to be costly. Once again this hints at a lack of commitment on the part of the United States with regard to combating narcotics trafficking and helps explain why targets with significant drug problems are seen later in the model to be unlikely to back down in the face of the United States threat. Furthermore, if the United States does threaten a country with which it has a large amount of trade it is more likely to back down at the implementation stage rather than impose sanctions if the target calls its bluff.

The substantive interpretation of the effect of the cost variables provides additional insight into the United States' behavior. Figure 5.8 shows how changes in the amount of trade between the target and sender affect the sender's propensity to threaten sanctions, holding other variable constant at their median. Given that the mean of the variable is 5.86, it is clear from the graph that for countries with an above average amount of trade with the United States, threats of sanctions under this policy are highly unlikely and changes in the amount of trade above the mean have little impact. However, for countries that the United States has little trade with, changes in the amount of trade have

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<sup>44</sup> In this empirical model the sender is always the US so total trade between sender and target is sufficient. If the sender varied, trade as a percentage of the sender's GNP would be a better measure since



a substantively large impact. Reducing the level of trade from the mean level to one standard deviation below the mean increases the probability of sanctions being threatened by approximately 38%.

Next, figure 5.9 shows the probability that the United States will back down once it has made its threat of sanctions. This figure shows that the United States is highly unlikely to back down from its threat with countries that it conducts little to normal amounts of trade. However, increasing trade by a standard deviation above the mean produces an increase in the probability that the United States will back down of about 20%.

These findings are mimicked in the political realm only not nearly as strongly. Senders are seen to be less likely (although not significantly so) to threaten sanctions against a democracy and significantly more likely to back down at the implementation stage if their bluff is called. Indicting another democratic government as complicit with international narcotics trafficking is certain to have lasting political costs for the United States. Thus, the more valued the relationship with the target is, the more costly imposing this type of sanction becomes and the less likely is its use. In fact we see that the United States is not significantly less likely to threaten the sanctions, but given the high political costs in terms of reputation for both the sender and target, they are significantly less likely to ever be implemented.

From the perspective of costs to the target, since the United States' drug sanctions do not specifically restrict trade with the sender it makes sense to analyze the economic costs of sanctions from a broader perspective. Since the sanctions specifically restrict the

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absolute measures would represent different relative costs depending on the size of the sender's GNP.

target's access to aid, targets that receive higher amounts of aid as a percent of their GNI will face higher costs. However, not only is United States aid cut off, but the United States also works to block the target's access to credit from the IMF and World Bank. This can force the target country to have to pay higher rates to secure credit from alternative sources and restrict capital inflows to the target. Not only will this action be more costly to those targets receiving high levels of aid as percent of GNI, but in general, countries relying on high levels of trade as a percent of GDP will also face higher costs. Less favorable terms of financing, and restricted aid levels leading to smaller amounts of available capital will be particularly harmful for countries relying on foreign trade. Moreover, the political stigma of being labeled as a type of international pariah state supporting international narcotics trafficking makes the political environment less attractive for foreign firms considering investment and trade with that country. Thus, as expected by the high potential cost of sanctions, countries receiving high levels of aid and participating in high levels of trade are statistically significantly more likely to cooperate with the United States if threatened with sanctions (as evidenced by the positive, significant coefficients on these variables at the threat stage in table 5.5). Moreover, if the sanctions are actually implemented, they are significantly more likely to be successful (Based on the positive, significant coefficients on these variables at the success stage in table 5.5).

While these variables measuring the cost of sanctions to the target have a great deal of statistical significance, the substantive significance is not nearly as great as we saw in the previous section covering the substantive significance of the cost of sanctions

to the sender. Figures 5.10 thru 5.13 show the minor variation in probabilities as these indicators are varied from minimum to maximum values.

In this section strong statistical support was found for O-H1b and O-H2b. The United States was seen to be significantly less likely to threaten sanctions against countries that it has a lot of trade with and countries that rely more on trade and aid were found to be more likely to comply with United States' threat of sanctions. Furthermore, O-H3a also receives support based on the finding that the United States will be more likely to back down after threatening sanctions against a country with which it has high levels of trade.

### **Regional Factors**

Another important factor to consider is whether the United States, as the regional hegemon, treats countries in South and Central America differently than countries in other regions of the world. The results show clear indications of the special relationship the United States has with other areas within its scope of influence. Holding other factors constant, the United States is significantly more likely to threaten sanctions against countries in the region, and those countries are significantly more likely to back down when faced with the threat of sanctions. The United States is also more likely to carry out its threat if necessary and initiate sanctions in the face of resistance by regional targets and those targets are more likely to be forced to comply if sanctioned. This behavior can be explained either as an example of the regional dominance of the United States or because the threat to the United States is greater when large drug producing and trafficking states exist within its own hemisphere. Thus, states that are closer pose a bigger threat to the United States and are more likely to draw the United States' attention.

Interestingly, while the United States is generally more likely to threaten, but also more likely to back down against states with a big drug problem, they are highly unlikely to back down once they have threatened a country in the region. Also, generally states with a larger drug problem are less likely to comply with the United States' threat of sanctions, but this is not the case with south and Central American countries. Regional countries are significantly more likely to back down when confronted with a threat of sanctions from the United States.

Table 5.6 shows the substantive importance of the regional dummy variable. This is a particularly important variable at the threat stage. Holding all other variables constant, the United States has been much more likely over the years to threaten countries in its region of influence. Holding other variables constant at their median levels and changing the regional dummy from 0 to 1 produces a staggering 64.5% increase in the probability that the United States will threaten sanctions. These regional countries are also seen to be much more likely to cooperate with the United States demands at the threat stage. South and Central American countries are 45.5% more likely to be deemed as cooperating by the United States.

### **Stability of the Target**

The final element of the empirical model is the stability of the target government. There is an argument in the literature that unstable countries characterized by internal conflict will utilize profits from illegal drug trade to finance rebellions. If this is the case, this might present a particularly difficult environment for sanctions to work whether it is at the threat or the implementation stage. Looking at the results of the model, we see that the United States is not significantly more or less likely to threaten these countries.

However, if the threat is made, it is highly likely to reach the sanctions stage as neither side is likely to back down. As one might expect, a target embroiled in internal conflict, is less likely to be responsive to the United States threat of sanctions. The United States, however, is less likely to be deterred from imposing sanctions against countries facing internal conflicts once they have been identified as a major non-cooperative drug trafficking state. Once sanctions are imposed, these states are no more or less likely to come into compliance. Perhaps, the outcome depends on whether the government or the opposition forces are in control of the drug resources.

The substantive effect of this variable is not great. Table 5.7 shows that the probability of the United States making a threat against a country engaged in internal conflict decreases by about 2%. Likewise, the probability of a country engaged in internal conflict backing down decreases by about 2%. In further stages, this variable carries even less substantive significance making less than a half a percentage of difference in the sender's decision to back down and in the eventual success of sanctions.

## **Summary of Support for Hypotheses**

### **Theoretical Hypotheses Not Generated from the Formal Model**

H1: Sanctions that are threatened against democracies should be more likely to be successful than those threatened against other regime types.

**SUPPORTED**

H2: Sanctions that are actually imposed against democracies should be less likely to be successful than those imposed against other regime types.

**NOT SUPPORTED BUT IN CORRECT DIRECTION**

H3: In general, senders should be more successful at using economic force to coerce targets to cooperate at the threat stage than at the implementation stage.

**SUPPORTED**

### **Stage One of Sanctions Model – Making a Threat:**

O-H1a: The United States will be more likely to threaten sanctions against countries that have a large amount of drug traffic through their country.

**SUPPORTED**

O-H1b: The United States will be less likely to threaten sanctions against countries that it has a lot of trade with.

**SUPPORTED**

O-H1c: The United States will be less likely to threaten sanctions against states with similar regime types.

**NOT SUPPORTED BUT IN CORRECT DIRECTION**

### **Stage Two of Sanctions Model – Compliance with Threat:**

O-H2a: Countries with a large amount of drug traffic will be less likely to comply with the United States' threat of sanctions.

**SUPPORTED**

O-H2b: Countries that trade more with the United States will be more likely to comply with United States' threat of sanctions.

**SUPPORTED**

O-H2c: Countries with a similar regime type to that of the United States will be more likely to comply with the United States' threat of sanctions.

SUPPORTED

Stage Three of Sanctions Model – Implementation of Threat:

O-H3a: When there is more trade between the sender and target, the probability of sanctions given a threat decreases.

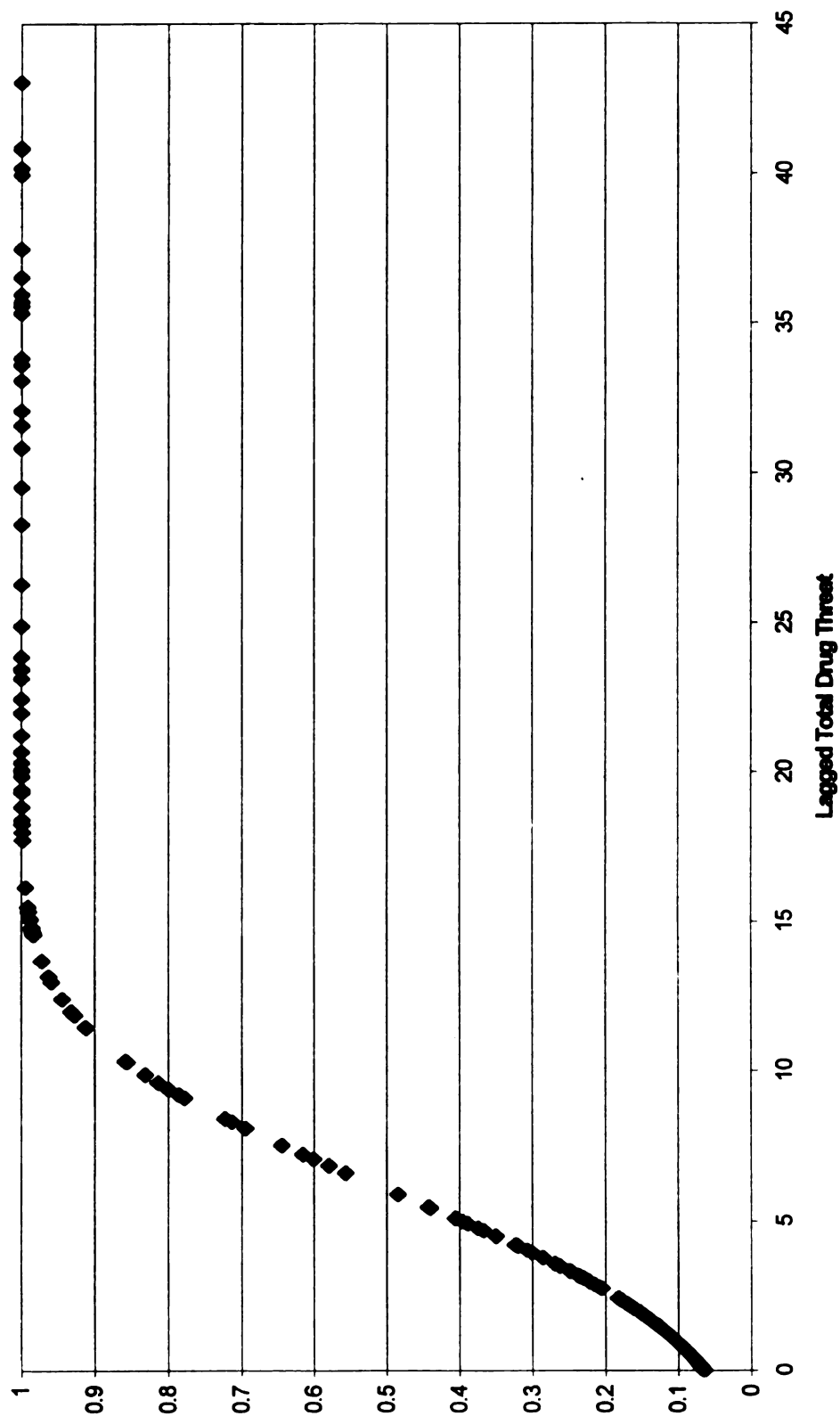
SUPPORTED

O-H3b: When there is less drug traffic in the target, the probability of sanctions given a threat decreases.

NOT SUPPORTED

O-H3c: When states have similar regime types, the probability of sanctions given a threat decreases.

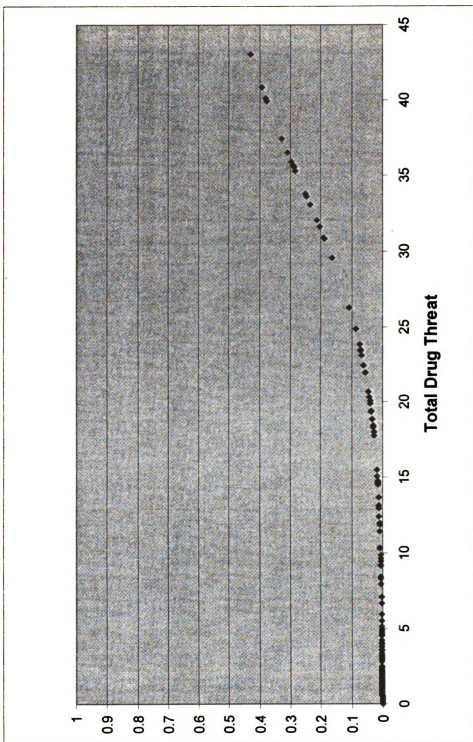
SUPPORTED



**Figure 5.6: Effect of Target Drug Problem on the Probability Sender Threatens Sanctions**

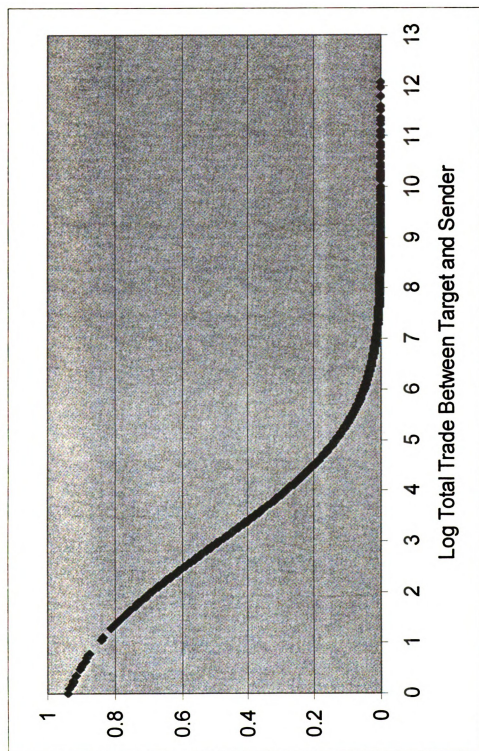
All Other Values at Median





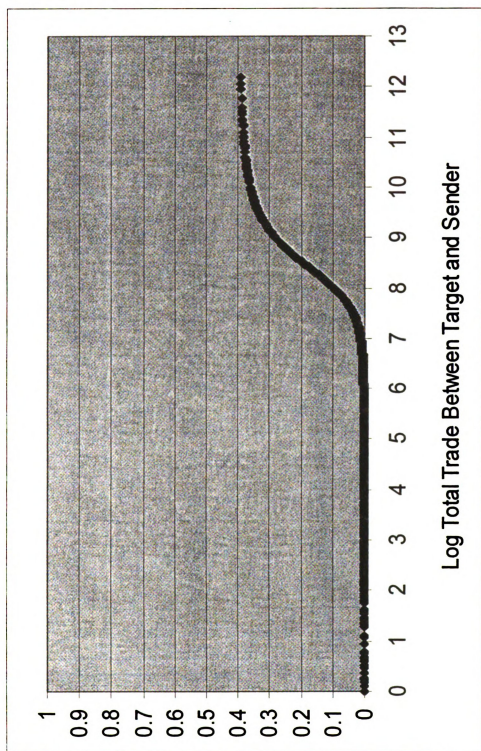
**Figure 5.7: Effect of Target Drug Problem on the Probability Sender Backs Down After Threatening**

All Other Values at Median



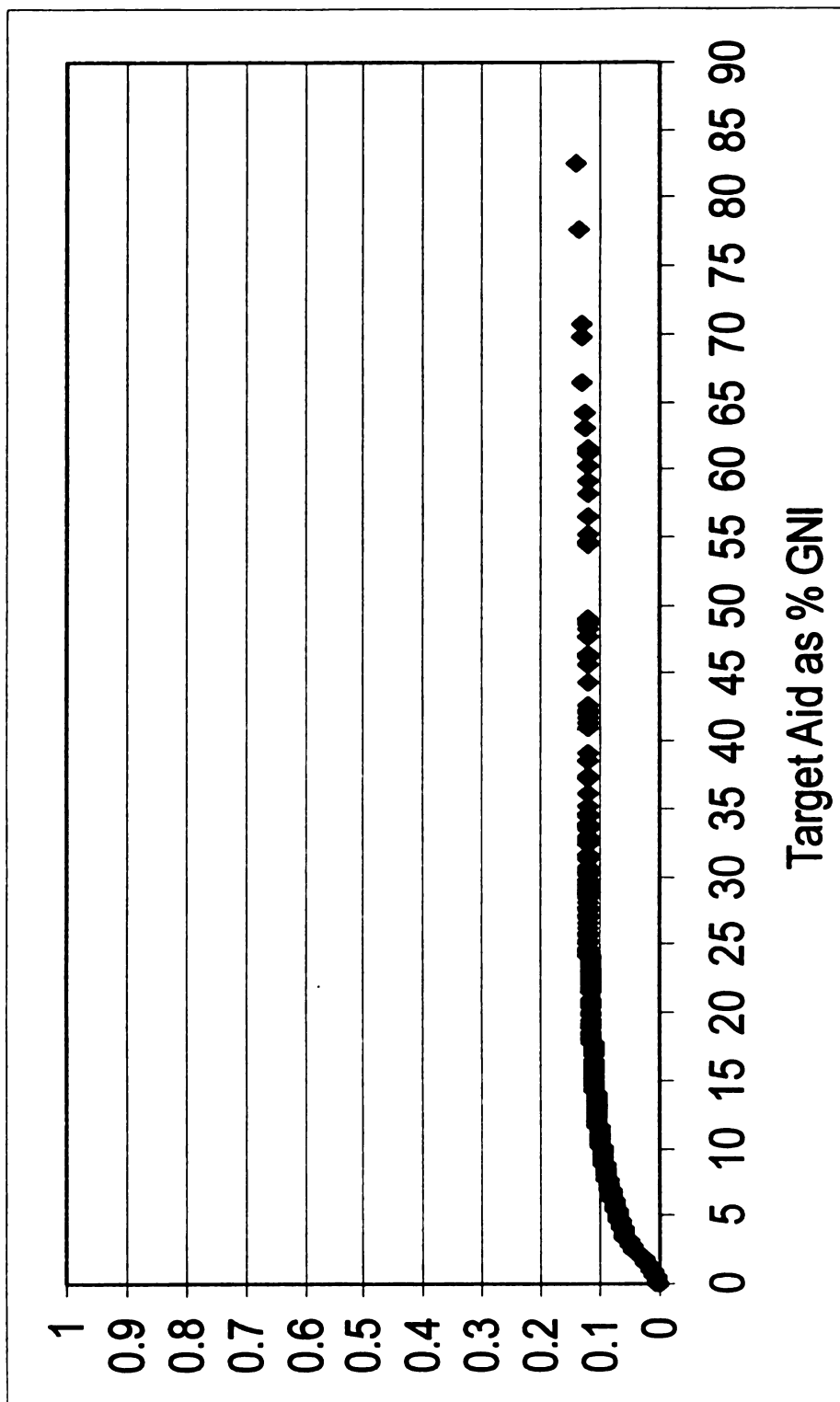
**Figure 5.8: Effect of Sender Target Trade Levels on Probability Sender Threatens**

All Other Values at Median



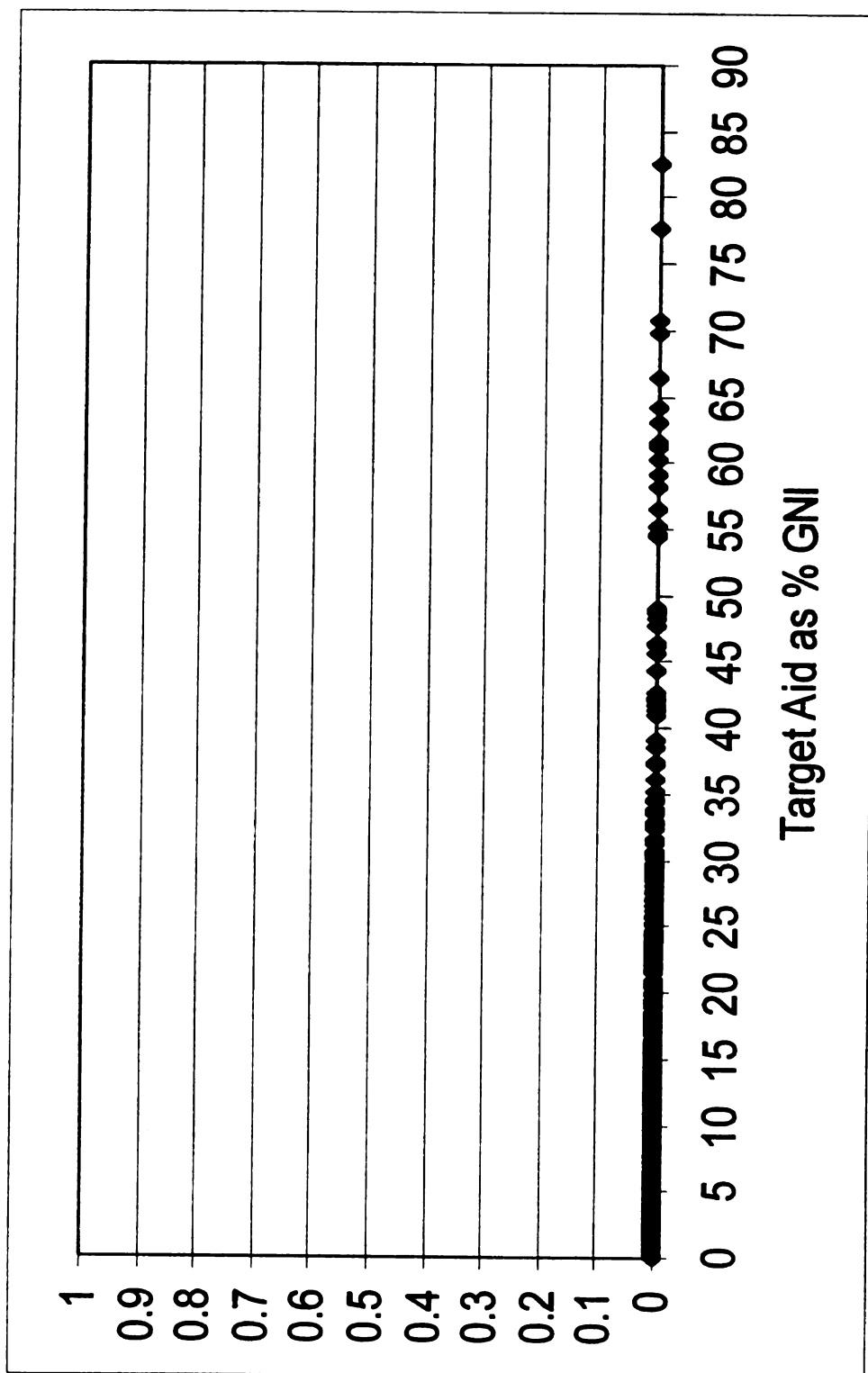
**Figure 5.9: Effect of Target Sender Trade on Probability Sender Backs Down After Threatening**

All Other Values at Median



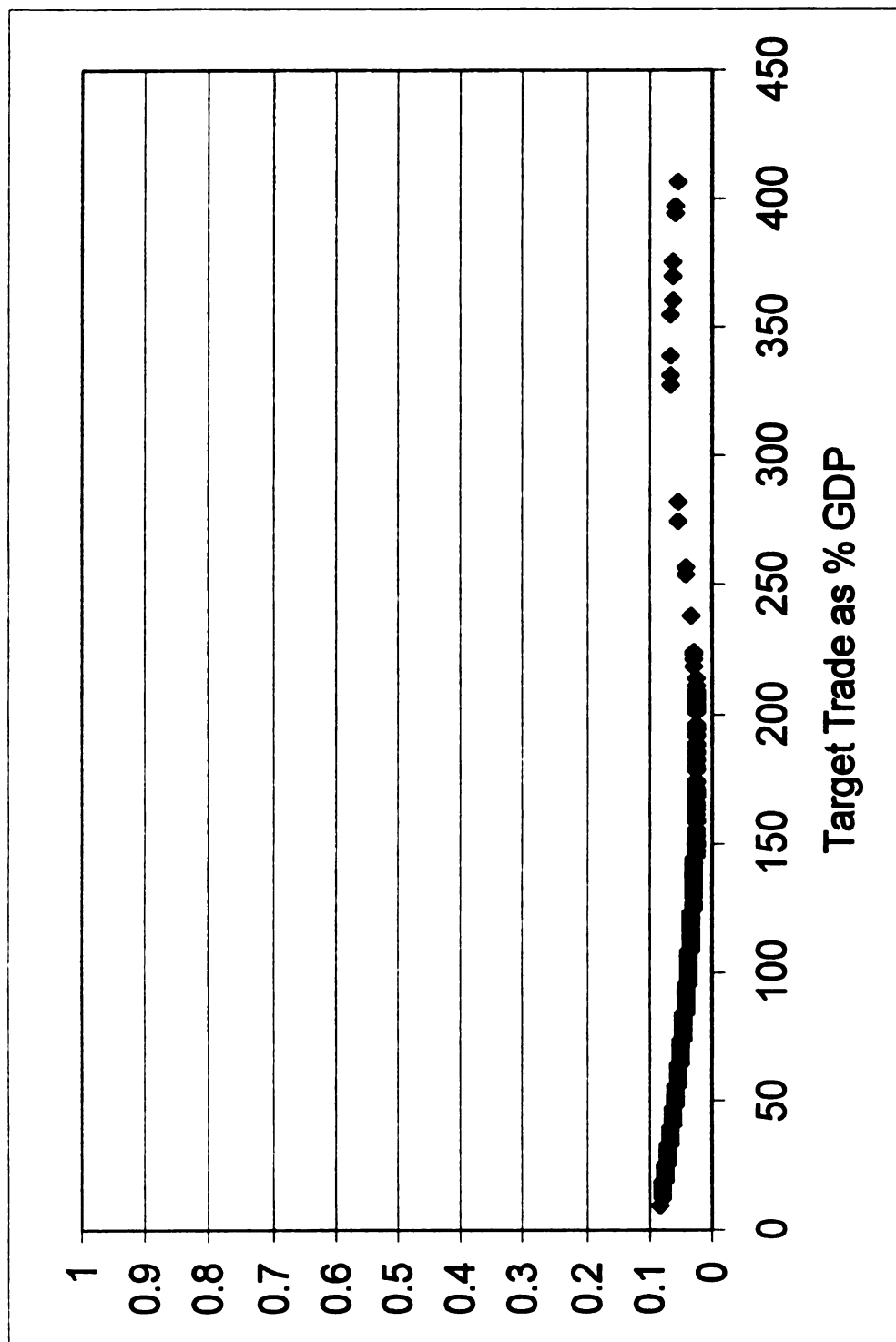
**Figure 5.10: Effect of Target Trade as % GNI on Probability Target Backs Down After Threatened**

All Other Values at Median



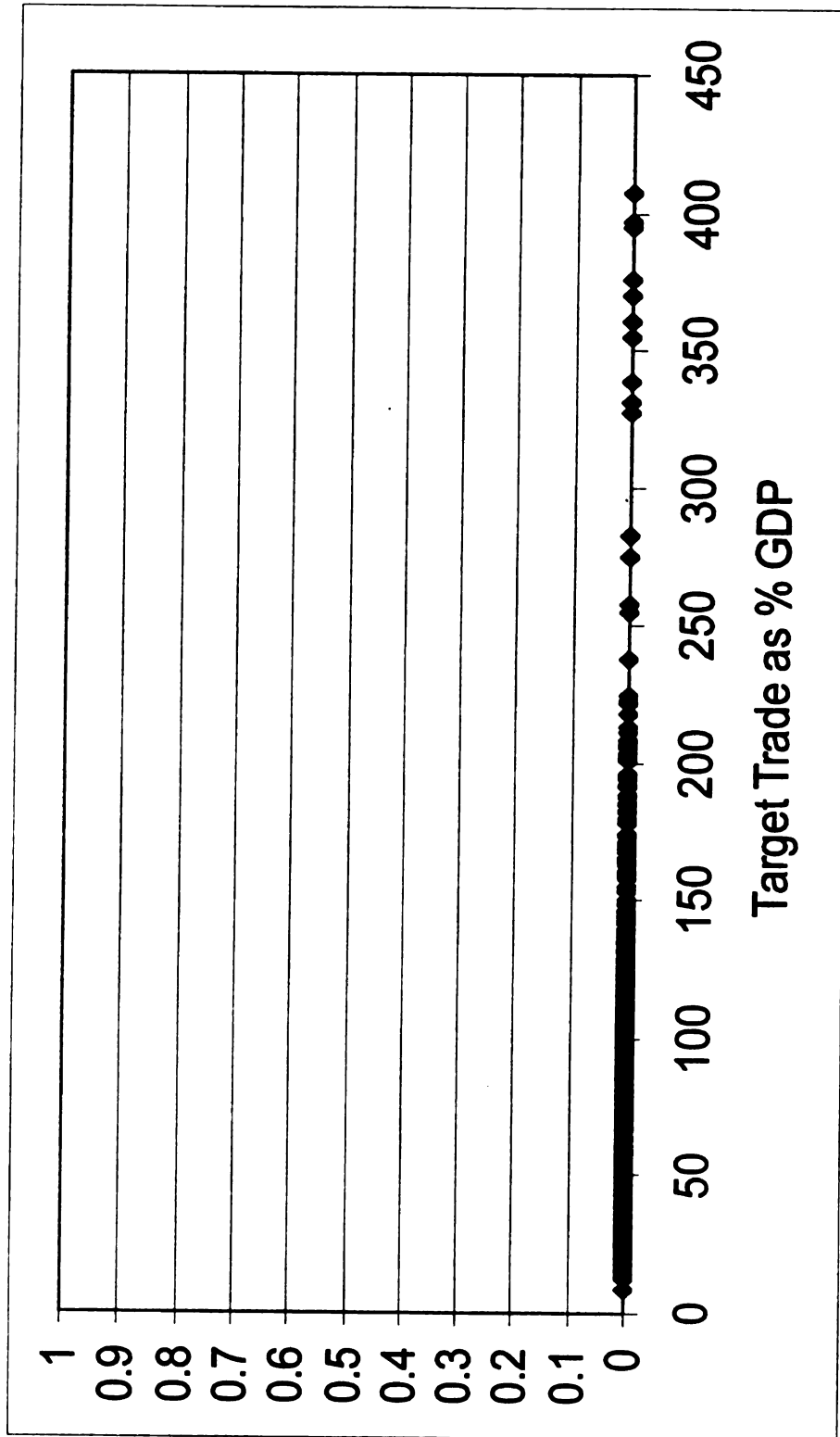
**Figure 5.11: Effect of Target Aid as % GNI on Probability Sanctions are Successful**

All Other Values at Median



**Figure 5.12: Effect of Target Trade as % of GDP on Probability Target Backs Down After Threatened**

All Other Values at Median



**Figure 5.13: Effect of Target Trade as % of GDP on Probability Sanctions are Successful**

All Other Values at Median

**Table 5.6: Change in Predicted Probability for South/Central American Dummy Variable**

	~South/Central		South/Central	Change in Prob.
	American Country	American Country		
Prob Threat	0.0647	0.7101	0.6454	
Prob Target Backs Down	0.0517	0.5069	0.4552	
Prob Sender Backs Down	0.1942	0.0014	-0.1928	
Prob Success	0.0007	0.005	0.0043	

Values indicate changes in predicted probabilities of event occurrence holding all other variables in the model constant at the median values



**Table 5.7: Change in Predicted Probability for Internal Conflict Dummy Variable**

	No Internal Conflict In Target	Internal Conflict In Target	Change in Prob.
Prob Threat	0.0587	0.0408	-0.0179
Prob Target Backs Down	0.0533	0.0356	-0.0177
Prob Sender Backs Down	0.0018	0.0003	-0.0015
Prob Success	0.0005	0.0011	0.0006

Values indicate changes in predicted probabilities of event occurrence holding all other variables in the model constant at mean values

### **Appendix A: Development of the Dependent Variable**

The following table shows, by year, the number of states that were affected by the United States sanctions policy against countries that are not cooperating to prevent the trafficking of illicit narcotics from or through their country.

<b>YEAR</b>	<b>NAMED</b>	<b>NAMED &amp; CERTIFIED</b>	<b>DECERTIFIED</b>	<b>DECERTIFIED &amp; WAIVED</b>	<b>SANCTIONED</b>
<b>1987</b>	24	19	5	2	3
<b>1988</b>	24	17	7	3	4
<b>1989</b>	24	18	7	1	6
<b>1990</b>	24	19	5	1	4
<b>1991</b>	25	20	5	1	4
<b>1992</b>	27	22	5	1	4
<b>1993</b>	27	22	5	2	3
<b>1994</b>	26	16	10	6	4
<b>1995</b>	29	18	11	6	5
<b>1996</b>	31	22	9	3	6
<b>1997</b>	31	22	9	3	6
<b>1998</b>	30	22	8	4	4
<b>1999</b>	28	22	6	4	2
<b>2000</b>	26	20	6	4	2
<b>2001</b>	24	20	4	2	2
<b>Total</b>	<b>400</b>	<b>299</b>	<b>102</b>	<b>43</b>	<b>59</b>

This data has been made available each year in an appendix of the International Narcotics Control Strategy Report (INCSR), which is prepared by the Bureau of International Narcotics Matters for the Department of State.

## **Appendix B: Countries Affected By United States Drug Sanctions Policy Since 1987**

The following is a list of all of the countries that have been affected by the policy. All countries not listed have never been named under this policy. A complete listing of each country's certification status by year can be obtained from the author upon request.

Afghanistan  
Aruba  
Bahamas  
Belize  
Bolivia  
Brazil  
Burma  
Cambodia  
China  
Colombia  
Dominican Republic  
Ecuador  
Guatemala  
Haiti  
Hong Kong  
India  
Iran  
Jamaica  
Laos  
Lebanon  
Malaysia  
Mexico  
Morocco  
Nigeria  
Pakistan  
Panama  
Paraguay  
Peru  
Syria  
Taiwan  
Thailand  
Venezuela  
Vietnam

## **Appendix C: Justification for Coding of Success Cases**

### **Syria 1998 – removed entirely from majors list after being sanctioned the year before.**

Syria was added to the Majors List in 1987 because opium in the Syrian-controlled Lebanese Biqa' Valley exceeded the threshold limits set by the Foreign Assistance Act of 1961, as amended. Syria was also accused of not actively preventing the transit of narcotics through territory under its control. Heroin and hashish produced in Lebanon were said to be transiting Syria in small quantities bound for Europe and the United States. Opium and morphine from Southwest Asia were also entering Syria via Turkey and transiting to processing labs in the Syrian controlled Lebanese Biqa' Valley. The lack of efforts by the Syrian government to control this drug trafficking through use of the military was a major reason for its 1987 decertification.

However, in 1992, Syria and Lebanon launched a successful eradication campaign, which has been sustained to the present, reducing the cultivated area of opium to approximately 150 hectares in recent (1999) estimates. The cultivation of cannabis, processed into hashish for primarily non-United States markets, was also reduced drastically during the same period. Syria also assisted Lebanese officials in implementing a ban on further cultivation of illicit crops, participated in narcotics seizures and raids on drug processing labs inside Lebanon, and arrested individuals trying to carry drugs through Syrian checkpoints. Syria also cooperated with the Lebanese government to eradicate most of the opium poppy in the Biqa' Valley. In recognition of these efforts, Syria was removed from the Majors List in 1997. (Source: 1999 INCSR)

### **Iran 1999 – removed entirely from majors list after being sanctioned the year before.**

The Islamic Republic of Iran is a major transit route for opiates smuggled from Afghanistan and Pakistan to Russia and Europe. However, according to the International Narcotics Control Strategy Report of 1998, Iran is no longer a major drug-producing country. A 1998 United States government survey concluded that the amount of opium poppy cultivation was negligible, down from an estimated 3500 hectares in 1993. Even though Iran is still a transit route, Iran's drug interdiction programs are apparently large and aggressive, even if only partially successful at stemming the flow of illicit drugs. UNDCP teams visited Iran three times in 1998, and in January 1999 Iran and the UNDCP signed an agreement to expand UN-Iranian cooperation, including opening a UNDCP office in Tehran. In the International Narcotics Control Strategy Report of 1998 it was also reported that while regional cooperation efforts by Iran are limited in scope and number, they have been mentioned favorably by the Dublin Group and the UNDCP, and appear to signal a new willingness to cooperate with the international community on counter-narcotics matters. (Source: 1998 INCSR)

**Panama 1990 – Goes from sanctioned to named and certified**

The United States imposed sanctions on Panama in 1988 and 1989 for lack of cooperation with the drug effort. During this time, Panama was ruled by the authoritarian regime of Manuel Noreiga. In 1990, after the ouster of Noreiga, the United States received full compliance from the new regime and was able to move Panama from the decertified and sanctioned list to the named and certified as cooperating list. Later, in 1994, the United States once again decertified the Panamanian regime as not cooperating in the effort to prevent drug production in its country and trafficking to the United States. However, unlike in 1988 and 1989 when the United States was trying to coerce the hard

line government of Noriega, in 1994, the United States failed to carry through with its threat, choosing instead to grant Panama a national interest waiver. The question is, why did the United States behave differently in 1988 and 89 when facing an authoritarian regime than it did in 1994 when facing a democratic regime? Also, why did Panama change its behavior and begin to cooperate with the United States in 1990 after its regime transitioned to democracy? Based on the theory and formal model presented earlier both the United States' and Panama's behavior were to be expected.

Looking at Panama's behavior first, several elements of their expected utility for production and traffic of illicit drugs changed between 1989 and 1990. First, the type of regime changed from authoritarian to democratic. This alone should have changed the incentive structure for political leaders regarding whether they should challenge or support drug lords in their country. As democratic leaders, their incentive came from successful public policy rather than providing private goods to leaders of the drug community. This coupled with a new regime not wanting to risk challenging the United States and being discredited with failed policy could have been enough to swing Panama's position to one of cooperation with the United States. Another possible factor from the model that may have influenced Panama's decision is that as the United States' chosen successor regime the value of cooperating with the United States and receiving foreign aid should have increased dramatically from the expected value during the Noriega days. In fact, the United States' aid to Panama increased by an incredible amount between 1989 and 1990. United States aid in 1989 was about 1 million dollars and in 1990 it increased to approximately 400 million dollars.

Turning to the United States' behavior change from its use of sanctions in 1988 and 1989 to its decision to grant Panama a national interest waiver in 1994, I also see a clear explanation provided by the theoretical model. Dealing with an autocracy in 1988 and 1989 the United States recognized the existing problem with drug production and traffic in Panama and threatened sanctions if the Panamanian government did not cooperate with the United States in combating this problem. When Panama's leadership refused to comply with the United States' demands, the United States could have backed down and granted a national security waiver or turned up the pressure for compliance by imposing sanctions and cutting off all aid. Since the model predicts that autocracies will be more likely to back down after initial refusal to comply with threats, the United States' actions made rational sense. Later, in 1994, when the United States was dealing with a democratic government in Panama, their behavior was predictably different. Once the leadership of Panama decided that it was in its best interest to resist the threats of the United States, there was little chance that sanctions would lead to their backing down. At this point, the United States turned back to its carrots of economic aid and diplomacy to gain compliance from Panama in the following and all subsequent years. The United States was able to show its dissatisfaction with Panama's lack of cooperation in combating illicit narcotics, but when Panama chose not to give in to the United States' demands, the United States was forced to back down and grant Panama a national security waiver. It is interesting to note that in 1994 Panama was also in a very strong position, having just received a \$7.5 million export/import bank loan to stimulate trade with the United States. Sanctioning Panama at that point would seem counterproductive to the United States.

## **Laos 1990 – Goes from sanctioned to named and certified**

### **History of certification status**

Laos was one of the original countries to be decertified under the current United States drug sanctions policy. In 1987 and 1988 Laos was decertified, but sanctions were waived by the United States for national security reasons. In 1989 Laos finally drew sanctions for the first time, as the United States decertified Laos and did not issue a waiver. However, these sanctions were short-lived, and Laos received full certification for cooperating in the war against international narcotics trafficking in the following year, 1990. Laos maintained that status, as cooperating, for the next four years, but in 1994 they were again decertified with a national security waiver being issued. Once again, decertification lasted only one year and Laos returned to full certification status in 1995 and has remained there until the present.

### **The Success of the United States Drug Sanctions Against Laos**

In 1987 when the United States first announced its certification status Laos was one of 5 countries that were decertified for lack of cooperation in the control of illicit narcotics traffic. These 5 countries were Laos, Lebanon (both receiving waivers) Afghanistan, Iran and Syria (who were actually sanctioned). In 1988, the list was expanded to 7 countries with Laos once again receiving a national security waiver. Finally, in March, 1989, the United States stepped up the pressure on Laos by decertifying it without issuing a waiver. Thus for the first time, Laos was subjected to the punishments under this policy.

1989 saw the United States decertify and sanction 6 countries, equaling the highest total of any year under the policy (there were also 6 countries sanctioned in 1996



and 1997). There was widespread pessimism regarding the “war on drugs” at the time. Secretary of State James Baker reported to congress at the time of the certification announcements that “the international war on illegal drugs was clearly not being won and might even be slipping backwards” (Drug War May Be Slipping Backwards, Baker Says. St. Louis Post-Dispatch. March 2, 1989).

However the prevailing thought was that the sanctions were more symbolic than instrumental, as is evidenced by the following quote “But that step [decertification] is virtually meaningless, since neither nation [Burma and Laos] or the others in the same list – Afghanistan, Iran, Syria and Panama – receives any U.S. aid” (Drug War May Be Slipping Backwards, Baker Says. St. Louis Post-Dispatch. March 2, 1989). This is a common view even today when the United States threatens sanctions against countries with which it has minimal trade ties. However, this view is perhaps too facile since there were many economic issues at stake and there was a growing acknowledgment by the Lao government that it “appeared to be falling increasingly behind the dynamic economies elsewhere in the region, including neighboring Thailand” (Gedda, 1990). And even though it was true that Laos received very little direct aid from the United States at the time (in 1988 and 1989 it received \$1.8 and \$1.5 million from the United States Food For Peace program) it was receiving an increasing amount of aid from international organizations. This is an important point because as part of the drug sanctions United States representatives would be required by law to vote against Laos receiving aid from any organizations in which it takes part. The following table shows that Laos did potentially have a lot to lose if the United States were to use its leverage to curtail Laos’

access to international aid from the World Bank Group's International Development Association, which was there largest source of International Aid in 1989 at \$53.5 million.

#### **International Assistance to Laos, 1986-1998**

<b>Year</b>	<b>Total</b>	<b>IBRD</b>	<b>IFC</b>	<b>IDA</b>	<b>IDB</b>	<b>ADB</b>	<b>AFDB</b>	<b>UNDP</b>	<b>OTHUN</b>	<b>EEC</b>
1986	23.4	0	0	3.9	0	12	0	7.5	0	0
1987	35.9	0	0	25.8	0	0	0	6.9	3.2	0
1988	57.5	0	0	14.1	0	34.5	0	8.9	0	0
1989	94.8	0	0	53.5	0	31	0	10.3	0	0
1990	83.7	0	0	44.7	0	39	0	0	0	0
1991	91.9	0	0	45	0	41.3	0	5.6	0	0
1992	127.7	0	0	40	0	73.6	0	8.1	6	0
1993	128.5	0	0	55	0	67	0	6.5	0	0
1994	96.5	0	0	48.4	0	43.2	0	4.9	0	0
1995	175	0	0	19.2	0	151.1	0	4.7	0	0
1996	162.4	0	0	60.7	0	91.7	0	9	1	0
1997	180.9	0	0	48	0	117.7	0	9.9	5.3	0
1998	64	0	2.3	34.7	0	20	0	7	0	0

#### **Table of Abbreviations**

<b>Total</b>	<b>Total Assistance From International Organizations</b>
<b>IBRD</b>	<b>International Bank For Reconstruction and Development (World Bank Group)</b>
<b>IFC</b>	<b>International Finance Corporation (World Bank Group)</b>
<b>IDA</b>	<b>International Development Association (World Bank Group)</b>
<b>IDB</b>	<b>Inter-American Development Bank</b>
<b>ADB</b>	<b>Asian Development Bank</b>
<b>AFDB</b>	<b>African Development Bank</b>
<b>UNDP</b>	<b>United Nations Development Program</b>
<b>OTHUN</b>	<b>Other United Nations Programs</b>
<b>EEC</b>	<b>European Economic Community</b>

In 1990, after one year of sanctions, the United States removed Laos from the list of countries deemed not to be cooperating in the war against drugs and provided it with full certification status. This is a significant incident in the relations between Laos and the United States and represents one of the few success stories for the United States drug sanctions policy. This success came in two parts. First, Laos did appear to be making strides to cut into its levels of drug production. In the two years prior to its removal from the list, Laos went from cultivating approximately 19% of the world's opium, to only

about 11%. During the year in which it was sanctioned Laos cut its cultivation of opium from approximately 42,000 hectares to about 30,000 hectares, representing approximately a 29% reduction in its opium cultivation in a single year. As a direct result, the opium produced by Laos dropped from 380 MT to 275 MT (a 27% reduction in production). Although I was not able to locate seizure data for 1989 (the year Laos was sanctioned) 1990 (the year they were removed from the list) was a record year for Laotian drug seizures. In 1990, Laos seized more total opium products than in any other year from 1987-1999 (615Kg). Much of this total was confiscated in one spectacular seizure in March of 1990 where 337.2 kilograms of refined narcotics were seized by Lao border guards in the northern province of Bokeo (Laos destroys confiscated narcotics. Zinhua News Agency. June 19, 1990).

The second area of success for the policy leading to the certification of Laos in 1990 was political. In January 1990, the United States and Laos agreed to establish ground rules for cooperation between the two governments in combating drug trafficking. Margaret Tutwiler, speaking on behalf of the State Department announced the agreement and reported that it marks a “significantly improved” American relationship with Laos. (U.S.-Laos Anti-Drug Effort. New York Times. January 10, 1990) Clearly the United States had an integrated policy of both dangling carrots in the form of economic aid and investment while constantly maintaining the threat of removal of all aid through drug decertification.

A complex set of issues was unraveling as Laos sought to shift control of its state run economy to the private sector by selling off state enterprises in an effort to attract foreign investment. (Gedda, George. Relationship between United States, Laos

Improving, Officials Say. The Associated Press. July 4, 1990). In the fall of 1989 the United States began making overtures to Laos that would simultaneously help it reduce drug cultivation and bring much needed capital to its economy. First, the United States and Laos agreed on a development aid project, which was the first anywhere in Indochina in 15 years and promised \$8.7 million to persuade farmers in northeast Laos to cultivate crops other than opium. (Gedda, George. Relationship between United States, Laos Improving, Officials Say. The Associated Press. July 4, 1990). This was an essential step in helping the Laotian government appease the portion of its population that relies heavily on opium cultivation as their main crop. "The Laotian government must tread warily with the hill people. Because they make up less than half the population, they have in the past felt discriminated against by the lowland Laotians, who in effect run the country." (Pringle, James. "America Joins battle against opium growing in Laos." The Times. December 29, 1990) This group, known as the Hmong, has been cultivating opium for well over a hundred years. Opium is their cash crop and a way of life according to a ruling Lao People's Revolutionary party central committee member. Aided by the \$8.7 million in United States funds, "The government will try to change the Hmong way of life by giving them more opportunity to raise cattle and eventually plant coffee and other crops." (Pringle, James. "America Joins battle against opium growing in Laos." The Times. December 29, 1990)

Second, the United States began unprecedented talks to send Peace Corps volunteers to Laos, which would mark the first time Peace Corps volunteers would ever work in a communist country. These talks lead to a \$300,000 Peace Corps Grant to Laos in 1991 (United States Overseas Loans and Grants). However, the agreement fell through

in the spring of 1992 because Laotian party leaders feared the potential subversive impact of the Peace Corps workers. (Savada, 1995)

As is always the case in economic statecraft, the United States was not simply giving away economic favors – it sought, and received, much in return. Along with wanting to encourage the opening of Laos' markets to encourage capitalism and free trade, the United States was primarily interested in two issues: POWs and Drugs. Pursuing the return of United States prisoners of war captured during fighting in the late 60's and early 70s continued to be an important domestic issue for United States politicians throughout the 80s and 90s. As part of this easing of tensions between the two countries, Laos set free several thousand political prisoners and allowed United States representatives to tour remote areas where United States warplanes crashed as part of an increased effort to account for Americans killed in Laos during the Vietnam War.

The other major issue on the United States agenda was drug production and trafficking. While the United States was dangling many economic incentives, the linkage between the economic incentives and Laos' increased effort at preventing drug smuggling and production in its country was made clear. Thus, the January 1990 agreement "in which Laos promised a maximum effort to halt the cultivation and trafficking of opium" (Gedda, George. Relationship between United States, Laos Improving, Officials Say. The Associated Press. July 4, 1990) was crucial.

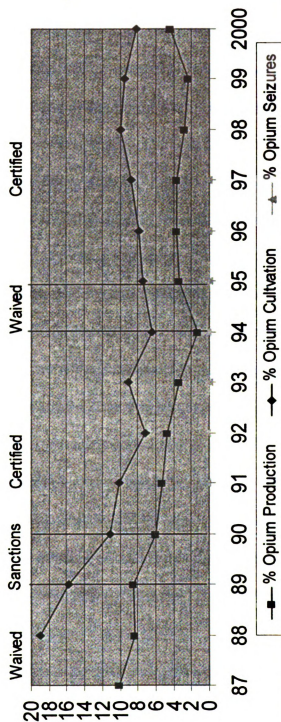
In April 1994, the United States again decertified Laos for its lack of cooperation but issued a national security waiver so that sanctions were never implemented. In essence, it was determined that the waiver was in the United States national interest in order to exact continued cooperation on the POW/MIA issue. (Savada, 1995) This may

have been partly responsible for the International Development Association (IDA) only providing \$19.2 million in aid in 1995. It is interesting to note that the Asian Development Bank (ADB) more than made up for any loss in aid from the IDA by providing a high of \$151.1 million in aid during the same year.

**Coding:**

Laos has continually been under threat of sanctions every year since the policy was put in place in 1987. In 1987, 1988, 1989, and 1994, the United States has reported that Laos was not cooperating fully in the preceding year. In 3 of those 4 years, however, the United States failed to carry out its threat of imposing sanctions even though Laos was deemed to be in non-compliance. In those three years a threat was made, the threat was resisted and the threat is viewed to have failed since the sanctions were waived. Only in 1989 was the United States willing to carry out its threat in the face of resistance and impose the threatened sanctions. However, because in 1990 Laos responded with clear steps to appease the United States interests, this implementation of sanctions is coded as a success for that year. Then in the years 1990-1993 the mere threat of sanctions is coded as having been enough to achieve cooperation. However in 1994, the threat is again coded as having failed (with the United States backing down) since compliance was not forthcoming and the United States was unwilling to carry out its threat. In the years 1995-2000 Laos again was seen to be taking steps to combat drug trafficking and while still under constant threat received certification. Thus, each of these years is coded as a successful threat.

Laos: Percent of World's Opium Production, Cultivation, and Seizures



## **Appendix D: Information on Seizures as a measure of drug traffic.**

The United States sanctions policy is described as being aimed at countries with a high volume of illicit narcotics production or traffic. One method of measuring the amount of illicit narcotics trafficking through a country is by observing the amount of drugs seized by that country. This is also the measure commonly used by international institutions for measuring illegal drug traffic. The UNDCP states “Data on drug seizures provide indications of the trafficking situation” (United Nations International Drug Control Programme, 1999; p.20). Although seizure data could reflect both drug trafficking and the efforts of law enforcement agencies, the UNDCP maintains that “statistics on seizures, particularly if observed over a longer period of time, reflect trafficking trends and facilitate the discovery of possible new developments” (United Nations International Drug Control Programme, 1999; p.20).

This measure also has an advantage over simply measuring the amount of narcotic drugs cultivated in a country. For example a country may not produce much of a drug on its own, but it still may be a major transit hub for distribution of that drug throughout the world. In this case, simply observing the amount of narcotics cultivated for that country would lead to the conclusion that there is not a narcotics problem in that country. On the other hand, any country that either produces or transits large quantities of illicit narcotics would be expected to have a high amount of seizures.

Seizure data is primarily obtained from the United Nations Statistics on Narcotics Drugs 1986-2000. The source of the UN report is statistical information furnished to the UN by governments in accordance with international treaties on narcotics. In some cases seizure data is not available from the UN, due to a failure by the country to report.



Whenever possible, missing data of this type is supplemented with information from the International Narcotics Control Strategy Report (INCSR). The INCSR prepares a yearly report to the president of the United States on Narcotics production and traffic.

Whenever possible the UN data is used because the INCSR is more likely to be biased with respect to this analysis. Since the president basis his decision regarding the use of sanctions on the information provided from the INCSR, the UN data is preferred. It is possible that the INCSR could be used to make certain countries, that the United States wants to sanction, look like they have a larger narcotics problem. The UN is much less likely to have this type of bias.

Seizure data is divided into three different categories depending on the type of plant used in the manufacture of the narcotic. The three basic categories are Cannabis (Consisting of marijuana and cannabis resin), Coca (consisting of coca leaf, coca paste, and cocaine hcl), and Opiates derived from poppy plants (consisting of heroin, morphine and opium).

The trafficking of cannabis exceeds the traffic of all other drugs in terms of geographical distribution. Cannabis is a tobacco-like greenish or brownish material consisting of the dried flowering, fruiting tops and leaves of the cannabis plant. The trafficking of cannabis includes both herbal cannabis and cannabis resin. "Cannabis resin means the separated resin, whether crude or purified, obtained from the cannabis plant" (1961 Convention, art. 1 para. 1). Cannabis resin is commonly referred to as hashish, which was once a general term for cannabis in eastern Mediterranean areas. North America (Canada, Mexico, and USA) has accounted for about half the seizures of cannabis during the 90's.

Coca leaves are used in the production of coca paste, which is processed into cocaine. "Coca leaf means the leaf of the coca bush from which all ecgonine, cocaine and any other ecgonine alkaloids have been removed" (1961 Convention, art. 1, para. 1). Throughout the 90's the USA has produced the largest number of seizures followed by Columbia, Mexico and Peru. It takes approximately 150 pounds of coca leaves to make one pound of powder cocaine. The leaves of the plant are crushed into a coca paste, which through a process of synthesis is eventually added to other substances to produce powder cocaine. Coca paste is an intermediary product in the chemical extraction of cocaine from coca leaves. Coca paste is an extract of the leaves of the coca bush. Purification of coca paste yields cocaine. Cocaine HCL is the pure white crystalline powder that is either snorted or injected. Cocaine is the main psychoactive alkaloid prepared from coca leaves. It can also be synthesized in a laboratory and is generally encountered as the hydrochloride salt (hcl).

Opium and its derivatives, heroin and morphine, combine to form the third seizure group. "Opium means the coagulated juice of the opium poppy. Opium poppy means the plant of the species *Papaver somniferum L*" (1961 Convention, art. 1, para. 1). Morphine is an alkaloid extracted from opium or poppy straw. Heroin is a semi-synthetic opiate synthesized from morphine. The Near and Middle East account for the majority of the seizures of these narcotics.

In the fourteen year history of United States sanctions under this policy eight countries have been sanctioned. In the table below, each of those eight countries are listed along with the outcome of the sanctions.

<b>Country</b>	<b>Years Sanctioned</b>	<b>Outcome</b>	<b>Polity at time of sanctions</b>	<b>Polity at outcome</b>
Afghanistan	81-92 and 95-00	Waived in 93	-7	-77*
Nigeria	94-98	Waived in 99	-7	4
Columbia	96-97	Waived in 98	7	7
Laos	89	Certified in 90	-7	-7
Panama	88-89	Certified in 90	-8	8
Iran	87-98	Removed from list in 99	-6	3
Syria	87-97	Removed from list in 98	-9	-9
Burma	89-00	Ongoing	-8	-9

\*A "-77" code for the Polity component variables indicates periods of "interregnum," during which there is a complete collapse of central political authority. This is most likely to occur during periods of internal war.

## Appendix E: US Drug Sanctions: Countries threatened and countries sanctioned

Country	Years Threatened	Polity at time of Threat	Years Sanctioned	External United States sanctions	Outcome	Polity at time of sanctions	Polity at outcome
Afghanistan	87-00	-7	87-92 and 95-00	99	Sanctions Waived in 93	-7	-77*
Aruba	98-99	N/A					
Bahamas	87-00	N/A					
Belize	87-94, 96-99	N/A					
Bolivia	87-00	9		79-82 Drug traffic			
Brazil	87-00	8		78-81, 62-64, 77-84			
Burma	87-00	-8	89-00	88-present	Ongoing	-8	-9
Cambodia	96-00	1		92-present			
China	92-00	-7		89-present			
Columbia	87-00	8	96-97		Sanctions Waived in 98	7	7
Dominican Republic	95-00	5		60-62			
Ecuador	87-00	8		95-98			
Guatemala	91-00	3		77-present 93			
Haiti	95-00	7		91-94			
Hong Kong	87-00	N/A					
India	87-00	8		65-67, 71, 74-76, 78-82, 98			
Iran	87-98	-6	87-98	51-53, 79-81, 84-present,	Removed from list in 99	-6	3
Jamaica	87-00	10					
Laos	87-00	-7	89	56-62,	Certified in 90	-7	-7
Lebanon	87-97	-77*		87-97			
Malaysia	87-98	5		63-66			
Mexico	87-00	-3		38-47,			
Morocco	87-93	-5					
Nigeria	87-00	-7	94-98		Sanctions Waived in 99	-7	4
Pakistan	87-00	-4		71, 74-76, 79-present			
Panama	87-00	-6	88-89		Certified in 90	-8	8

Appendix E: Continued							
Paraguay	87-00	-8		96			
Peru	87-00	7		68, 68-74, 91-95, 95- 98,			
Syria	87-97	-9	87-97	86-present	Removed from list in 98	-9	-9
Taiwan	95-00	7		76-77,			
Thailand	87-00	2					
Venezuela	92-00	8					
Vietnam	95-00	-7		63, 78-88, 54-98			

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