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International Economic Sanctions Outcome: The Influence Of Political Agreement

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DEDICATION

I dedicate this dissertation to my beloved parents, Mr. and Mrs. Onder, who have always been a source of inspiration and encouragement to undertake my graduate education abroad. I could not have done this without you. Thank you for all of your support along the way.

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CHAPTER 1 INTRODUCTION

Background

This research attempts to resolve a recurring empirical problem in world politics literature concerning the association between international relationships and economic sanctions. International relations (IR) scholars' assessments of economic sanctions outcomes have suggested contrasting views on the role of international organizations' (IO) involvement in sanctions regimes. Results from empirical studies have concluded that unilateral sanctions are more successful than multilateral sanctions (Drezner, 2000; Miers & Morgan, 2002). Drezner (2000) argued that despite the intuition that seeking more partners benefits sanctions regimes, problems of bargaining, enforcement, and coordination are more plentiful and can result in sanctions being less effective. Conversely, recent empirical analyses using new data suggested that multilateral sanctions, smart sanctions, especially those under the auspices of international institutions, can be effective (Cortright & Lopez, 2002). The costs of sanctions are distributed on a number of actors and the cooperative framework exerts stronger political pressure on the target (Mansfield, 1995; Drezner, 2000; Thompson, 2006). This study explores the role of political agreement in unilateral and coalition (multilateral) economic sanctions.

Economic sanctions are measures intended to alter the behavior of a given state. They are "economic measures directed to political objective" (Barber, 1979, p. 376). Therefore, the level of political agreement (LPA) among sanctioning states influences sanctions' levels of effectiveness. Higher levels of political agreement among sanctioning states has been associated with more successful sanctions regimes, including greater cooperation, coordination and enforcement among sender states, resulting in higher disutility on the target. Further, multilateral sanctions featuring

greater LPA constitute a higher degree of moral legitimacy, making the target more likely to change its behavior consistent with the demands of the sanctioning coalition.

According to Bapat and Morgan (2009), central to the contemporary debate regarding the effectiveness of economic sanctions is controversy regarding the role of variables such as the view of international institutions' toward their involvement. Bapat and Morgan (2009) proposed three different explanations underlying this controversy (i.e., selection effects, public goods, and spatial theory), and conclude that unilateral sanctions are more effective than multilateral ones. First, they argued that the vast majority of multilateral sanctions concerned high stake political issues. Despite the high costs of sanctions paid by the target, such costs do not overweigh the value of the issue at hand, producing a less effective sanctions regime. Second, coalition sanctions present a classical collective action problem. In a coalition of sender states, individual states have the incentive to free ride on the public goods furnished by other coalition members. Therefore, a coalition member or sender state may not enforce the sanctions by allowing business transactions with the target state, thus reducing the disutility of the sanctions and jeopardizing the effectiveness of the sanctions' regime. Third, and most important to the present study, is the level of agreement over demands among sender states (Kaempfer & Lowenberg, 1999). The principal sender's political priorities may differ significantly from secondary senders, resulting in ineffective pressure over the target and rendering sanctions less successful.

Coalition sanctions especially entail a bargain between the principal sender and the target states. Drezner (2000) argued that if the principal sender and the target perceive no benefit from resolving the political deadlock caused by economic sanctions, multilateral sanctions can be expected to fail. This conclusion indicates that cooperation in economic sanctions may not necessarily lead to effective sanctions. Lektzian and Patterson (2015) also noted the existence of a

bargaining dilemma among participating states in sanctions coalitions. States must find common grounds to foster cooperation, which can be difficult, as well as facilitate the enforcement and effectiveness of sanctions. The multiplicity of actors' differences in motivations among them, and different levels of involvement of each actor, as well as target resolve make it more difficult for coalition sanctions to be effective.

Many scholars have pointed to the credible commitment problem, the difficulty in enforcing coalition sanctions given the benefits of unilateral defection (Martin, 1992; Martin 1993b; Pollack, 2003; Posner & Sykes 2013). Sanctioning states generally are better off if all states comply with enforcing sanctions. However, states may realize economic benefits by defecting and conducting economic transactions with the target, while other states incur the enforcement costs. Larger sanction coalitions generate higher economic rents because each sender has a choice between continuing to cooperate or defecting. This classic institutional enforcement problem challenges the success of coalition sanctions and makes them less effective than unilateral sanctions (Hufbauer, Schott, & Elliott, 2009).

Recent empirical investigations on economic sanction outcomes noted the importance of international organizations' involvement in determining the effectiveness of sanctions (Mansfield, 1995; Martin, 1993b; Mastanduno, 1992). Higher levels of international cooperation generate more cooperation, equipping a coalition with better bargaining and enforcement means (Mansfield, 1995). Institutional support provides actors with mechanisms that prevent member states or private agents from free riding. Therefore, analysts recommended that policymakers seek the approval of international organizations to guarantee an effective outcome for economic sanctions.

Advocates of multilateral sanctions argued that participating within a sender states coalition increases its bargaining power and can result in higher economic costs for the target,

prompting changes in its behavior. The sanction possesses greater political pressure and legitimacy when more actors are involved in a given sanctions episode, making it more effective (Drury, 1998). Statistical tests have furnished evidence to support this argument that multilateral sanctions work better than unilateral ones.

This research focuses on the unilateral versus multilateral sanctions effectiveness debate by introducing a new theoretical argument linking the level of political agreement among sanction actors with the likelihood of sanctions success. Higher levels of political agreement among sanction actors increase their effectiveness. The literature noted that problems of cooperation, coordination, bargaining, and enforcement have reduced the effectiveness of multilateral sanctions. The degree of political agreement among sanctioning actors on the demands sought by the principal sender can be used to determine the level of effectiveness of economic sanctions.

Galtung (1967) noted that domestic politics influenced the likelihood of sanctioning states bearing high costs when threatening or imposing sanctions. The effectiveness of economic sanctions also depends on the level of disutility experienced by the target state. Thus, the level of economic sanctions effectiveness is associated with the greater economic and political disutility for the target state. The threat or imposition of economic sanctions entails self-imposed costs by sanctioning states. Mansfield (1995) stated that "The ability of policymakers to assume high costs associated with sanctions depends in large measure on whether the interests of societal actors converge with the national interest" (p. 591). In other words, the level of political agreement among domestic actors affects the decisions of public officials when considering sanctions. Governments are more likely to bear high costs if the main opposition, interest groups and their lobbyists are in favor of its decision of imposing sanctions. Widespread support can increase the effectiveness of sanctions, as sanctioning states are willing to bear more costs for longer periods. Conversely, if

domestic political actors are opposed to economic sanctions, the levels of governmental commitment and enforcement may be reduced, resulting in less effective sanctions regimes.

In *Coercive Cooperation*, Martin (1993a) noted the importance of cooperation in making economic sanctions more effective. Her analysis concluded that higher levels of agreement among domestic political actors were associated with greater credibility and commitment to other states, as well as the willingness of the principal sanctioning state to uphold its demands and bear high costs through imposing sanctions (Martin, 1993a). One important function of international institutions in coalition sanctions is the pronouncement of issue linkage among participating states. International institutions help sanctioning states disseminate, share, and exchange information, resources, and strategies to bolster their efforts in making the target comply with their demands. If the members of international organizations are affected by the same issues prompting the sanctions, their commitment to the initiation, imposition, and enforcement of sanctions is more likely.

Despite the intuitive appeal of the argument that arduous coordination and enforcement problems reduce the effectiveness of economic sanctions (Miers & Morgan, 2002), international political economy scholars have not tested the effect of political agreement level on the outcomes of economic sanctions. My research contributes to scholarship on the effectiveness of economic sanctions by filling this gap in the literature. A new variable, the level of political agreement among crucial actors in sanctions episodes, is proposed, and a measure of it constructed. The level of political agreement (LPA) within the sender state, international system, and the target state is considered. This information to constitute the LPA scale, summarizes the level of agreement per sanctions regimes.

Overview of Methodology

This dissertation combined level of political agreement dataset with two comprehensive datasets on economic sanctions, the HSE (Hufbauer, Schott, & Elliott, 2009) dataset and the Threats and Imposed Economic Sanctions (TIES) dataset (Morgan, Bapat, & Kobayashi, 2014). Hufbauer et al. (2009) primarily collected information on 174 imposed economic sanction episodes from 1914 to 2000. HSE considered sanctions with multiple goals, phases, and targets as separate observations, thus increasing their cases to 204. They considered cases of multilateral sanctions by more than one sender, as well as unilateral ones. However, Morgan et al. (2014) examined sanctions both threatened and imposed. Therefore, the TIES data set includes 1,412 cases from 1945 to 2005.

The present study used both game theoretical models and empirical models. The TIES data set was used for contingency probabilities, such as the probability of imposing economic sanctions given sanctions were threatened or not threatened, for game theoretical models. For the empirical models, this study analyzed cross-sectional dataset of sanction episodes threatened and/or imposed. Observations were obtained by matching HSE dataset with the TIES dataset. Cases were analyzed by utilizing ordinal regression models. Overall, there are 125 cases matched between HSE and TIES with a time frame from 1946 to 1999.

The main dependent variable in this study is the effectiveness of economic sanctions. The degree of effectiveness is the extent to which the sanctions have achieved the stated goals of the sanctioning states. The main independent variable, the level of political agreement (LPA), is not found within any existing economic sanctions dataset. HSE data were mainly used to construct the political agreement level index in this study. Political agreement is calculated for each economic sanction episode. Other independent variables, including relative power, regime types, signaling,

sanctions cost, and others, were also included in the regression models as control variables. The unit of analysis is the economic sanction episode based upon the dyadic relationship between the sender and the target. For coalitional sanctions, main sender state is assumed to be the sender state. A high agreement denotes higher levels of political agreement within the sender, lower levels of agreement within the target, and higher levels of political agreement in the international system. Conversely, a low political agreement score denotes lower levels of political agreement within the sender, higher agreement levels within the target, and lower agreement levels within the international system.

To illustrate the theoretical argument, three case studies are introduced. These are: (a) The United States v. Turkey, from 1974 to 1976, (b) The United States and Canada v. South Korea, from 1975 to 1976, and (c) The Unites States v. Brazil, from 1977 to 1984. In the first case, because of the moderate levels of political agreement in the United States as a sender state (LPA_1) and higher levels of political agreement in Turkey as a target state (LPA_2), the sanction regime was partially effective. In the second case, however, the sanction episode was effective because of the higher levels of political agreement in the United States as a main sender state (LPA_1) and lower levels of political agreement in South Korea as a target state (LPA_2) and higher levels of international political agreement (LPA_3). In the third case, the sanction's effectiveness was low since level of political agreement in the United States as a sender state (LPA_1) was at lower levels, and level of political agreement in Brazil as a target state (LPA_2) was at moderate levels. I discuss below the measures for the variables. I also describe the measures and their distributions.

Outline for the Remainder of the Study

This dissertation assessed the influence of political agreement on the effectiveness of economic sanctions. The first chapter introduces the problem and presents the underlying logic

behind the proposed explanation for making economic sanctions more effective. It outlines the theoretical and empirical bases of the influence of political agreement on the outcomes of economic sanctions. It also describes the content of subsequent chapters in the dissertation.

The second chapter reviews the literature on economic sanctions and their effectiveness. First, I introduce the concept of economic sanctions and define it. Second, a discussion on the various types and purposes of economic sanctions is presented. Third, a comprehensive review of the empirical literature of the determinants of economic sanctions outcomes is presented. Finally, the chapter provides a discussion on the few attempts found in this scholarship that point out the potential effects of political agreement.

The third chapter describes the methods used to collect the data, variables in the study, and analyses used to test the hypotheses. A comprehensive discussion of the HSE data and its variables is provided. This section includes a detailed exploration of the dependent, independent and control variables considered in the study. Second, a section is devoted to explaining the use of multiple regression and its appropriateness for testing the hypotheses. This discussion also includes a detailed description of the model, its specification, and the coefficients and statistics used to evaluate its goodness of fit.

The fourth chapter presents and discusses the results of the data analysis. First, model checks are presented to evaluate if the results are robust or not. Second, the model fit is evaluated using conventional statistics—that is, the amount of variation in the dependent variable explained by the model. Third, a closer examination of individual coefficients and test statistics is conducted to ensure the results are trustworthy. This section shows results of the maximum likelihood estimates. In addition, this chapter includes a detailed discussion of the findings and their meaning. The findings lend support to a narrative that links the effectiveness of economic effectiveness to

the level of political agreement. It is a narrative that should be incorporated into the larger body of research on the effectiveness of economic sanctions. There are also, recommendations for future research.

The fifth chapter applies my findings to case studies. Three cases are used to show how differing levels of political agreement lead to varying degrees of effectiveness for economic sanctions.

Finally, the sixth chapter presents a summary of the findings, discusses how they lead to a better understanding of factors affecting the impact of economic sanctions, and provides recommendations for future research.

CHAPTER 2 LITERATURE REVIEW

International relations experts have debated extensively the determinants of economic sanctions outcomes (Hufbauer, Schott, & Elliott, 1990). This immense scholarship has resulted in a number of controversies regarding whether economic sanctions are an effective foreign policy tool, and when they are, what are the conditions that make them more successful? (Pape, 1998). It is useful to review the work on the history, types and correlates of economic sanctions prior to discussing the connection between political agreement and sanctions outcomes.

History of Economic Sanctions

Economic sanctions have been used by states as foreign policy instruments to advance their interests throughout human history (Drury, 1998). In 432 B.C., Pericles issued the Megarian decree announcing a trade embargo with Athens. This move was a response to the Megarian territorial incursions into Athenian lands (Hufbauer, Schott, & Elliott, 1990). Despite the failure of this episode—it was followed by the Peloponnesian war—economic sanctions have become an increasingly popular way that states attempt to make other states comply with their demands.

Historically, economic sanctions have been comprehensive and have included a number of tools including trading restrictions, imposing embargoes, limiting international ties, and freezing target states assets. The advent of the scientific study of economic sanctions is associated with empirical analyses to assess the relative effectiveness of such tools (Dashti-Gibson, Davis, & Radcliff, 1997). States have incorporated these tools selectively into their foreign policy and over time have adopted smarter sanctions that also are referred to as targeted sanctions. The move from comprehensive to targeted sanctions is motivated by the belief that targeted sanctions are more effective and promote speedier compliance (Berejikian & Shagabutdinova, 2007). Regardless of

the type of sanctions, the conventional wisdom of political science has been that sanctions are not effective policy tools (Pape, 1998).

Since the end of the Second World War, powerful countries as well as international institutions have increased their use of economic sanctions (Allen & Lektzian, 2013). The League of Nations, and later the United Nations (UN), imposed sanctions a few times prior to the collapse of the Soviet Union. The UN and other international actors, such as the European Union, increasingly have used economic sanctions as a coercive policy instrument aimed at engendering a change in the target state behavior. The United States has notably been the single greatest user of economic sanctions in recent history (Lowenberg, 2015). This increased use of sanctions became possible because of globalization and the wide political, economic, and cultural penetration of the U.S. in world politics. According to the HSE data set, despite the capacity of regional organizations including the African Union, Arab League, Association of Southeast Asian Nations (ASEAN) and countries signing on to the North American Free Trade Agreement (NAFTA), these organizations have not widely utilized economic sanctions.

The Three Phases of Economic Sanctions

Political scientists have generated a large body of research that has debated the conceptualization, measurement, and effectiveness of economic sanctions. This scholarship occurred in three main phases. The first phase began in the 1970s, with scholars conducting qualitative in-depth evaluations of economic sanction episodes in Rhodesia and South Africa (Levy, 1999). These studies concluded that economic sanctions did not work. The second phase occurred between the early 1980s and late 1990s. The study of economic sanctions became more rigorous with quantitative analyses of a newly constructed dataset by Hufbauer, Schott and Elliott ([HSE], 1990). During this phase, researchers concluded that economic sanctions worked under

certain political, economic, and institutional conditions. The third phase started in the late 1990s and is ongoing, with the study of economic sanctions becoming more diverse conceptually, as well as methodologically (Morgan, Bapat, & Krustev, 2009). This phase has produced new definitions, metrics, and approaches to the investigation of economic sanctions with mixed findings regarding their success.

In his essay "On the Effects of International Economic Sanctions with Examples from the Case of Rhodesia," Galtung (1967) led the way for the systematic analysis of economic sanctions. He concluded that economic sanctions were ineffective in inducing policy change by a target state. His analysis refuted the popular theory of "naive sanctions." This theory postulated that the economic costs of sanctions felt by the target state could lead to a policy change conforming to the sender institution/state demands. In their work on South Africa, Hermele and Odén (1988) detailed the sanctions episode, its preconditions, its implementation, and successive regime change. Most studies in the first phase of the literature on economic sanctions featured detailed descriptions of events, domestic and international dynamics, key actors, and effects. This body of scholarship did not use social science theories or methods to guide its investigations or support its findings. Political scientists just recorded large numbers of facts and events to arrive at a qualitative explanation of sanctions' episodes and their effectiveness.

Building on this early phase, scholars of the second phase started to develop theory, construct models based on theory, and use data to test those models. In 1990, the celebrated work of the scholars HSE provided evidence that sanctions worked in a third of their cases. HSE have revived the economic logic of sanctions, arguing that the cost of sanctions episodes is the most significant factor determining the effectiveness of sanctions. HSE research motivated a large

number of economic and political analysts to study the effectiveness or success of economic sanctions.

Drury's (1998) economic model found that the argument based upon the cost of sanctions episodes is not supported given the ability of target states to foster alternative solutions to the economic problems in markets arising from the imposition of sanctions. Importantly, methodological controversies have dominated the field of economic sanctions since HSE (1990) produced their dataset. Many scholars have criticized HSE's approach of selecting cases, arguing that there was selection bias—their cases are a non-random and unrepresentative group of economic sanctions cases (Morgan, Bapat, & Krustev, 2009). Their selection criteria resulted in the exclusion of many cases where economic sanctions had been threatened, but not imposed. Nevertheless, the work of HSE revived the use of quantitative methods to analyze economic sanctions and the factors impacting their relative effectiveness.

Inspired by the second phase, the current phase involves better theory, the construction of new data sets, and the use of more appropriate methods for studying economic sanctions (Bapat & Morgan, 2009). Scholars have emphasized the importance of political, as well as institutional variables, along with economic factors in determining the effectiveness of economic sanctions (Martin, 1993b). New datasets have been constructed including the International Threats and Imposed Sanctions (TIES; Morgan et al., 2009). Scholars have used deductive, as well as inductive techniques, to investigate the degree to which sanctions achieve their objectives (Carter, 2008). The major contribution of the third phase on economic sanctions is improvements in specifying and estimating the effects of various factors upon economic sanctions' outcomes. There has been increasing use of economic sanctions since the dissolution of the Soviet Union, and scholars want

to know under which conditions economic sanctions are effective (Bapat, Heinrich, Kobayashi, & Morgan, 2013).

Conceptualizing Economic Sanctions

Economic sanctions have been used by states before and/or during wartime with the ultimate objective of weakening the target state. These sanctions come in many forms, including naval blockades, trade restrictions, and embargos. The disasters suffered by countries in the First World War prompted world leaders, especially Woodrow Wilson, to seek alternative dispute resolution methods. During this era, economic sanctions were applied by the League of Nations, and more recently by the United Nations as policy instruments to compel states that do not comply with the wishes of the international system. Other states, especially the United States, have used economic sanctions to achieve their interests without incurring the costs of war, and this opportunity has resulted in a rise in the use of economic sanctions (Elliott & Hufbauer, 1999).

The understanding of economic sanctions has evolved over time from an internationally celebrated action taken against states committing humanitarian atrocities to a unilateral measure that any state may undertake to attain a given political goal (Baldwin & Pape, 1998). Within the first wave of economic sanctions studies, scholars focused on their international aspects. For example, Galtung (1967) referred to economic sanctions as:

> Actions initiated by one or more international actors (the ‘sender's’) against one or more others (the ‘receivers’) in order to punish the receivers by depriving them of some value and/or to make the receivers comply with certain norms the senders deem important. (p. 379)

With more states, more particularly the United States, adopting economic sanctions as unilateral policy tools to achieve their political objectives, the literature has shifted its emphasis from the international to a more state-oriented view. Lindsay (1986) defined economic sanctions

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” (p. 154).

The research on economic sanctions has focused on particular types of economic sanctions that senders possess to induce target states to comply. In their seminal quantitative study on economic sanctions, Hufbauer, Schott, and Elliot (1990) referred to economic sanctions as “deliberate, government-inspired withdrawal, or threat of withdrawal, of customary trade or financial relations” (p. 2). The recent outgrowth of quantitative research on economic sanctions has emphasized the various types and intensities of economic measures used in sanctions episodes. The specific features of economic sanctions have become more nuanced, evolving along with trends in globalization.

The first two phases of economic sanctions studies focused on episodes where sanctions were actually imposed. Responding to the need to include also cases where sanctions were only threatened but not imposed, Doxey (1987) defined economic sanctions “as penalties threatened or imposed as a declared consequence of the target’s failure to observe international standards or international obligations” (p. 4). Despite this definition that includes more sanctions episodes, it remains focused on the international level. Other definitions have included sanctions at the international, as well as the state level. Carter (2008) defined economic sanctions as “coercive economic measures taken against one or more countries to attempt to force a change in policies, or at least to demonstrate the sanctioning country’s opinion of another’s policies” (p. 2).

Therefore, to consider a particular episode as an economic sanctions event, one needs to assess the goals, types, and motives of the sender. If the sender has declared its goal to be changing the behavior of the target state and getting it to comply with international norms, then a requirement of Carter's definition is met. Besides, economic sanctions vary in type, and may

include trade restrictions, embargoes, or business banning. Not all foreign policy tools are considered economic sanctions. For instance, symbolic foreign policy gestures may not be classified as sanctions. Finally, the motive behind economic sanctions should be the intent to induce a change in the behavior of the target state.

Types of Economic Sanctions

Despite the variation in the types of economic sanctions, they can be classified into four categories as Doxey (1980) suggested. These types include first, trade controls, second, suspension of trade or assistance, and third, the freezing of assets and the blacklisting companies with bilateral business. Looking first at trade controls, these are numerous and varied and can include a partial or total embargo; a partial or complete boycott or both. They also can include restrictions on exports/imports via special tariff policies aimed to hurt specific sectors of the target's economy. An example is canceling or terminating a bilateral trade agreement, such as fishing contracts.

Second, the sender can suspend or reduce aid or assistance of goods/services. These sanctions can include, but are not limited to, suspension or reduction of military, technical, or development aid. These sanctions also encompass measures aimed at reducing the target state's ability to acquire loans, grants, or access to credit. They can include other measures that affect the ability of the target to borrow from international monetary institutions or investors.

Third, freezing assets is another form of economic sanctions and can vary in intensity and type. This category of sanctions includes the confiscation or expropriation of the target government's or officials' assets. It also includes the suspension of any ongoing or scheduled joint projects, such as rescheduling debt payments. It includes freezing interest or any ongoing financial activity involving the target state government or its officials.

Fourth, economic sanctions can entail the blacklisting of businesses, wherever headquartered, that are engaged in business with the target state (Doxey 1980). This process involves a prohibition of such businesses conducting business either in the sender state or the target state.

Purpose of Economic Sanctions

International law scholars (deKieffer, 1983; Kaempfer & Lowenberg, 1988) have claimed that economic sanctions are aimed at inducing a given state to terminate its violations of international law. Based on this understanding, economic sanctions have the objective of upholding international norms and are largely exercised to protect human rights (Reisman & Stevick, 1998). Political scientists have expanded this view to include cases where a single state may use sanctions as a tool to attain its own goals. This understanding has dominated the recent scholarship on economic sanctions and their effectiveness.

Although senders' statements regarding economic sanctions may specify the senders' goal(s), it is nevertheless difficult to know exactly why a given sender has initiated an economic sanctions episode against a target state (Lam, 1990). However, HSE (1990) noted that the purposes of economic sanctions are similar to those of common law, namely: punishment, deterrence, and rehabilitation. A more refined analysis of economic sanctions objectives conducted by Miyagawa (1992) noted that the goals of economic sanctions are fivefold: deterrence, coercion, destabilization, signaling, or symbolism.

Similar to criminal deterrence, economic sanctions punish a target state for a given violation of international laws and norms, and this acts to discourage other states in the international system from engaging in similar violations. International institutions or individual states punish other states for behaviors that they perceive to be a transgression. The sender through

sanctions sends a strong message to the target state and other states that it is willing capable, and determined to enforce its policy demands, now and in the future. The sender needs to give a persuasive signal to other states in the international system for successful results (Martin, 1993a).

Another goal of economic sanctions, although difficult to achieve, is senders' desire to get targets to comply with its policy goals or international norms (George & Simons, 1994). In these cases, the target has already transgressed and senders' goal is to correct the target's behavior by encouraging compliance or punishing non-compliance. In these cases, the sender is reacting to and trying to change the target's behavior.

One of the most sought-after goals of economic sanctions is regime destabilization. The Soviet Union launched a series of trade restrictions with former Yugoslavia as a way to replace Tito with another communist sympathizer (Wood, 2008). Similarly, the United States imposed sanctions on Iraq, Iran, and Syria hoping to engender a change in the regime. With a change of regime, the United States would see more favorable policies aligned with its interests. Economic sanctions have been widely used by actors both unilaterally and multilaterally to subvert governments, to destabilize regimes, and generate a change of policy in line with the sanctioner's objectives.

Despite the conventional wisdom in political science that economic sanctions are an ineffective tool of foreign policy, scholars have acknowledged its role in signaling (Bergeijk, 1989; Melby, 1998). First, the sanctioner sends a strong message to its allies and to other states that it validates its words with action. Second, the sanctioner signals that it is serious to the target state that more serious actions may follow, such as quasi or regular military action. The comprehensive economic sanctions used against Saddam Hussein's regime in Iraq in 1990 is an excellent example of a case where the United States along with the United Nations in addition accompanied or

followed these with a host of military, diplomatic, and political measures, thereby signaling their strong commitment to uphold international norms (Alnasrawi, 2001).

Finally, sanctions are signals for the domestic, as well as the international community (Whang, 2011). First, political opponents within a state may exert political pressure on a government to take measures against another state. The government, wishing to avoid a military confrontation and wanting to mollify the opposition, may impose economic sanctions on the other state, if only for symbolic effect. The imposition of economic sanctions is an action that supports international norms. The international community will not be a silent actor in the face of egregious violations of international law and human rights (Klotz, 1995). Despite the possible failure of economic sanctions in bringing change in the policy of the target, they signal a commitment to support and defend domestic and international laws and norms.

Linking Economic Sanctions to Political Outcomes

Hirschman (1980) argued that when a given actor sanctions another actor in the international system by interrupting or distorting trade, such action is used an inducement to get the other actor to change their policy. This argument assumes that if a state is engaged in trade with another state, and that state is dependent on this relationship, the state may threaten or try to alter this relationship to gain political concessions (Hirschman, 1980). This argument led to the development in political science of the conventional understanding of economic sanctions: the more economic pressures and disabilities that a target state experiences from trade restrictions imposed by a sender state or an international institution, the higher the probability the target will change its behavior in accordance to the senders' policy interests.

This understanding is derived from an international trade theory (Zhang, 2008) suggesting that trade has positive effects on the incomes of nations. The less access that countries have to

international trade, the lower incomes they will experience. The extent of trade relations between states is the main link to political concessions, where senders usually possess a higher standing in the economic system than targets. It is assumed that targets depend more on the benefits of the trading relationships with senders. The expectation is that they will offer political concessions in exchange of economic utilities.

In his seminal work on economic sanctions in Rhodesia, Galtung (1967) called the above logic as naive. He argued that the degree of economic disutility experienced by target states may not necessarily lead to political change, rather imposing sanctions may lead to a rally around the flag effect, political integration, and thus counter the intended effect of sanctions. He also noted that sanctions may not eventually lead to policy or political change in the target state, as the target state may look for alternative routes to replace the losses from the trading relationship.

In their analysis of the international system, Keohane and Nye (1977) argued that interdependence constitutes an important variable in explaining economic, as well as political outcomes, from sanctions. Generally, international trade is a dimension of the globalized economy within which states operate. Power differentials, such as power preponderance or power parity**,** also play significant roles in determining economic and political affairs because relative power affects dyadic relations between states (Geller, 1993). The actual, as well as potential ability of states to alter the behavior of others in today's international system, represents another explanation connecting economic sanctions to policy change. The more dependent that states are on each other economically, the more sensitive and vulnerable they become. Therefore, sanctioners dealing with more dependent states may be better able to use their power to alter the behavior of targets and compel them to conform to their interests.

Economic Sanctions Outcomes

Evaluating economic sanctions outcomes is not easy. First, scholars have differed widely on conceptualizing the goals of sanctions, and then disagreed on how to best measure sanction outcomes (Yang, Askari, Forrer, & Teegen, 2004). A few scholars have argued that sanctions exhibit multiple goals and therefore are difficult to quantify (Bapat & Kwon, 2015). Other researchers have acknowledged this problem; however, they favor focusing on stated goals of the sanctioner (HSE, 2009). HSE revolutionized the measurement of economic sanctions outcomes by assigning a success score and a measure of sanction's contribution to the behavior change of the target state. Despite the innovative approach, political scientists have criticized this approach, calling it inaccurate, insufficient, and misleading (Baldwin & Pape, 1998; Drury, 1998). Others have indicated it was too complex, less transparent, and lacked robust properties (Pape, 1997).

To assess sanctions, their goals need to be identified. Early scholars of sanctions identified multiple goals of sanctions. For example, Galtung (1967) suggested two main criteria for assessing the success of sanctions: (a) the degree of punishment and (b) the extent to which the target has complied with the stated goals of the sender or international norms. The first criterion can be measured through various techniques of estimating costs or utilities associated with the episode. While the second criterion is harder to operationalize, the degree to which the behavior of the target state complied with the goals of the sender state can be assessed.

Similarly, Barber (1979) identified three goal domains for economic sanctions: primary, secondary, and tertiary. Each set of goals is directed at specific audiences. For example, primary goals concern the coercion and compliance with the stated goals of the sanctioner. Conversely, secondary and tertiary goals relate to the international system and its accepted norms. Barber

suggested that focusing on primary goals in measuring economic sanction outcomes is an invalid approach, because many other intended goals are missed.

The quantitative study of economic sanctions has led to the emphasis on primary goals, the extent to which the target state complies with the publicly stated goals of the sanctioner. HSE data and later Threat and Imposition of Economic Sanctions (TIES) data assessed the outcomes of sanctions using categorical measures of whether the episodes fulfilled the primary goals of the sender and its publicly stated objectives. Those constructing the HSE and TIES data argued (Hufbauer, Schott, & Elliott, 1990; Morgan, Bapat, & Kobayashi, 2014) that capturing all sanctions goals in one measure is extremely difficult. Therefore, to assess sanctions outcomes quantitatively, parsimonious measures need to be developed. Although this approach yields a numeric value on the degree of economic sanctions outcomes, the extent to which sanctions met the diverse goals of the sanctioner is not captured.

One of the defining features of the third phase of the study of economic sanctions is the assessment of sanctions outcomes. Pape (1997) argued that HSE miscoded their data and that this increased the number of cases of success. Others suggested that assigning a score for an episode outcome was arbitrary and suffered from several reliability and validity issues (Dashti-Gibson, Davis, & Radcliff, 1997). A few scholars even argued that measuring the effectiveness of sanctions episodes by assessing the extent of target state compliance is an erroneous approach. They argued that scholars cannot know if the sanctions have generated a change in the targeted state behavior. Most studies evaluating sanctions outcomes have developed binary measures, reducing the range of variation in sanctions' outcomes (Dashti-Gibson et al., 1997). Despite this simple intuitive and straightforward approach, this method disregards the multiple goals of sanctions when assessing outcomes and does not distinguish between differing levels of effectiveness. Economic sanctions

may be evaluated ordinally as having no, limited, partial, major, or complete effectiveness. This range of variation is lost in the current approaches to the assessment of the outcomes for sanctions.

Notwithstanding the wide range of criticisms offered regarding approaches for evaluating the success of economic sanctions, political scientists have extensively investigated the determinants of sanctions success. This literature has produced plethora of findings that seem to be contradictory. The investigation of determinants has found that economic and political variables matter most in influencing the likelihood of success of economic sanctions (Bapat, Heinrich, Kobayashi, & Morgan, 2013).

Some scholars have argued that economic pressures exerted by sanctioners on targets can influence domestic political stability. For example, Galtung (1967) attributed this proposition to the naïve theory and pointed out that

> There is a limit to how much value-deprivation [a] system can stand and that once this limit is reached (resulting in a split in leadership or between leadership and people), then political disintegration will proceed very rapidly and will lead to surrender or willingness to negotiate. (p. 388)

Economic sanctions are expected to instigate economic losses on the part of the targets' population. Rising costs are expected to exert increasing pressure especially on the target's elected political leaders to make changes in order to lessen economic hardships (Allen, 2008). However, Cortright and Lopez (1999) indicated that non-economic factors also possess equal if not more significance in linking sanctions to policy change.

Determinants of Economic Sanctions

An important argument within the economic sanctions' literature is about the set of conditions that determine their effectiveness (Bapat, Heinrich, Kobayashi & Morgan; 2013). This body of literature has findings with many inconsistencies and disagreements about what leads to the effectiveness of sanctions and to what extent economic or political variables contribute to their

effectiveness (Bapat et al., 2013; HSE, 2009; Pape, 1997). In areas where relative consensus has been established, such as the effect of economic costs on the likelihood of sanctions' effectiveness, scholars have disagreed on the magnitude of such an effect.

Economic Explanations

In a comprehensive empirical analysis on the determinants of the success of economic sanctions s, Bapat et al. (2013) ran a total of 262,143 logistic regression models and found that

> Senders are more likely to achieve their goals (1) when they threaten and/or impose sanctions under the auspices of international institutions (IO Involvement) and (2) when sanctions are anticipated to impose or actually impose severe economic costs on targets (Target Costs). In our analysis, these factors are found to be positively associated with success of sanction policies, which is consistent with the hypotheses in the literature, and these relationships are robust. (p. 89)

Their sensitivity analysis confirmed the conventional wisdom about sanctions' outcomes; the more economic losses a target state experiences, the higher the likelihood of economic sanctions being effective. Such logic has been challenged by other scholars (Galtung, 1967; Baldwin 1985; HSE, 2009). For instance, Pape's (1997) and Cortright and Lopez's (1999) analysis of sanctions concluded that high levels of economic losses do not necessarily lead to policy changes. The case of Iraq in 1990 is a prime example. Iraq's economy, when ruled by Saddam Hussein, suffered substantially from high inflation and a decline in the gross national product (GNP), but these occurred without any policy change. Therefore, the argument that the more disutility a target state experiences from economic sanctions, the greater the effectiveness of the sanctions might not necessarily true. This finding corroborated an earlier study conducted by Drezner (1999) who found that the suspension of aid for vulnerable targets that caused great economic losses but did not lead to compliance by the targets.

Blanchard and Ripsman's (2008) in depth qualitative analysis confirmed the relevance of factors other than economic costs. They argued that for economic sanctions to be effective, other

causal factors must be present, as well. They noted a number of political factors including regime type in their analyses. Consistent with this view, Allen (2005) found that domestic political stability and structure affected the likelihood of economic sanctions being effective. Internal political turmoil and instability appeared to be important covariates in explaining the rate at which economic sanctions work.

Analyzing HSE data, Lam (1990) found that overall economic health, as well as political stability were important determinants of economic sanctions' outcomes. Similarly, Elliott & Uimonen (1993) found that these variables were significant at the 0.01 significance level using probit regression. Using logistic regression, Drury (2005) found that economically healthier targets could withstand economic sanctions at a higher threshold compared to less well-off states. Drezner (1999) used probit analysis of HSE data and found that political stability also was found to be a significant variable at the 0.05 level.

Martin argued that international and bilateral trade levels determine the success of economic sanctions. Countries that depend on international trade for imports and exports are likely to be affected more than states that are less dependent on international trade. Similarly, a country with more trade partners generally does not suffer as much as a country with a limited number of partners when exposed to international economic sanctions (Martin, 1993b). In this case, states with higher access to international markets will find more suppliers for their goods and services resulting in economic sanctions being less effective. Another economic indicator, foreign exchange reserve, was found to influence the degree of success for economic sanctions (Kirshner, 1997). The ability of states to withstand international financial crises and pressures with the use of their foreign reserves lessen the impact of sanctions.

Lektzian & Patterson (2015) discussed the evolving nature of economic sanctions given growth of the global economy. They suggested that the availability of financial borrowing and access to international financial markets on the part of the target state influence the likelihood of economic sanctions' effectiveness. The less able a country is to access financial resources and international investors, the more likely it will concede to senders' policy goals. In a related note, globalization was found to increase the target's state ability to seek alternative options, thus resulting in the failure of economic sanctions. The link between globalization and effectiveness of economic sanctions has not been investigated sufficiently.

Political Explanations

A few scholars have argued that a key political variable determining the effectiveness of sanctions is the level of international organizations' involvement. The more multilateral an episode is the higher its probability of success (Bapat, Heinrich, Kobayashi, & Morgan, 2013). HSE's (2009) research found that the level of cooperation in a sanction's episode can negatively impact its effectiveness. They argued that unilateral episodes generally are more effective than multilateral ones. For example, the United States has been the most frequent unilateral user of economic sanctions, and sometimes it has achieved successful outcomes.

The ability of the target state to mobilize its citizens in opposition to the sanction's has been noticed as a key factor reducing sanction's effectiveness. Target states tend to incite their populations with nationalist and anti-imperialist rhetoric to boost their governments' capacity to withstand sanctions (Tung, 2003). The target state's ability to incite a "rally around the flag" is thought to influence the likelihood of sanction's success. Despite the extensive literature on this effect, no study has used data to determine if there is evidence for it.

Pape (1997) argued that target states could obtain political utility from economic sanctions. The regimes of target states may want to increase their power by weakening the strength of their political opponents and strengthening ties with their supporters. They are likely to redistribute rents obtained from lower supplies and higher prices to those who vehemently support their resistance to complying with the sanctioner. Given the difficulty in operationalizing the use by regimes of target states to favor political supporters and punish political opponents, researchers have not yet included this variable in their analyses.

Nossal (1989) found that effective economic sanction episodes occur more in democracies than dictatorships. He argued that authoritarian governments solicit a rally around the flag effect where they manipulate media, security, and domestic order to garner more support and resistance to foreign interventions. Despite this plausible argument, Pape (1997) found that differences in regime types do not alter the probability of effectiveness. Therefore, the evidence on the relationship between regime type and economic sanction effectiveness is inconclusive.

In their analysis of economic sanctions, HSE (2009) concluded that sanctions have a higher level of probability of success when a set of political and economic factors are met. These factors include:

> (1) When the goals of the sender are limited; (2) the target is already experiencing economic difficulties; (3) there are generally friendly relations between sender and target countries; (4) sanctions are forcefully implemented in a single step; (5) sanctions entail significant costs for the target; (6) the costs for sender countries are modest; (7) the sanctions are not accompanied by covert action or military operations; and (8) few countries are needed to implement the sanctions. (p. 81-91)

This diagnosis for the conditions of effective sanctions highlights the importance of political forces, such as the scope of sanctions, alliance, absence of military action during the episode, and magnitude of the episode. The most debated political variables in the literature have included: sender-target interaction, and the alliance status between the sanctioner or the main

sender state in the sanctioning coalition and the target. Empirical evidence on alliance status have been mixed, with some scholars arguing that sanctions worked better if they involved political allies while other scholars disagreed (Drezner, 2000; Lektzian & Souva, 2007; McLean & Whang, 2010).

In a report submitted to the Senate Foreign Relations Committee, the General Accountability Office (1992) noted the importance of culture in determining the effectiveness of economic sanctions. The report concluded that effective sanction episodes would occur more frequently in target countries with a greater number of cultural ties with the sender. Drezner (1999) argued that the greater the adversity between the sender and the target, the more likely the episode can be expected to fail. The basis for this argument is that targets are more reluctant to acquiesce to a sender that is a perceived enemy or threat. Therefore, cultural ties and adversity are important in determining if sanctions are effective.

Some scholars view economic sanctions as a tool of foreign policy that is available to states to use in advancing their interests (Barber, 1979). Few scholars have argued, however, that if senders show intent to carry out military action along with economic sanctions, that economic sanctions will be more effective. Scholars have failed to analyze empirically the additional factor of a threat of military action adequately.

Explanations of Sanction Effectiveness

Kaempfer and Lowenberg (1999) argued that the severity of an economic sanction episode determines its possible effectiveness. The more economically, politically, and symbolically severe are sanctions, the higher the probability of their effectiveness. Despite this expected outcome, they argued that internal pressures upon sanctioners from political and economic groups opposed to sanctions that are severe because they will result in high human costs might prevent sanctioners

from applying such damaging sanctions. This in turn would result in less severe sanctions that would not be as effective as damaging ones.

Many scholars have argued that the more disutility experienced by political and economic elites in a target state, and the sectors that they control, the more effective that sanctions will be. Such sanctions are called targeted sanctions. Cortright and Lopez (2002) argued that when political and economic elites targeted by sanctions experience greater costs, the more likely they will be to acquiesce to the demands of the sanctioner and change their behavior. Therefore, the effectiveness of sanctions varies with the economic and political status of the individuals who are targeted. Although scholars have tried to measure this variable, they are unable to do so accurately because of the lack of information regarding the extent of economic, political, and symbolic losses that elites or the sectors they control have experienced as a result of sanctions (Shagabutdinova & Berejikian, 2007; Tostensen & Bull, 2002).

One of the most commonly used measure of targeted sanctions is the type of sanction. Financial sanctions that are intended to hurt political, military, and economically allied individuals and institutions are thought to be more targeted and effective in bringing policy change. Trade-wide restrictions or embargos have a wider effect. For example, the population at large may experience greater negative effects, thus giving the target government the ability to rally people around the flag using nationalist rhetoric. Therefore, researchers have found that financial sanctions for targeted groups are more effective than other types of sanctions (Torbat, 2005).

Scholars have found that monitoring and enforcement levels are important in determining if economic sanctions are effective (Doxey, 1980). Costs associated with monitoring sanctions have to be less than the benefits perceived to be obtained from them. Black and Cooper (1989) argued that the type of economic system could influence the likelihood of economic sanctions to

being effective. Economic sanctions can be more effective if used against countries with market-oriented economies. The literature on economic sanctions effectiveness has supported the importance of political, as well as institutional variables in explaining if sanctions work.

In their recent analysis of how economic sanctions succeed; Whang, Mclean, and Kuberski (2013) noted that economic sanctions could be effective through two mechanisms. First, sanctions work if they altered an existing dependency between the sanctioning and target states and the target perceived that such dependency would be affected severely if sanctions were imposed. This argument highlighted the importance of economic variables, such as costs associated with sanctions, trade linkages, economic alliances, and financial ties. Whang et al. (2013) also maintained that the level of determination, commitment, swiftness, and capability exhibited by the sanctioner signaled the truthfulness of the message to the target (costly signaling theory), leading to concessions by the target state. This analysis indicated the importance of economic, as well as political forces in determining the effectiveness of economic sanctions.

In a recent analysis of targeted sanctions, Drezner (2011) concluded that economic sanctions could be more effective at the threat stage when compared to imposition. Moreover, he found that imposed economic sanctions succeeded if the target state experienced substantial economic losses; if the sender and target states did not anticipate future conflict; if the episode involved a less political and salient issue; and if more actors participated in the episode. Drezner argued that the use of smart (targeted) sanctions that hurt the political elites of the targeted states rather than the population are more likely to succeed and should be recommended to policymakers.

Finally, the duration of sanctions' episodes is another characteristic affecting the effectiveness of sanctions (Bolks & Al-Sowayel, 2000). Scholars are not in agreement concerning the relative effectiveness of shorter or longer sanctions. Some researchers argued that shorter

sanctions are more effective (Drezner, 1999; Hufbauer, Schott, & Elliott, 1990). Conversely, other scholars suggested that shorter sanctions might not inflict sufficient economic or political costs on target states and thus lead to their failure (Brady, 1987; Daudi & Dajani, 1983). An unexplored question is what is considered short for a sanction. Despite the mixed results found in the empirical literature, the duration of sanctions is believed to affect their success, with shorter sanctions being less effective than longer ones.

Limitations of the Literature

Ignoring the Level of Political Agreement

When investigating the effectiveness of economic sanctions, political scientists have ignored a potentially important explanatory variable, namely the level of political agreement among multiple sanctioning actors. The threat and imposition of economic sanctions by multiple actors are considered to be high profile international decisions. The level of agreement among leaders involved in the decision-making process at all levels can influence the effectiveness of sanctions regimes. On a political leadership level, Renshon and Renshon (2008) argued that world leaders incorporate their own psychological attitudes and assumptions when rendering a decision on how states should behave in the international system. This decision-making process arises from the idea that if the primary stakeholders in a sanction regime share the same attitudes and prescriptions, the political, logistical, and economic effectiveness of sanctions should be higher. This decision-making process can be described by using a game theoretical approach.

Game Theory Approach to Sanctions Decision Making

By using Bayesian probabilities and a two-level game theoretical approach first introduced by Putnam (1988), economic sanctions bring out relatively less effective outcomes when these conditions are satisfied: (a) if there is a domestic opposition within a sanctioning state, (b) the

domestic opposition does not support the government's sanctions; compared with the case where the sanctioning state does not have a domestic opposition. However, sanctions are more effective when opposition supports the government's sanctions policy when compared to the situation, where there is no opposition (i.e., authoritarian regimes). So, the least effective sanctions occur in settings where sanctions are not supported by domestic political opponents (e.g., main opposition party), whereas sanctions are moderately effective in settings where regimes do not have political opponents, and more effective sanction occur in settings where domestic political opponents support the government's sanction policy. Two game theoretical models (model 1 in Figure 2.1 and model 2 in Figure 2.2) are presented to depict the situation. Payoffs for sender and target state under the sub-game perfect equilibrium (SPE) condition will be presented next in Figure 2.3. Note that this is a zero-sum game under incomplete information environment.

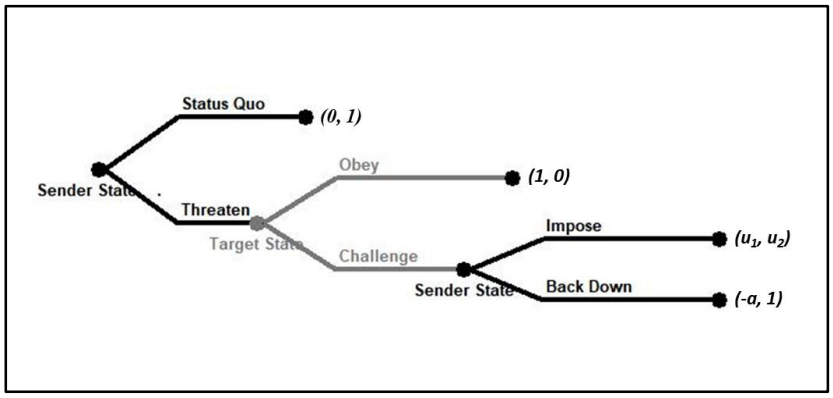


Figure 2.1: Extensive form of the game where there is no opposition in the sender (model 1)

The sequence of moves for the first model

a. The government of sender state moves first by choosing to either threaten economic sanctions to a target state or maintain the status quo. If sender state chooses the strategy of status quo, then the game ends.

b. After observing the government's actions, target state either obeys or challenges sender state's demands. If target state obeys, then the game ends.

c. If the target state chooses to challenge, then sender state government either backs down or imposes economic sanctions.

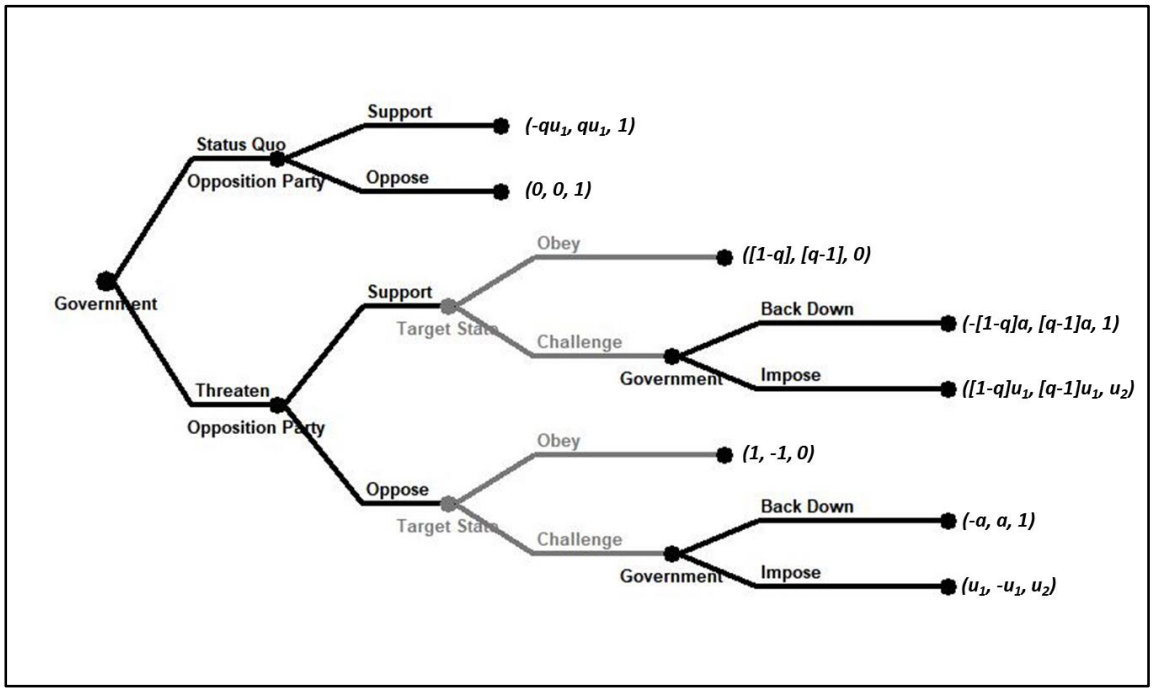


Figure 2.2: Extensive form of the game where there is opposition in the sender state (model 2)

The sequence of moves for the second model

a. The government of sender state moves first by choosing to either threaten economic sanctions to a target state or maintain the status quo.

b. The opposition party in sender state moves next by choosing to either support or oppose the government's economic sanctions policy.

c. After observing the government's and the opposition party's strategies, target state either obeys or challenges sender state's demands. If target state obeys, then the game ends.

d. If the target state chooses to challenge, then sender state government, either backs down or imposes economic sanctions.

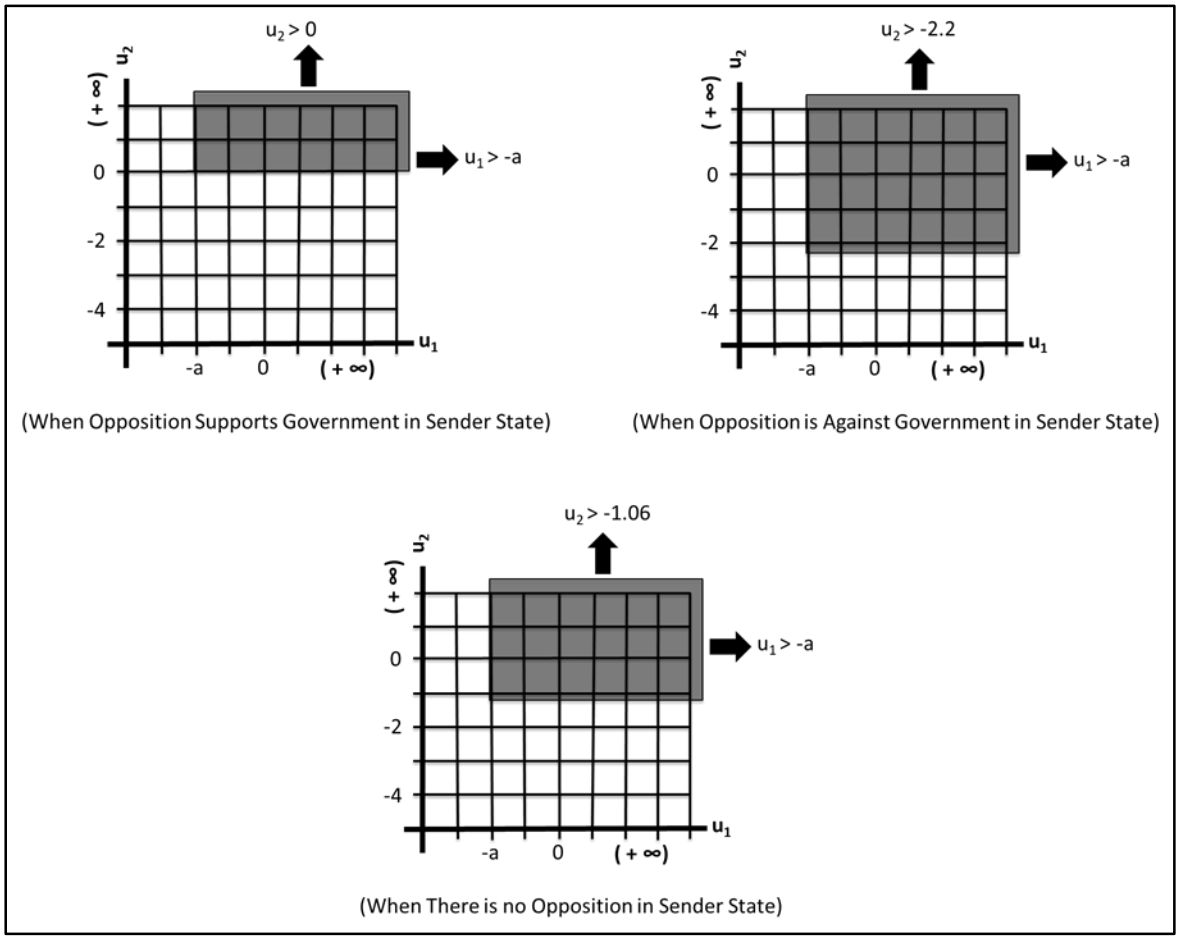


Figure 2.3: Payoffs for sender and target states under the sub-game perfect equilibrium (SPE) condition (note that u_1 denotes sender state's payoffs, and u_2 denotes target state's payoffs)

In the sub-game Perfect Equilibrium (SPE) condition, as seen in Figure 2.3, there are three different payoff outcomes for target state given that sender state payoffs are held constant at $u_1 > -a$. Target state payoffs (u_2) are:

a. When opposition supports sender government, payoffs range for target state = [0, ∞];

b. When there is no opposition in sender state, payoffs range for target state = [-1.06, ∞];

c. When opposition opposes sender government, payoffs range for target state = [-2.2, ∞].

Comparing the utilities obtained by sender and target state under the case where there is domestic opposition and there is no domestic opposition in sender, target state gets more utility (higher magnitude of payoffs range) when the main opposition party does not support the

government's sanctions policy (smaller payoffs range) in sender state, however, target state gets lesser utility (lower magnitude of payoffs range) given opposition supports government's sanction policy.

The model suggests that opposition party can serve to send credible signals to the rival state in a crisis by creating a second information source that effectively confirms the government's level of political agreement. Conversely, the opposition's refusal to agree to the government's decision on economic sanctions decreases the effectiveness of sanctions because now the target state is simply more uncertain about the government's determination level, whether it is bluffing or not. Therefore, the target state is more likely to challenge with lower levels of political agreement in the sender state. Thus, in the equilibrium condition, the level of political agreement in the sender state is related to the effectiveness of economic sanctions outcomes (See Appendix A for payoff calculation details for formal models).

Domestic actors' agreement on economic sanctions is thought to affect decisions on the use of foreign policy tools. When confronted with a decision on matters of war and peace, leaders are driven by their own preferences, as well as by domestic pressures. Mintz and DeRouen (2010) argued that many economic sanction episodes are created to appease domestic political pressures arising from demands by the public for political action, or by political opponents, or lobby groups. It is reasonable to believe that if all domestic actors agree on the demands, outcomes, and logistics of economic sanctions, sanctions are more likely to be effective.

The degree of fit between sanctions goals and outcomes

In the 21st century, economic sanctions are rarely declared unilaterally. They are often initiated by an international organization or an *ad hoc* coalition. International cooperation has been found to be one of the most robust predictors of the effectiveness of economic sanctions (Hagan,

2001). When international actors, leaders, as well as decision-making bodies are in greater agreement, the effectiveness of economic sanctions is likely to increase.

Notwithstanding the difficulty of judging what institutions and processes conducive to effective decision making in foreign policy, international relations (IR) scholars have argued that the degree of fit among actors increases the efficiency of the process, as well as its outcomes (Adrian, Ang, & Peksen, 2007). The degree of fit refers to the level of agreement between goals and outcomes. To what extent is there consensus among actors' goals or demands in a decision-making body? For instance, one difference between the Reagan administration's economic sanctions on Poland in 1981 and the Obama's administration Iranian sanctions was the degree of fit in the declared goals by the senders. In the first episode, the Reagan staff wanted Europeans to cooperate and cut assistance to the Soviet oil pipeline development, which failed because European firms wanted to continue assistance, resulting in a poor fit that generated an ineffective sanctions regime. In the latter, the United States along with European powers (especially, the UN Security Council's five permanent members and Germany, P5+1), wanted Iran to halt its nuclear development. Sanctions resulted in an agreement signed by the Iranian government and world powers, which restricted the Iranian state from developing its desired nuclear goals over time. As a result, the United Nations sanctions were lifted sanctions against Iran in early 2016. The degree of fit was substantially higher in the second episode, resulting in more effective sanctions.

Major differences in policy goals are likely to be associated with extremely high levels of political disagreement, hindering achievement of consensus for foreign policy decisions (Morgan & Schwebach, 1995). Political psychologists have recommended the use of multiple advocacy decision-making structures, systems where diverse views are voiced and encouraged. Such structures are used to manage inherent conflict features in decision-making bodies. Psychologists

warned about where there exist or there is promotion of different alternatives, worldviews, or preferences (McLean & Whang, 2010). On the other hand, if actors agree on the essential political ingredients of the foreign policy decision, the time and resources required to reach such a decision may be reduced, increasing the effectiveness of the decision-making structure, as well as its outcomes.

Political scientists have suggested a number of indicators that influence the degree of fit among world political actors. Kratochwil (1991) suggested that issues of high stakes outcomes for international actors can make them more likely to incur greater costs and make expensive political decisions. If a foreign policy decision concerns a salient issue for a sufficient number of actors or a group of interested agents (i.e., nuclear weapons), actions or decisions made regarding the issue could reflect a higher degree of commitment on the part of actors. Such an issue could be expected to increase the fit of demands, goals, or plans of international actors, because it carries substantial leverage in the international system.

Another potential factor that can increase the degree of fit, or the level of political agreement, is economic interdependence. States that are involved in substantial bilateral economic exchange often share many common interests. Similarly, political and cultural links also are drivers of political agreement in the international order. Allies are more likely to advocate for each other to protect common interests. Simultaneously, shared cultural markers such as religion, language, or race also may increase the likelihood of states exhibiting similar goals in a given foreign policy body (Mazarr, 1996).

Despite much theorizing about political agreement in international relations, there is no quantitative research on the topic. The present study looks at the concept of political agreement in the context of economic sanctions. The effectiveness of economic sanctions is judged by whether

the target state has conceded to the demands of the sender state(s). The study investigates and tests the hypothesis that a greater degrees of political agreement among all of the members of multilateral sanctions episode with respect to the demands established by the principal sender is associated with a more effective sanction regime. The underlying rationale of this hypothesis is that if political agreement is high, the members of an economic sanctions coalition are more likely to reach decisions quickly on the type, scope, and enforcement of sanctions, when compared to episodes reflecting low levels of agreement. Moreover, higher levels of demand fit are expected to generate greater cooperation for sharing intelligence and increased levels of monitoring, along with institutional commitment to ensure that sanctions achieve the principal demander's set of demands.

Measurement Limitations

The study of the effectiveness of economic sanctions is limited by several methodological problems. First, most researchers analyze effectiveness as a binary outcome, success or failure of episodes (Carter, 2008; Dashti-Gibson, Davis, & Radcliff, 1997). A justification for using this measure is that dichotomizing the outcome results in simplicity and easy interpretation. A comparison between episodes that resulted in the target acquiescing to the sender stated goals and those where targets did not lead to simple interpretations for both descriptive and inferential statistical analysis. Using a dichotomous variable also allows for an intuitive understanding of whether and why sanctions worked or not. For example, many of the variables used in both the HSE and TIES datasets are binary measures making it easy for the user to understand and comprehend the complex political, economic, and episodic factors. This simplicity however comes with costs.

The problems of dichotomizing variables are well documented (Altman & Royston, 2006; Royston, Altman, & Sauerbrei, 2006). First, much of the variation and thus information contained within the outcome variable is lost. Effectiveness may be viewed as a continuous measure with varying degrees. With loss of information there is less of a chance of detecting a relationship between variables because the power of statistical tests is substantially reduced by categorization. The use of binary variables can be problematic especially when HSE and TIES datasets include effectiveness measures at the ordinal level. HSE's measure is at the ordinal level, and thus includes information on effectiveness not found in a binary measure. Similarly, TIES datasets include both nominal and ordinal measures of success. When possible, it is best to work with the full information contained within a variable's measure rather than collapsing that variable's measure and losing information.

A more serious problem arises using a dichotomous measure of a sanction's outcome as successful or unsuccessful. International relations scholars judgments regarding the cut-point of success seem arbitrary (Altman & Royston, 2006). Therefore, when an analyst decides to code data into cases of success and failure, many cases would be placed according to the analyst's own criteria or simply misplaced. Existing datasets on the effectiveness of economic sanctions are imperfect. Nevertheless, they include ordinal level measures that contain more valid information on sanctions outcomes than data that has been recoded into dichotomies.

Modeling Shortcomings

The current empirical literature on the effectiveness of economic sanctions is limited by several methodological problems. Using binary measures of the success of economic sanctions, scholars used binary regression analysis techniques (logistic and probit regression). The use of such methods, however, has limitations.

First, Peduzzi, Concato, Kemper, Holford, & Feinstein (1996) noted the importance of sample size when using dichotomous regression analysis. Although all statistical models are affected by the size of the sample used, binary regression models have specific limitations. Small sample sizes, generally less than 400 cases, as Nemes, Jonasson, Genell, & Steineck (2009) indicated, are more likely to results in biased estimates of the parameters of the model. As sample size decreases, the odds ratio become larger (Lemeshow & Hosmer, 1982). For the analysis of economic sanctions, many studies have been conducted using logit and/or probit regressions with small samples and large number of predictors, thereby exacerbating the problems of bias.

Second, most analyses of the effectiveness of economic sanctions rely on a single regression model with a number of explanatory variables (Bapat et al., 2013). Although such models produce valuable information regarding the effects of predictors, the confidence and validity of results may not be generalizable because of different model specifications (variables included or excluded), even using the same data sets. Many scholars attempt to solve this problem by varying the specification of their models, typically by including more independent variables. However, such efforts are insufficient. Adding more independent variables, while it may improve the fit of models, does so at the cost of parsimony. Changing the specification of models also results in changes in the coefficients and statistics, making it difficult to judge the quality of models.

Third, investigations of the effectiveness of economic sanction has led to model specifications that lack parsimony. To achieve acceptable levels of fit, scholars tend to include a large number of covariates that are likely to lead to the well-documented problem of over inclusion (Babyak, 2004). Researchers may be unable to account for specificity (the degree to which cases do not achieve an effective outcome) regarding the failure of economic sanctions, and sensitivity

(the degree to which cases achieve effective outcomes) of cases of economic sanctions effectiveness. The data sets do not have enough cases of failures and successes to allow researchers to discern small effects. Researchers need to consider the goal of parsimony and exercise caution and care in selecting independent variables.

A measure of the effectiveness of economic sanctions should not be collapsed into a dichotomy. Because sanctions have multiple goals; a better way to conceptualize and measure the effectiveness of sanctions is to think of effectiveness in terms of levels.

CHAPTER 3 RESEARCH METHODS

This chapter outlines the research methods that I used. The topics include, data sources, conceptualization and measurement, and data analysis techniques. It details the model of the relationships between political agreement and economic sanction outcomes.

The population of cases includes both threatened and imposed economic sanctions episodes as defined by the Threats and Imposition of Sanctions dataset (TIES; Morgan, Bapat, Kobayashi, 2014). The latest version of the dataset includes cases between 1945 and 2005. I use this version because the authors corrected the coding errors in previous versions. Sanctions cases before 1945 were excluded from the analysis due to the lack of available data on many of the independent variables in this analysis. The HSE data set is the main source of data for each sanction episode when specifying the level of political agreement for three parties: principal sender, target, and international. For some cases, HSE does not have sufficient information to measure the level of political agreement. To solve this problem, I explored other available data sources, such as states' official public statements and newspaper indexes (i.e., Lexis-Nexis, Facts on File, Keesing's Record of Contemporary Events).

The unit of analysis in this research is the sanction episode. The population studied includes each case in the TIES dataset. Most research on the effectiveness or outcomes of economic sanctions uses sanction episodes as the units of analysis. This study does the same.

Matching the TIES dataset cases to the HSE dataset resolves the recurring problem of selection bias in the economic sanctions' literature (Drezner, 2003) and adds to the randomness. This is so because the TIES data set also includes threatened sanctions, as well. Economic sanctions are considered to be ineffective foreign policy tools because sanctions can "widen the conflict, add to its destructiveness, and sometimes prolong it" (Kreisberg, 2012, p.88). These

findings, however, are based on analyzing only imposed sanctions. This strategy neglects that threatened sanctions may also be effective and cause target states to alter their behavior in accordance with the wishes of sender states (Bapat et. al., 2013; Drezner, 2003). Drezner (2003), relying on a game theoretical framework, argued that effective sanctions occur as a result of threats rather than because of their imposition. Therefore, the TIES dataset is a solution for the problem of selection bias since it is a more inclusive population compared to other datasets.

Analytic Method

The analytic method used is a set of related models using ordered logit regression of cross-sectional data. There are 125 cases of sanctions episodes in the data set (from 1946 to 1999). The dependent variable is sanctions effectiveness. Nine different models were fitted from general model of sanction effectiveness as seen in Figure 3.1. There are a total of 14 independent variables. The list follows:

1. Political agreement in principal sender state (LPA_1);
2. Political agreement in target state (LPA_2);
3. Political agreement in international system (LPA_3);
4. Aggregated level of political agreement (LPA_4);
5. Principal sender's cost ($Cost_1$);
6. Target's cost ($Cost_2$);
7. Relations (degree of alliance between principal sender and target);
8. Relations (number of senders);
9. Relations (the United States involvement);
10. Relative power;
11. Inducements;

12. Principal sender regime type;

13. Target regime type;

14. Signaling;

15. Bluntness scale.

Level of Political Agreement Model

General: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \varepsilon$

Detailed:

$$Y = \beta_0 + \underset{\substack{(LPA1)\\(LPA2)\\(LPA3)\\(LPA4)}}{\beta_1^{LPA}} \underset{\substack{(11)\\(12)\\(13)\\(14)}}{X_1} + \underset{\substack{(cost1)\\(cost2)}}{\beta_2^{COST}} \underset{\substack{(21)\\(22)}}{X_2} + \beta_3^{SIGN} X_3 + \underset{\substack{(alli)\\(coll)\\(USA)}}{\beta_4^{RELA}} \underset{\substack{(41)\\(42)\\(43)}}{X_4} + \beta_5^{RELP} X_5 + \beta_6^{INDU} X_6 + \underset{\substack{(regi1)\\(regi2)}}{\beta_7^{REGI}} X_7 + \beta_8^{BLUN} X_8 + \beta_9^{SIGN} X_9 + \varepsilon$$

Figure 3.1: General model of sanctions effectiveness

Subsequent analysis estimated modified versions of the general model. First, the effects of the level of political agreement on the senders' level, LPA_1, was added to the model. As shown on Figure 3.2, Group 1 Models include three models variable: one including LPA_1 and the remaining eight independent variables, one without LPA_1 and one without the cost variable. These different model specifications help to better understand and compare the effects of level of agreement.

Group 1 Models	**Level of Political Agreement in Sender (LPA_1)**
Model 1.a	$Y = \beta_0 + \beta_{LPA1} X_{11} + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$ *(LPA_1 included, Cost excluded)*
Model 1.b	$Y = \beta_0 + \beta_{COST} X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$ *(LPA_1 excluded, Cost included)*
Model 1.c	$Y = \beta_0 + \beta_{LPA1} X_{11} + \beta_{COST} X_3 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$ *(Both LPA_1 and Cost included)*

Figure 3.2: LPA_1 Model (first model)

This strategy also is applied to evaluate the level of political agreement of the targets, as well as the international level. As shown in Group 2 Models (in Figure 3.3) and Group 3 Models (in Figure 3.4) respectively, a model with LPA_2, on the target side, is estimated, accompanied by three additional other models, one without cost, one excluding LPA_2, and one including both. The same steps are taken to evaluate LPA_3, the level of political agreement on the international level. Three models are estimated, one excluding cost, one excluding LPA_3, and one including them.

Group 2 Models	**Level of Political Agreement in Target (LPA_2)**
Model 2.a	$Y = \beta_0 + \beta_{LPA2}X_{12} + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ *(LPA_2 included, Cost excluded)*
Model 2.b	$Y = \beta_0 + \beta_{COST}X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ *(LPA_2 excluded, Cost included)*
Model 2.c	$Y = \beta_0 + \beta_{LPA2}X_{12} + \beta_{COST}X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ *(Both LPA_2 and Cost included)*

Figure 3.3: LPA_2 Model (second model)

Group 3 Models	**Level of Political Agreement in the International System (LPA_3)**
Model 3.a	$Y = \beta_0 + \beta_{LPA3}X_{13} + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ (LPA_3 included, Cost excluded)
Model 3.b	$Y = \beta_0 + \beta_{COST}X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ (LPA_3 excluded, Cost included)
Model 3.c	$Y = \beta_0 + \beta_{LPA3}X_{13} + \beta_{COST}X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ (*Both LPA_3 and Cost included*)

Figure 3.4: LPA_3 Model (third model)

Finally, the analysis estimates three models labeled Group 4 Models in Figure 3.5. These models estimate the effect of the aggregated level of political agreement variable, LPA_4. The first model includes LPA_4 and excludes cost. The second model includes cost, but LPA_4. The third

includes both variables. Since the second sub-model of each the model excludes LPA variables, but included the cost variable, model 1.b, model 2.b, model 3.b, and model 4.b have the same specification.

Group 4 Models	Aggregated Level of Political Agreement
Model 4.a	$Y = \beta_0 + \beta_{LPA4}X_{14} + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ *(LPA₄ included, Cost excluded)*
Model 4.b	$Y = \beta_0 + \beta_{COST}X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ *(LPA₄ excluded, Cost included)*
Model 4.c	$Y = \beta_0 + \beta_{LPA4}X_{14} + \beta_{COST}X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$ *(LPA₄, and Cost included)*

Figure 3.5: LPA$_4$ Model (fourth model)

Dataset Descriptions

1. TIES dataset description.

The Threat and Imposition of Sanctions (TIES) dataset was the one of the primary sources of information for this research. It uses the same country codes as those found in the Correlates of War (COW) project. TIES dataset provides information about economic sanctions including their length, intensity, actors and outcomes. TIES dataset includes 1,413 sanctions episodes from 1946 to 2007. In addition to numerous secondary sources, the primary sources for TIES dataset are *Lexis-Nexis, Facts on File,* and *Keesing's Record of Contemporary Events* (Morgan, Bapat, & Kabayashi, 2014).

The authors define a sanction case when it satisfies two conditions: (1) involves at least one sender state and a target state, and (2) is implemented by the sender state in order to change the behavior of the target state. Therefore, their cases include many kinds of actions, including

tariffs, export controls, embargoes, import bans, travel bans, freezing assets, cutting foreign aid, and/or blockades (Morgan et al., 2014).

For each case, the dataset includes information about the duration (including starting day, month, year, and ending month day, year) of each sanctions episode. The dataset also provides information about the sanctions type: whether the case involves a single state (unilateral), a group of up to five states (multilateral) or an international institution(s), such as the United Nations (UN) or European Union (EU). If it is a multilateral sanction, the dataset also provides the principal sender state, as well. The dataset specifies one target state, which is in accordance with their definition of sanctions.

For issues, the dataset provides 15 different issue type codes, and includes three variables allowing for the coding of up to three types of issues: issue1, issue2, and issue3, as causes for the sanctions. These variables reflect their order of importance, and use the codes shown below. Morgan et al. (2014) includes issue types separately both for threatened and imposed sanctions. Therefore, the dataset includes up to three of the most relevant issues for cases of both threatened and imposed sanctions. These issue types together with their codes are below:

1. Contain Political Influence;
2. Contain Military Behavior;
3. Destabilize Regime;
4. Release Citizens, Property, or Material;
5. Solve Territorial Dispute;
6. Deny Strategic Materials;
7. Retaliate for Alliance or Alignment Choice;
8. Improve Human Rights;

9. End Weapons/Materials Proliferation;
10. Terminate Support of Non-State Actors;
11. Deter or Punish Drug Trafficking Practices;
12. Improve Environmental Policies;
13. Trade Practices;
14. Implement Economic Reform;
15. Other.

Morgan et al. (2014) also provide information about how the threat was made by the sender. They identify the person(s) who threatened economic sanctions by the threat identity variable. The dataset provides for up to three variables for each case depending upon the number making the threat, using the codes below. Their categories include:

1. The threat was made by a bureaucrat or a body of bureaucracy;
2. Individual Legislator, the threat was made by legislation;
3. Legislature, the threat was made from legislation structure;
4. Executive staff member, when a threat was made by executive staff member;
5. Executive, when executive, such as president, prime minister etc., make a threat;
6. Government, when the government threatens using economic sanctions;
7. Sanctions were threatened by the head of international institution;
8. When an institution body adopt a resolution on sanctions.

For the sanction types threatened, the dataset includes 11 categories; these are; (a) unspecific, (b) total economic embargo, (c) partial economic embargo, (d) import restriction, (e) export restriction, (f) blockade, (g) asset freeze, (h) termination of foreign aid, (i) travel ban, (j) suspension of economic agreement/protocol, and (k) other type of sanctions threatened. The first

10 categories (a) through (j) are coded using numbers 1 through 10; the last category (k) is alphabetic (a string variable). The sender's clarity regarding the offending behavior of the target state is coded as (1) ambiguous and (2) clear. If no threat was made before the imposition of sanctions, then variable is coded as missing. In addition, sender's commitment levels when threatening the use of sanctions is coded as (1) weak, (2) moderate, and (3) strong.

The specific target intended to bear the cost of sanctions threatened is coded as (1) general, (2) regime leadership, (3) a particular industry or industries, (4) a particular political group or groups, (5) military, and (6) other. Threats may focus on more than one target in a case, then two group codes are included in a cell.

The diplomatic sanctions variable captures threatened or imposed restrictions on a diplomatic body or bodies. This variable disregards whether there was first a threat of sanctions or not. Categories include (1) expulsion of ambassador, (2) recall of ambassador, (3) temporary closing of embassies, (4) ending diplomatic contact.

The carrots variable captures positive inducements when sanctions were threatened as (1) economic payments or aid, (2) trade concessions, (3) removal of previous sanctions, (4) military aid, and (5) political concessions, and other. There are 30 cases with positive inducements.

The anticipated target economic cost variable captures the impact of sanctions imposition on the target state, but not anticipated cost when sanctions were only threatened. Here the focus is on imposition. Morgan et al. (2014) measured the cost with three codes: (1) minor, when there is no evidence that sanctions will hurt the target economy (2) major, when evidence show that sanctions may cause abnormal changes in the target economy, such as at least 5% expansion of inflation and/or unemployment rate, and significant reduction in trade relationships (3) severe, where an episode can cause significant decreases in critical supplies and increases mortality rate

(Morgan et. al., 2014). The same codes (minor, major, and severe) are also used for the anticipated costs for the sender state for sanctions imposition.

The data set includes 10 codes for sanctions outcome. Codes specify whether sanctions were threatened and/or imposed. Below shows sanctions outcome codes.

1. Partial acquiescence by target to threat;
2. Complete acquiescence by target to threat;
3. Capitulation by the sender(s) in threat stage;
4. Stalemate in the threat stage;
5. Negotiated settlement at the threat stage;
6. Partial acquiescence by the target state following sanctions imposition;
7. Total acquiescence by target state following sanctions imposition;
8. Capitulation by sender after sanctions imposition;
9. Stalemate after sanctions imposition;
10. Negotiated settlement following sanctions imposition.

2. HSE Dataset

Hufbauer, Schott, and Elliott (HSE) conducted the most extensive analysis of economic sanctions in their updated book entitled *Economic Sanctions Reconsidered* (HSE 2009). They constructed a database of 174 cases of imposed economic sanctions and provided details about each sanction case. They also considered cases with multiple goals, phases, and targets, increasing the number of cases to 204. If an episode involved multiple sanctioners, HSE only considered sanctions with up to 3 senders. The first sender is usually the principal or leading sender. The data also include a measure for multilateral targets; sanctions may be aimed at more than one state.

They classified cases based on world regions: (a) Organization of Economic Cooperation and Development (OECD); (b) Non-OECD Europe; (c) Latin America; (d) Middle East; (e) Asia; and (f) Africa. They developed several measures to quantify various attributes of economic sanctions. For example, they created two dummy variables regarding the United States' involvement in sanction episodes. They looked at multilateral sanctions if the U.S. was one of the sender state(s) and the U.S. was imposing sanctions unilaterally.

HSE also analyzed the goals of economic sanctions. They divided sanctions goals into five categories, these are:

1. Modest policy changes;
2. Regime change and democratization;
3. Disruption of military adventures;
4. Military impairment;
5. Other major policy changes.

HSE provided the start and end year for each sanction episode. They also considered sanction types. They attached a symbol for each type including "F" indicating the interruption of commercial finance, aid, and other official finance; "X" indicating the interruption of exports from the sender to the target; and "M" indicating the interruption of imports by the sender from the target" (HSE 2009).

They created two variables for the sanction outcomes. The first is the sanction results variable that has four categories, including:

1. Failed outcome;
2. Unclear but possibly positive outcome;
3. Positive outcome;

4. Successful outcome.

The second outcome variable is sanction contribution variable that has four different categories:

1. Negative contribution;
2. Minor contribution;
3. Substantial contribution;
4. Decisive contribution.

Multiplication of these two variables, sanction results (1 - 4) and sanctions contribution (1 - 4) produces a third variable, called the success score index, which can range from 1 to 16. This index indicates the level of economic sanctions success for each individual episode.

The HSE data specified international cooperation using three different variables. The first variable is the extent of international cooperation (C) with four categories: (1) no cooperation; (2) minor cooperation; (3) modest cooperation; and (4) significant cooperation. The second variable is international assistance (A) to the target variable and is coded as a 1 if present and left blank for others. The third variable is the international organization (IO) variable that indicates a cooperating international organization. Two more variables are added to explain the role of IO, the third variable. These is a dummy variable where 1 indicates IO as sender and, and there is a second dummy variable where a 1 indicates that an international organization (IO) is either a sender, imposes a sanction without being a sender, or otherwise cooperates in an episode, and that both senders and targets are members of the IO (HSE 2009).

The relationship variable describes the overall degree of warmth between the sender and target before the sanction episode (HSE 2009). This variable is coded as: (1) antagonistic, (2) neutral, and (3) cordial. Regime type variables come from the Polity IV database. The health and

stability index measures target country's overall stability and includes three codes: (1) distress, (2) significant problems, and (3) strong and stable.

The variable sanctions' cost to the target considers the condition where sanctions were imposed, not threatened. The first variable is a measure of the cost of sanctions on targets in millions of dollars. The second variable is a measure of the cost of sanctions on the target with respect to the gross national product percentage (GNP). The third variable is a measure of the cost to the target state's per capita income, and the fourth variable is a measure of the trade linkage variable, which "equals the average of pre-sanction target-country exports to the sender country as a percentage of total target-country exports and imports from the sender country as a percentage of total target-country imports" (HSE, 2009, p 115). The sender's cost is an index of these four variables, coded as: (1) net gain to sender; (2) little effect on sender; (3) modest welfare loss to sender; and (4) major loss to sender. Costs related to sanctions threats were coded as missing data for both sender and the target.

They also provide a measure of the ratio of sender GNP to target GNP. The economic development variable was calculated as the average of the last five years' development rate as a percentage before the imposition of sanctions. Moreover, they considered an average of three years before the sanctions' imposition as average of percentages of each year.

Variables

1. Dependent Variable

Sanctions effectiveness is the dependent variable. Its level of measurement is ordinal. Political scientists have measured sanctions effectiveness in many ways. Despite this, analyses of sanctions effectiveness have collapsed this variable into a dichotomy, successful or unsuccessful. Such dichotomization leads to several problems. First, it reduces the range of variation within the outcome. Second, it lowers the capability of statistical tests of detecting relationships between covariates. Third, on a conceptual level, economic sanctions effectiveness may not be binary. On the contrary, effectiveness may be conceptualized as a continuous measure taking varying degrees of effectiveness, none, minor, major or complete, just to name few possibilities.

In the field of world politics, there have been heated debates among scholars regarding the measurement of economic sanctions effectiveness. Two main approaches emerged in the past three decades, the HSE approach and the International Threats and Imposed Sanctions' dataset approach. In the first approach, HSE (Hufbauer, Schott, & Elliott, 2009) assigned each episode of imposed sanctions a success score. They derived this score by conducting an in-depth analysis of each case and considering whether the publicly stated goals of the sanctioner were met or not. The effectiveness score is calculated by multiplying two indices (contribution of sanctions x sanctions outcome). Several scholars have criticized this approach by arguing that it is arbitrary and lacks transparency (Baldwin & Pape, 1998; Drury, 1998; Pape, 1997, 1998). Further, others have criticized the HSE approach since it mostly excludes cases of threatened sanctions (Drezner, 1999, 2003). To overcome this criticism, another approach was developed by Morgan et al. (2014 and became known as the TIES dataset.

The creators of TIES measured economic effectiveness as an ordinal level variable where the outcome could take on 10 different values, measuring different levels of effectiveness and ineffectiveness. Five outcomes were assigned to cases of threatened sanctions and the five were assigned to cases of actual imposed sanctions. Tables 3.1 and 3.2 indicate the coding scheme used by TIES authors. The coding of cases is done through a thorough examination of each case. Although this approach includes more cases, it is based upon the judgment of experts and thus raises questions concerning reliability.

This research does not propose a new measure of economic sanction outcomes. It does, however, use a new analytic method that derives estimates of the effects of different independent variables upon the odds of effective economic sanctions (level 4) for different levels: partial effectiveness (level 3), negotiated effectiveness (level 2), un-negotiated effectiveness (level 1) and failure (level 0). The codes found in TIES are recoded into newer codes that are easier to understand.

Tables 3.1 and 3.2 also present the TIES coding scheme and the new proposed codes used in this study. The new measure records the 10 categories into five ordinal outcomes. Sanctions could be effective (level 4), partially effective negotiated (level 3), partially effective un-negotiated (level 2), stalemate (level 1) or ineffective (level 0). The partially effective category could result from the acquiescence of the target or the capitulation of the sender. Therefore, the new measure differentiates between negotiated and un-negotiated effectiveness. Although an interval or ratio level measures are ideal, for analytic purposes, ordinal level measures are superior to nominal ones.

Table 3.1

Coding Outcome for Cases where Sanctions Threatened

TIES Code	TIES Variables (after threat)	Our Code	Our Variables
3	Capitulation by the sender in threat stage	0	Effectiveness Level 0
4	Stalemate in the threat stage	1	Effectiveness Level 1
1	Partial acquiescence by target to threat	2	Effectiveness Level 2
5	Negotiated settlement at the threat stage	3	Effectiveness Level 3
2	Complete acquiescence by target to threat	4	Effectiveness Level 4

Table 3.2

Coding Outcome for Cases where Sanctions Imposed

TIES Code	TIES Variables (after imposition)	Our Code	Our Variables
8	Capitulation by sender following sanctions imposition	0	Effectiveness Level 0
9	Stalemate between sender and target state after sanctions imposition	1	Effectiveness Level 1
6	Partial acquiescence by the target state after imposition	2	Effectiveness Level 2
10	Negotiated settlement following sanctions imposition	3	Effectiveness Level 3
7	Total acquiescence by target state following sanctions imposition	4	Effectiveness Level 4

In this study, the dependent variable is ordinal and includes five ranked categories. No effectiveness is coded as 0, which indicates capitulation, by the sender. Stalemate is ranked higher than capitulation with a score of 1. Partial effectiveness as un-negotiated and negotiated partial effectiveness are coded as 2 and 3 respectively. The sender is more satisfied with the negotiated outcome than the un-negotiated outcome, since there is a consensus between principal sender and target. However, if the sanction is partially effective, this outcome can be volatile, and an

agreement is not noted between states. Therefore, negotiated partial effectiveness gets a higher rank than un-negotiated partial effectiveness. Conventional wisdom says that total acquiescence is effective and is coded as 4. Therefore, in this study, a sanction episode is ranked as entirely effective as long as the target state acquiesces completely to the sender state after the threat and/or imposition of economic sanctions.

2. Independent variables (*italicized* variables are used in regression models)

Eight different groups of independent variables were used in regression analyses. These variable groups included: (a) level of political agreement (LPA), (b) sanction cost, (c) sender-target relationships, (d) signaling, (e) relative power, (f) inducements, (g) regime types, and (h) sanction bluntness.

1) Level of political agreement (LPA) is the main independent variable. It is an ordinal variable. It is not found within any existing economic sanctions dataset. HSE (2009) data were used to construct the political agreement level index. Political agreement levels were calculated per economic sanctions episode.

   (a) Level of political agreement within the sanctioning state (LPA_1);

   (b) Level of political agreement within the target state (LPA_2);

   (c) Level of political agreement within international system (LPA_3);

   (d) Level of aggregated political agreement (LPA_4).

To construct the level of political agreement variable, an in-depth-analysis of dataset case studies provided by HSE, as well as other datasets, was conducted by two researchers. Each researcher reviewed each case and assigned scores based on their criteria for LPA (See Appendix B). The ratings for the two reviewers were averaged to obtain a score for each LPA (LPA_1, LPA_2, and LPA_3) score. Each economic sanction episode possessed different scores for political

agreement: senders, targets, and international involvement. The three political agreements indices were constructed as follows:

A. To construct the level of political agreement on the senders' level, LPA_1, three actors were considered: the government, main opposition, and other (e.g., lobby groups, social factions, and influential entities). Each actor received a score of -2, -1, 0, 1 or 2. A score of -2 indicated the lack of political support for the economic actions for that particular actor. A 0 indicated an impartial or unclear position towards the sanctions. A score of 2 reflected the support of the actor for the economic sanctions episode. After assigning an average score per actor, a mean was calculated and considered as the level of political agreement on the senders' side for that particular economic sanction.

B. The construction of the political agreement level index on the targets' level, LPA_2, was developed in the same way as the political agreement level on the senders' side. Similar to the LPA_1, three actors were considered: the government, the main opposition and other influential groups. The two reviewers each assigned a score (between -2 and 2) per actor and then averaged them to calculate a mean of the level of political agreement index on the targets' side.

C. To construct the level of political agreement index on the international level, LPA_3, different set of actors were considered. The two reviewers considered international support (coalitional sanctions), and governments' based international organizations, non-governmental based international organizations, and multinational corporations. To gauge each actors' support for the sanction episode, the two reviewers assigned a number (-2, -1, 0, 1 or 2) to indicate the level of support as in the case of level of political agreement indices on the senders' as well as the targets' level.

D. Aggregate level of political agreement, LPA_4, was calculated by summing LPA_1 and LPA_3 and then subtracting LPA_2.

$$LPA_4 = LPA_1 - LPA_2 + LPA_3$$

This score represents the aggregated score for LPA for each sanction episode.

2) Sanction Cost: This variable measures the cost of sanction episodes separately for both principal sender and target:

(a) Sender Cost: This ordinal variable has three levels, coded from "0" to "2." A "0" indicates minor costs, where sanctions do not hurt the economy; "1" major costs, where sanctions cause unusual changes in the economy; and "2" severe costs, where sanctions influence peoples and decrease critical supplies substantially. The TIES dataset was used for this variable.

(b) Target cost: This ordinal variable is similar to the sender cost, with three levels that coded from "0" to "2." The codes are: "0" minor, "1" major, and "2" severe costs. The same logic and data source were used to rank the values.

3) Commitment Scale (Signaling): This ordinal variable indicates the level of commitment in principal sender's credible signals. It was coded as a "0" when weak signals were sent by sender, "1" where they are moderate, and "2" where they are powerful. A "3" was assigned when a sanction imposed without threatening. The TIES dataset was used for commitment scale variable.

4) Sender-Target relations: To address the relationship between sender(s) and target, four different variables were used:

(a) Degree of alliance (alliance scale): This ordinal variable shows the level of alliance. This variable was coded as a "0" if the principal senders were enduring rivals. I used the definition and data from Klein, Goertz, and Diehl (2006) to rank this variable. A"1" was used when neither

principal sender nor target is neither having alliance nor enduring rivalry relationship. In addition, the variable was coded as a "2" when the principle sender and target were formal allies as defined by Small and Singer (1966).

(b) Multiple Senders (collaboration scale): This interval variable indicated the number of senders. The variable was coded as a "0" when the sanctions are imposed unilaterally, "1" when there are two senders, "2" when there is a collaboration of three senders, "3" when there is a collaboration of four senders, and "4" when there are at least five senders engaged in the sanctions. The source for this data is TIES Dataset for this variable.

(c) The United States Involvement: This ordinal variable was coded "0" for sanction episodes where it was not imposed by the United States or with the collaboration of the United States. It was coded "1" where it is a multilateral sanction and the United States collaborated the sanctions episode; however, it was not the principal sender. It was coded "2" where the sanction is a multilateral episode and the United States is the principal sender. It was coded "3" where it was a unilateral sanction episode and the United States was the sender state. The TIES dataset was used for this variable.

5) Relative power: This continuous variable was obtained from the principal sender's composite index of national capability (CINC) score relative to the target's CINC score. Therefore, principal sender's CINC score divided by the Target's CINC score. Instead of a percentage ratio, I used the proportion. I did not divide principal sender's CINC score with the sum of both states' CINC scores because, in this way, I can address how many times sender state has more capability than target state. The data source for CINC scores was obtained from the COW (Correlates of War) Project National Material Capabilities Dataset v4.0 (Singer, Bremer, & Stuckey, 1972).

6) Carrots (Inducements): This ordinal variable measures the level of positive inducements by the sender to the target. It was coded as a "0" if the sender offered no inducements. However, if inducements were offered, it was coded as a "1." So, this is a dummy variable. TIES Dataset code carrots as "1" economic payments or aid, "2" trade concessions, "3" removal of previous sanctions, "4" military aid, and "5" political concessions.

7) Regime Types: This ordinal variable used the data provided by Polity IV. This dataset provided annual information about states on the level of democracy from 1800 through 2013. Polity scores ranged from -10 to +10 and had 21 categories in total. Scholars usually accept values between -10 to -6 as autocracies, -5 to 5 as anocracies, and 6 to 10 as democracies (Marshall, Jaggers, & Gurr, 2002). However, this approach tended to use all levels instead of dividing the information into 2 (democracy vs. non-democracy) or 3 (autocracy, anocracy, and democracy). In this way, the full information was used for the statistical results. Therefore, the data will be coded from 0 to 20, with showing "0" as full autocracy and "20" as full democracy.

(a) Sender's Regime Type: This ordinal variable showed the level of democracy ranging from "0" to "20." I used the Polity IV database as the data source for this variable.

(b) Target's Regime Type: This ordinal variable indicated the level of democracy ranging from "0" to "20." I used the Polity IV database as the data source for this variable.

8) Sanctions Intensity (bluntness scale): It is an ordinal variable that measures the severity of threatened or imposed sanctions. The worst sanctions are those that do not have selective objectives or can influence the population. This variable also showed the bluntness of imposed sanctions. I coded the intensity of sanctions from travel ban to blockade, with a "0" indicating travel ban, "1" asset freeze, "2" suspension of economic agreement/protocol, "3" import restriction

/ export restriction, “4” termination of foreign aid, “5” partial economic embargo, “6” total economic embargo, “7” blockade. The TIES dataset was used for this variable.

Hypotheses:

The followings are my hypotheses.

H_1: The higher the level of political agreement on the sender’s side, the more effective the economic sanctions.

H_2: The higher the level of political agreement on the sender’s side and the greater costs experienced by the target, the more effective the economic sanctions.

H_3: The higher the level of political agreement on the target’s side, the less effective the economic sanctions.

H_4: The higher the level of political agreement on the target's side and the less economic disutility, the less effective the economic sanctions.

H_5: The higher the level of political agreement on the international level, the more effectiveness of economic sanctions.

H_6: The higher the level of political agreement on the international level and the greater the costs to the target, the more effective the economic sanctions.

H_7: The higher the level of aggregate political agreement, the more effective are the economic sanctions.

Using this newly constructed measures, level of political agreement variables (LPA_1, LPA_2, LPA_3, and LPA_4), I test seven hypotheses by using four different group of empirical models in the following chapter.

CHAPTER 4 RESULTS AND DISCUSSION

Introduction

In this chapter, I present the findings regarding the relationships between level of political agreement (LPA) variables and the target cost variable and sanctions effectiveness, controlling for other independent variables. First, I describe the distributions of key variables. Second, I present the results of the ordered logit regression models for each of the four LPA variables that test the seven hypotheses set out in chapter 3. Then, I estimate logit regression models to check the robustness of the results and to consider alternative explanations for the results. For reliability tests, I conduct ordered probit and standard probit regression models. Finally, I discuss and assess the findings with respect to the hypotheses.

Statistical Description of the Key Variables

Sanction effectiveness is an ordinal measure that varies from zero to four. Accordingly, I used ordered multivariate logit regression for assessing the effects of multiple independent variables on this ordinal variable. Model specifications are based on previous findings of the economic sanctions literature. Logistic regression models derive coefficients using maximum likelihood estimation (MLE) rather than derived using the assumption of constant variance or homoscedascity of ordinary least squares (OLS). The MLE coefficients are estimates of the effects of the independent variables on the logarithm of the odds of the dependent variable for each level of sanction effectiveness. Table 4.1 shows descriptive statistics and the frequency distribution of sanctions effectiveness for 125 sanctions cases. Figure 4.1 is a bar chart showing the frequency distribution.

Table 4.1

Descriptives and Frequency Distribution for Sanction Effectiveness

Sanction Effectiveness Variable	
Number of observations:	125
Range:	[0-4]
Unique Values:	5
Units:	Ordinal
Mean:	2.15
SD:	1.48

Sanction Effectiveness Variable Tabulation

Value	Freq.	Percent	Cum.
0	28	22.4	22.4
1	14	11.2	33.6
2	24	19.2	52.8
3	29	23.2	76.0
4	30	24.0	100.0
Total	125	100	-

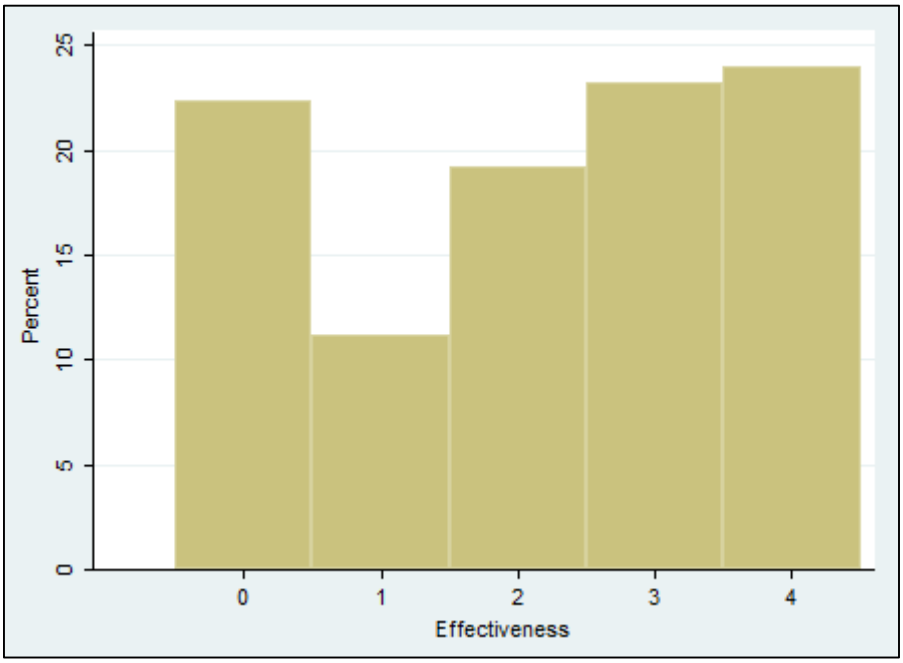


Figure 4.1: Frequency Distribution of Sanctions Effectiveness

Sanctions are foreign policy tools used to change target behaviors. Implementing these tools require at least some agreement between groups within the sender state and at the international level. Similarly, the target state's leaders, opposition parties (if any), social factions, and other groups are unlikely to welcome sanctions threatened or carried out against their state. Therefore, all political agreement variables have skewed distribution (i.e., the agreement values tend to bunch towards the higher values in sender, target, and international levels). Likelihood ratio regression models produce consistent estimates even under skewed data distribution, while OLS regression does not. Tables 4.2, 4.3, and 4.4 show descriptive statistics and frequency distributions for the LPA variables in sender state (LPA_1), target state (LPA_2), and international system (LPA_3).

Table 4.2

Level of Political Agreement in Sender State (LPA_1)

LPA_1 Variable Coding Information	
a) Number of observations	125
b) Range	[3, 4]
c) Unique Values	12
d) Units	Continuous
e) Mean	3.83
f) Std. Dev.	0.27

LPA_1 Variable Tabulation

Value	Freq.	Percent	Cum.	Value	Freq.	Percent	Cum.
3.000	4	3.2	3.2	3.502	1	0.8	23.2
3.083	1	0.8	4.0	3.665	1	0.8	24.0
3.250	2	1.6	5.6	3.667	2	1.6	25.6
3.333	1	0.8	6.4	3.750	5	4.0	29.6
3.415	1	0.8	7.2	3.833	1	0.8	30.4
3.500	19	15.2	22.4	4.000	87	69.6	100.0
Total	/	/	/	/	125	100	-

Table 4.3

Level of Political Agreement in Target State (LPA_2)

LPA_2 Variable Information					
a) Number of observations	125				
b) Range	[1.5, 4]				
c) Unique Values	16				
d) Units	Continuous				
e) Mean	3.41				
f) Std. Dev.	0.51				
LPA_2 Variable Tabulation					
Value	Freq.	Percent	Value	Freq.	Percent
1.500	1	0.8	3.250	8	6.4
1.750	1	0.8	3.333	1	0.8
2.250	1	0.8	3.335	1	0.8
2.500	5	4.0	3.417	1	0.8
2.667	2	1.6	3.500	25	20.0
2.750	4	3.2	3.583	1	0.8
2.916	1	0.8	3.750	12	9.6
3.000	26	20.8	4.000	35	28.0
Total	--	--	--	125	100

Table 4.4

International level of political agreement (LPA_3)

LPA_3 Variable Coding Information		
a) Number of Observations	125	
b) Range	[2,4]	
c) Unique Values	4	
d) Units	Continuous	
e) Mean	2.74	
f) Std. Dev.	0.86	
LPA_3 Variable Tabulation		
Value	Freq.	Percent
2	68	54.4
3	16	12.8
3.5	11	8.8
4	30	24.0
Total	125	100

In addition to developing measures of the $LPA_{1, 2, 3}$ variables, an index measure was created for the aggregate level of political agreement variable [LPA_4]). Tables 4.5 presents descriptive statistics and a frequency distribution for the LPA_4 variable. Figure 4.2 displays a histogram of the LPA_4 variable. Although the three level of agreement variables' ($LPA_{1, 2, 3}$) distributions are skewed, the variable for the aggregate level of political agreement (LPA_4) e has an approximately normal distribution.

Table 4.5

Aggregate Level of Political Agreement (LPA_4)

LPA_4 Variable Coding Information	
a) Number of observations	125
b) Range	[1.5, 3.17]
c) Unique Values	48
d) Units	Continuous
e) Mean	2.43
f) Std. Dev.	0.37

LPA_4 Variable Tabulation

Value	Freq.	Percent	Cum.	Value	Freq.	Percent	Cum.
1.500	1	0.8	0.8	2.541	1	0.8	59.2
1.625	1	0.8	1.6	2.555	1	0.8	60.0
1.660	1	0.8	2.4	2.583	1	0.8	60.8
1.750	4	3.2	5.6	2.625	1	0.8	61.6
1.874	1	0.8	6.4	2.664	1	0.8	62.4
1.875	4	3.2	9.6	2.665	1	0.8	63.2
1.986	1	0.8	10.4	2.666	15	12	75.2
2.000	13	10.4	20.8	2.667	2	1.6	76.8
2.083	1	0.8	21.6	2.694	1	0.8	77.6
2.084	1	0.8	22.4	2.750	3	2.4	80.0
2.125	3	2.4	24.8	2.751	3	2.4	82.4
2.166	1	0.8	25.6	2.832	3	2.4	84.8
2.208	1	0.8	26.4	2.833	2	1.6	86.4
2.218	1	0.8	27.2	2.834	2	1.6	88.0
2.222	1	0.8	28.0	2.861	1	0.8	88.8
2.250	12	9.6	37.6	2.875	1	0.8	89.6
2.333	2	1.6	39.2	2.916	2	1.6	91.2
2.333	1	0.8	40.0	2.916	1	0.8	92.0
2.334	1	0.8	40.8	3.000	5	4.0	96.0
2.375	5	4.0	44.8	3.055	1	0.8	96.8
2.416	1	0.8	45.6	3.083	1	0.8	97.6
2.417	1	0.8	46.4	3.111	1	0.8	98.4
2.499	1	0.8	47.2	3.125	1	0.8	99.2
2.500	14	11.2	58.4	3.167	1	0.8	100.0
Total	/	/	/	/	125	100	-

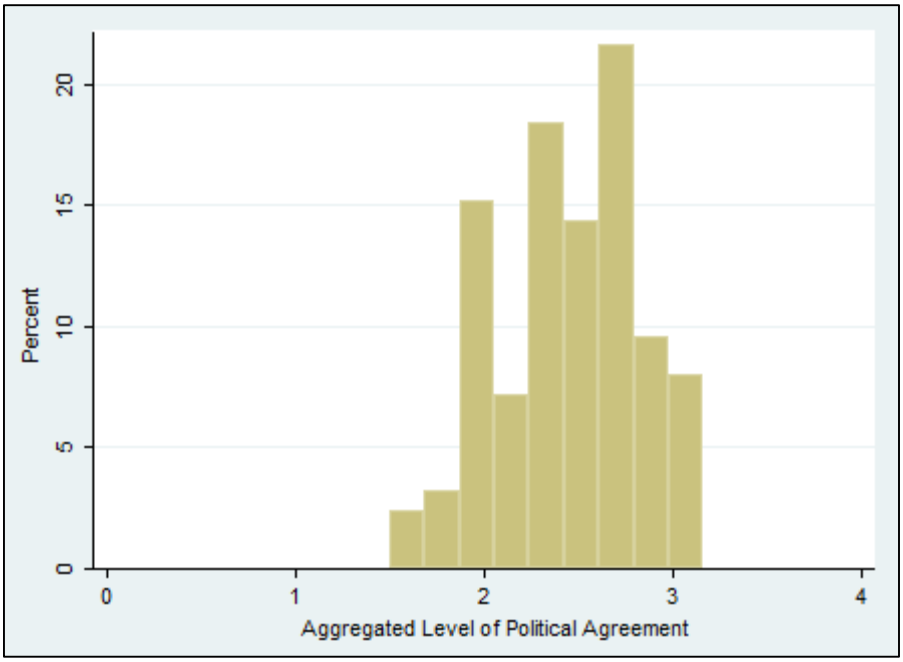


Figure 4.2: Percentage histogram of aggregated level of political agreement (LPA_4) variable

Table 4.6 shows the joint distribution of cases with respect to higher and lower levels of each of the three political agreement variables: level of political agreement in sender state (LPA_1), level of political agreement in target state (LPA_2), and international level of political agreement (LPA_3) variables. Note that higher levels of a political agreement variable indicate cases with LPA scores higher than average LPA scores for that variable ($LPA > \mu_{LPA}$). Lower levels of a political agreement include cases whose LPA scores were lower than average LPA scores of that variable ($LPA < \mu_{LPA}$). Figure 4.3 presents eight different classifications and average sanction effectiveness scores for each classification.

Table 4.6

Classification of all Cases with regard to Higher and Lower Values of $LPA_{1, 2, and\ 3}$

LPA_3: (→) ($\mu_{LPA3} = 2.74$)	Lower Levels of International Political Agreement ($LPA_3 < \mu_{LPA3}$)		Higher Levels of International Political Agreement ($LPA_3 > \mu_{LPA3}$)		LPA_3: (←)
LPA_1: (→) ($\mu_{LPA1} = 3.83$) $LPA_{2:}$ (↓), ($\mu_{LPA2} = 3.41$)	Lower Levels of Political Agreement in Sender State ($LPA_1 < \mu_{LPA1}$)	Higher Levels of Political Agreement in Sender State ($LPA_1 > \mu_{LPA1}$)	Lower Levels of Political Agreement in Sender State ($LPA_1 < \mu_{LPA1}$)	Higher Levels of Political Agreement in Sender State ($LPA_1 > \mu_{LPA1}$)	Totals:
Lower Levels of Political Agreement in Target State ($LPA_2 < \mu_{LPA2}$)	9 Economic Sanction Episodes Average Sanc. Effectiveness Score = 2.77)	20 Economic Sanction Episodes Average Sanc. Effectiveness Score = 2.40	4 Economic Sanction Episodes Average Sanc. Effectiveness Score = 3.00	19 Economic Sanction Episodes Average Sanc. Effectiveness Score = 3.31	52 Episodes (41.6%)
Higher Levels of Political Agreement in Target State ($LPA_2 > \mu_{LPA2}$)	17 Economic Sanction Episodes Average Sanc. Effectiveness Score = 1.23	22 Economic Sanction Episodes Average Sanc. Effectiveness Score = 1.36	8 Economic Sanction Episodes Average Sanc. Effectiveness Score = 1.62	26 Economic Sanction Episodes Average Sanc. Effectiveness Score = 2.19	73 Episodes (58.4%)
Totals:	26 Episodes (20.8%)	42 Episodes (33.6%)	12 Episodes (9.6%)	45 Episodes (36%)	N=125 (100%)

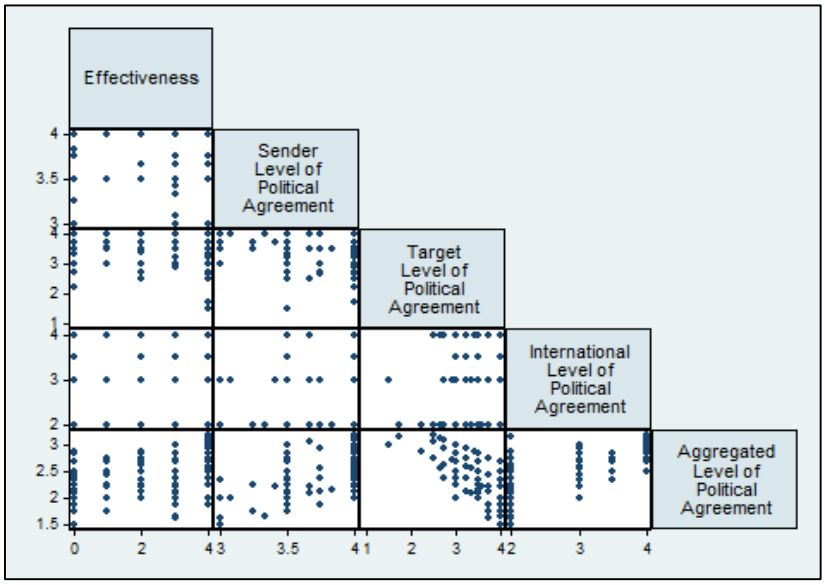


Figure 4.3: Scattergram of sanction effectiveness and all LPA variables.

Table 4.7 presents descriptive statistics and the frequency distribution of the target cost variable. Although the primary focus of this study was on level of political agreement variables ($LPA_{1, 2, 3, 4}$), the target cost variable is also analyzed in greater detail due to its importance in the economic sanctions literature.

Table 4.7

Information on Target Cost Variable

Target Cost Variable Information			
a)	Number of observations	125	
b)	Range	[0, 2]	
c)	Unique Values	3	
d)	Units	1 (ordinal)	
e)	Mean	0.72	
f)	Std. Dev.	0.80	
Sanction Effectiveness Variable Tabulation			
Value	Freq.	Percent	Cum.
0	63	50.40	50.40
1	34	27.20	77.60
2	28	22.40	100.00
Total	125	100	-

I calculated descriptive statistics for the other control variables. The signaling variable has a mean score of 2.04 (standard deviation [sd] = 0.84), with a distribution that is approximately normal. The mean score for the alliance scale variable is 1.16 (sd = 0.62) with a distribution that is approximately normal as well. The mean score for the collaboration scale variable is 1.66 (sd = 1.91) and it has a distribution that is bimodal (modes 0, 4). The mean score for the US involvement variable is 1.88 (sd = 1.22) with a bimodal distribution (modes 0, 3).

The relative power variable has a mean score is 81.06 (sd = 132.44) with a heavily right-skewed distribution that includes outliers. This variable is continuous interval level variable; I use

the logarithm transformation to deal with the outlier problem. As a result, the mean score for the logged relative power variable is 2.97 (sd = 2.00) and its distribution is approximately normal.

The mean score for the inducements variable is 0.07 (sd = 0.25), and the mean score for sanction bluntness variable is 4.48 (sd = 1.32). For the regime types variable; the mean score for the sender regime type variable is 16.45 (with discrete integer values ranging from 0 to 20) and its distribution has a left-skew; the mean score for the target regime variable is 8.16 (with discrete integer values ranging from 0 to 20) and its distribution has a right skew. The standard deviation for the sender regime type variable is 7.11; the standard deviation for target regime type is 7.02. Table 4.8 shows the linear correlation coefficients between all variables used in this study.

Table 4.8

Correlation Matrix for All Variables

Variables	(1) Sanction Effectiveness	(2) Sender LPA (LPA_1)	(3) Target LPA (LPA_2)	(4) International LPA (LPA_3)	(5) Aggregated LPA (LPA_4)	(6) Sender State Cost	(7) Target State Cost	(8) Signaling	(9) Alliance Scale	(10) Collaboration Scale	(11) The US Involvement	(12) Relative Power	(13) Inducements	(14) Sender Regime Type	(15) Target Regime Type	(16) Bluntness
1) Effectiveness	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2) LPA_1	0.14	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3) LPA_2	-0.35	-0.07	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-
4) LPA_3	0.23	0.21	0.09	1.00	-	-	-	-	-	-	-	-	-	-	-	-
5) LPA_4	0.40	0.49	-0.56	0.68	1.00	-	-	-	-	-	-	-	-	-	-	-
6) Sender Cost	0.06	0.06	-0.02	0.12	0.10	1.00	-	-	-	-	-	-	-	-	-	-
7) Target Cost	0.22	-0.02	-0.09	0.28	0.25	0.20	1.00	-	-	-	-	-	-	-	-	-
8) Signaling	0.15	0.02	-0.14	0.01	0.10	0.01	-0.02	1.00	-	-	-	-	-	-	-	-
9) Alliance	0.04	-0.04	-0.29	-0.19	0.04	-0.11	0.01	-0.02	1.00	-	-	-	-	-	-	-
10)Collaboration	0.10	0.21	0.07	0.78	0.56	0.09	0.31	-0.01	-0.21	1.00	-	-	-	-	-	-
11) US Invol.	-0.03	0.01	0.10	-0.29	-0.27	-0.25	-0.16	-0.02	0.09	-0.46	1.00	-	-	-	-	-
12) Rel. Power	0.18	-0.12	-0.32	-0.11	0.06	-0.15	0.21	-0.05	0.29	-0.16	0.32	1.00	-	-	-	-
13) Inducements	-0.05	-0.02	0.12	0.15	-0.01	0.12	0.05	-0.11	-0.07	0.11	-0.02	-0.00	1.00	-	-	-
14) Sender Reg.	0.11	0.17	0.09	-0.08	-0.09	-0.30	-0.25	0.02	0.12	-0.31	0.73	0.21	-0.02	1.00	-	-
15) Target Reg.	0.12	-0.16	-0.11	-0.13	-0.09	0.22	0.01	0.16	0.16	-0.08	-0.30	-0.25	-0.12	-0.23	1.00	-
16) Bluntness	0.04	0.03	0.04	0.14	0.08	0.21	0.31	0.01	-0.09	0.30	-0.18	0.10	0.10	-0.28	0.00	1.00

The 16 variables that are used in this study are categorized into eight groups of independent variables. In these groups, 12 independent variables are used in regressions for sanctions effectiveness for the four model groups. Regression model specifications are different combination of these variables. Table 4.9 provides the list of the independent variables for the regressions analyses used in each of the models. Note that each model group (model group 1, 2, 3, and 4) has three sub-models (a, b, and c), and the third sub-model represents each model in general.

Table 4.9

List of All Independent Variables Used for Regression Analyses

Variable Group	Variable used in Regressions	Model 1 a, b, c	Model 2 a, b, c	Model 3 a, b, c	Model 4 a, b, c
1) Level of Political Agreement Variables	LPA in Sender State (LPA_1)	✓,×,✓	×,×,×	×,×,×	×,×,×
	LPA in Target State (LPA_2)	×,×,×	✓,×,✓	×,×,×	×,×,×
	International LPA (LPA_3)	×,×,×	×,×,×	✓,×,✓	×,×,×
	Aggregated LPA (LPA_4)	×,×,×	×,×,×	×,×,×	✓,×,✓
2) Sanction Cost Variables	Sender Cost	×,✓,✓	×,✓,✓	×,✓,✓	×,✓,✓
	Target Cost	×,✓,✓	×,✓,✓	×,✓,✓	×,✓,✓
3) Commitment Var.	Signaling	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
4) Sender Target Relations Variables	Alliance Scale	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
	Collaboration Scale	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
	The US Involvement	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
5) Rel. Pow. Variable	Relative Power	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
6) Carrots Variable	Inducements	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
7) Regime Type Variables	Sender Regime Type	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
	Target Regime Type	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓
8) Intensity Variable	Sanction Bluntness	✓,✓,✓	✓,✓,✓	✓,✓,✓	✓,✓,✓

Note: ✓ indicate variable is included in the model; × indicate variable is excluded from model

A key concern in regression analysis is correct model specification. Specification errors occur when the analyst omits important independent variable(s) and includes irrelevant independent variables. Omitting an important independent variable if correlated with other independent variables results in biased coefficients; including an irrelevant independent variable can reduce the model's fit. However, in the absence of strong theory, knowing which independent variables to include or exclude in a model specification is difficult.

Capturing the *ceteris paribus* effect when interpreting regression coefficients is important for unbiasedness. Omitting an important independent variable typically results in biased estimates of the coefficients and might result in Type 2 error (although the null hypothesis of the independent variable having no effect on the dependent variable is false, failing to reject it). Moreover, biased estimates generally do not disappear as the sample size increases.

Omitting independent variables with effects on the dependent variable is a source of more harm to the analyses than including irrelevant variables. Thus, I include all of the independent variables that have been discussed and included in models from the sanctions literature. In the absence of strong theory that clearly distinguishes between independent variables that are relevant and those that are irrelevant, especially given my use of a better measure of the dependent variable (i.e., that includes more information about sanctions effectiveness), there is good reason to estimate a variety of models in order to compare their relative fit.

This study estimates logit (logistic) regression models. Logistic regression models use the maximum likelihood estimation (MLE) techniques rather than the least squares estimation techniques (LS). Thus, the coefficients in MLE models are used to interpret the likelihood ratios for each of the outcomes in the dependent variable, (i.e., sanctions effectiveness). The sign of the coefficients, whether positive or negative, between dependent and independent variables indicates

whether there is an increase or decrease in the logarithm of the odds of sanctions effectiveness (practically, an increase or a decrease in the odds or probability of sanctions effectiveness). Since likelihood estimation also uses information between variables, presenting correlation coefficients between variables is important.

Ordered (Ordinal) Logit Regression Models

The following regression models analyses economic sanctions effectiveness in terms of

1. sender state's level of political agreement on sanction threatening and/or imposition;
2. target state's level of political agreement against threatened and/or imposed sanctions;
3. international level of political agreement on sanction threatening and/or imposition;
4. aggregate level of political agreement on sanction threatening and/or imposition.

Some sanctions were threatened and/or imposed unilaterally and some were threatened and/or imposed by a coalition of sanctioning states. If it is a unilateral episode, then it is a dyadic relationship between sender and target. In this case, international level of political agreement variable is coded as neutral. However, if there are multiple senders involved, then this study incorporates and examines the main sender in the coalition for LPA_1 and also incorporates and examines the sanctioning coalition for LPA_3.

In addition to exploring the level of political agreement variables influence on economic sanctions outcomes, this study also investigates the target state's economic disutility and sanctions effectiveness. The literature on economic sanctions indicates varying levels of statistical significance regarding costs for target states. However, the significance levels for the target cost variable in those studies are all less than 0.10 (Bapat et al., 2013). Other independent variables included in model specifications were selected according to well-known evidence from the economic sanctions literature.

The level of measurement for the dependent variable is ordinal. Independent variables are either ordinal or interval level. According to Long and Freese (2006), if there are clear-cut equal differences between the increments of ordinal level variables, they can be treated as interval level and OLS or WLS regressions used. Given that there are sufficient number of cases for the regression analysis. As my dependent variable has five levels (coded 0, 1, 2, 3, and 4), and it is difficult to treat outcomes measuring sanction effectiveness, such as (1) capitulation, (2) stalemate, (3) partial acquiescence, (4) negotiated settlement, and (5) complete acquiesce with clear-cut equal differences, a multivariate ordinal (ordered) logit was used.

For example, the distance between capitulation and stalemate could be shorter than the distance between complete acquiesce and negotiated settlement. Conversely, the distance between complete acquiesce might be larger than the distance between partial acquiescence and vice versa. Thus, there is no strong argument or evidence that the distances between the ordered levels of the dependent variable (sanctions effectiveness) are the same. Thus, the use of ordered logit regression is the appropriate method to use. In addition, this method provides robust estimates when variables have skewed distributions, as seen in the LPA variables. As MLE models already provide robust estimates for skewed variable distributions, there is no need to use robust standard errors for calculating significance levels for the independent variables.

Ordinal logistic regression belongs to the logistic regression family. Logistic regression usually is used for two possible outcomes or binary outcomes. However, when the dependent variable is an ordinal variable and has more than two categories, then ordinal (ordered) logistic regression is the most suitable regression model. The main disadvantage of choosing logit or ordinal logit models is they are they are more difficult to interpret when compared with other regression methods. Ordered logistic regression predicts what the likely outcome of each economic

sanction is by using independent variables and applying a process called proportional odds assumption as illustrated in Table 4.10.

Table 4.10

Proportional Odds Assumption for the Ordered Logit Regression

Dependent Variable (Sanction Effectiveness) Outcomes	Orders (levels)	Probability
Capitulation by sender in threat stage or after economic sanctions imposition	0	P_0
Stalemate in the threat stage or after imposition of economic sanctions	1	P_1
Partial acquiescence by the target to economic sanctions threat or following sanctions imposition	2	P_2
Negotiated Settlement at the threat stage or following economic sanctions imposition	3	P_3
Complete or total acquiescence by target at the threat stage or following economic sanctions imposition	4	P_4

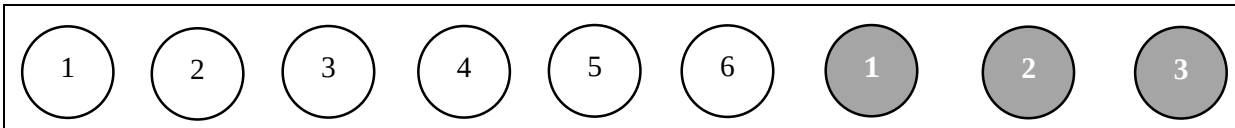
Meaning	Formula (Log of odds ratio)	Value (e.g.)	Sequence
Complete compliance or worse	$Log(\frac{P_4}{P_0 + P_1 + P_2 + P_3})$	X	1
Negotiated settlement or worse	$Log(\frac{P_3 + P_4}{P_0 + P_1 + P_2})$	X+Y	2
Partial acquiescence or worse	$Log(\frac{P_2 + P_3 + P_4}{P_0 + P_1})$	X+2Y	3
Capitulation by sender or worse	$Log(\frac{P_1 + P_2 + P_3 + P_4}{P_0})$	X+3Y	4

This prediction process performed by taking the logarithm of odds, which form arithmetic series in sequence. In the end, ordinal logistic regression provides the estimates (coefficients) for the highest level of the ordinal variable (complete acquiesce by the target to the sender, in this study). As we have five categories of sanction effectiveness variable, ordinal logistic regression produces four intercepts (constants) because of log likelihood sequence iterations in Table 4.10

above. For this study, when a target state completely acquiesces an economic sanction, it is assumed to be an effective sanction, which is the highest level of dependent variable (i.e., sanction effectiveness).

If the dependent variable has five ranked levels, as in this study, there will be five likelihood values; however, ordinal regression only predicts the logarithm of the odds for the highest level. A complete compliance is the highest level for sanctions effectiveness to attach meaning to the value of the coefficients for each independent variable, it is necessary to calculate the odds ratio for each of them.

It is important to point out that probability and odds both designate the chances that an event will occur and are interrelated concepts. Odds, such as odds in favor, basically mean the ratio of the incidence of a favored outcome (a) to the incidence of one that is not favored (b). On the other hand, probability refers directly to the chance that the favored outcome will occur (a/[a+b]) and varies from .00 to 1.00 To illustrate these concepts, assume that a sample space is formed by white and grey circles in as Figure 4.4. As seen, probabilities are usually represented by a number between zero and one or by percentages, whereas odds can be represented by any number between zero and positive infinity.



Probability of a person choosing a white colored circle is 67%	Odds in favor of choosing a white colored circle is 2 to 1	Odds and probability concepts are interrelated with each other
$P(W) = \frac{N(W)}{N(W) + N(B)}$	$Odds\ (W) = \frac{N(W)}{N(B)}$	$P\ (W) = \frac{Odds\ (W)}{1 + Odds\ (W)}$
$P\ (W) = \frac{6}{6+3} = 0.67$	$Odds\ (W) = \frac{N(W)}{N(B)} = \frac{6}{3} = 2$	$0.67 = \frac{2}{1+2} = 0.67$

Figure 4.4: The relation between probability and odds

All logit regression types (e.g., ordinal [ordered] when the dependent variable is ordinal, multinominal logit regression when the dependent variable is categorical but with more than two levels, and standard logit regression used for dichotomous dependent variables) estimate the effect that each independent variable has on the odds or probability of the dependent variable. Coefficients for independent variables in the standard logistic regression are the effects on the logarithm of the odds of the dependent variable caused by a one-unit increase in the independent variable holding all other independent variables fixed (partial effects). Conversely, coefficients in the ordered regression indicate how much change in the logarithm of the odds is caused by one unit increase in an independent variable, *ceteris paribus*.

Therefore, coefficients in ordinal logit regression do not represent odds, but the change in the logarithm of the odds caused by partial effects of each independent variable. To interpret the effects of each independent variable there's need to take the exponent of each coefficient. Thus, for each ordinal regression, a table shows the coefficients or the change in the logarithm of the odds of the dependent variable caused by one-unit increase in the independent variable, followed by another table showing the odds ratio. The odds ratio can be understood as a multiplier of the odds of the dependent variable resulting from a unit increase in the independent variable. If its value is greater than one, the odds are greater; if less than one, the odds are lesser.

The goodness-of-fit measure, R^2, shows the amount of variance explained in OLS models. The goodness-of-fit statistic for logit models where coefficients are estimated using log-likelihood functions have a somewhat similar meaning to the R^2 statistic in OLS regression but is a called pseudo-R^2 McFadden (1979) compared R^2 and pseudo-R^2 as follows:

> While the R^2 index is a more familiar concept to planner who are experienced in OLS, it is not as well behaved as the ρ^2 [rho-squared] measure, for ML [maximum likelihood] estimation. Those unfamiliar with ρ^2 should be forewarned that its values tend to be considerably lower than those of the R^2 index...For example, values of 0.2 to 0.4 for ρ^2

> represent 'excellent' fit." However, when the model is ordinal logistic regression and independent variables are only predicting the highest level out of five level of the sanction effectiveness variable, we should not get surprised to see lower values of goodness-of-fit measures especially for the ordered logistic regression models. (p. 26)

However, when the model is ordinal logistic regression and independent variables are only predicting the highest level out of five levels of sanctions effectiveness, it would not be surprising to see lower values of goodness-of-fit measures especially for an ordered logistic regression model.

Although a pseudo-R^2 nay not be an ideal statistic to describe the overall goodness of fit of a logistic regression model, and there are different pseudo-R^{2s}, it does help in comparing the relative fit of models using different specifications. Pseudo-R^2 also gives an idea regarding the percentage of variance that likelihood ratio (LR) regressions can explain (Long and Freese, 2006).

The likelihood ratio chi-square (x^2) statistic is an indication of whether an overall model is statistically significant or not. Therefore, LR chi-square statistic has an interpretation similar to the F statistic in OLS regression (Wooldridge, 2009). An LR chi-square score with a p-value that is less than 0.05 indicates that the independent variables in the aggregate help to better explain the odds of the dependent variable in comparison to a null model with no independent variables.

The Regression Models for the Political Agreement Level in Sender State (Model Group 1)

This model examines the influence of a sender state's level of political agreement (LPA_1) on sanction effectiveness. Table 4.11 presents the regression results of two restricted and one unrestricted model. The first restricted model (model 1.a) includes the level of political agreement in the sender state variable (LPA_1) and the other independent variables, but excludes the cost variables, (i.e., sender cost and target cost variables). The second restricted model (model 1.b) includes the cost variables and other independent variables, but does not include the LPA_1 variable. The unrestricted model (model 1.c) includes all of the independent variables. For the models in group 1, the unrestricted model specification is the main model for purposes of comparison.

Table 4.11

Ordered Logit Regression Results for Model Group 1

Model 1	Model 1.a: Effectiveness (0-4)	Model 1.b: Effectiveness (0-4)	Model 1.c: Effectiveness (0-4)
LPA in Sender State (LPA_1)	1.28* (0.70)	-	1.43* (0.74)
Sender Cost	-	0.41 (0.43)	0.23 (0.45)
Target Cost	-	0.45* (0.23)	0.53** (0.24)
Signaling	0.27 (0.20)	0.26 (0.20)	0.27 (0.20)
Alliance Scale	-0.29 (0.29)	-0.24 (0.29)	-0.32 (0.29)
Collaboration Scale	0.09 (0.11)	0.07 (0.11)	0.02 (0.11)
The US Involvement	-0.37 (0.24)	-0.45* (0.24)	-0.43* (0.24)
Relative Power	0.35*** (0.10)	0.27*** (0.10)	0.31*** (0.10)
Inducements	-0.12 (0.65)	-0.38 (0.64)	-0.23 (0.67)
Sender Regime Type	0.07* (0.03)	0.11*** (0.04)	0.09** (0.04)
Target Regime Type	0.07** (0.02)	0.05* (0.02)	0.06** (0.03)
Sanction Bluntness	-0.02 (0.14)	-0.08 (0.14)	-0.10 (0.14)
Observations	125	125	125
LR Chi-Squared, χ^2	25.76***	27.70***	31.61***
Pseudo R^2	0.06	0.07	0.08

Standard errors in parenthesis
* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Coefficients in ordered logit regression indicate the change in the logarithm of the odds in favor of the target state completely acquiescing to economic sanctions. The actual odds ratio or multiplier of the odds are presented in Table 4.12. It shows the odds ratio in favor of the target state completely acquiescing to the sanctions episode versus the combination other four outcomes, which are: negotiated settlement (the fourth level), partial acquiescence (the third level), stalemate

(the second level), and capitulation (the first level).

Table 4.12

Odds Ratio Values for the Coefficients of Model 1.c

Independent Variable (X_i)	Model 1.c Coefficient (β)	Coefficient's Odds Ratio (OR)
LPA_1	1.43*	4.16
Sender Cost	0.23	1.26
Target Cost	0.53**	1.70
Signaling	0.27	1.31
Alliance Scale	-0.32	0.72
Collaboration Scale	0.02	1.02
The U.S. Involvement	-0.43*	0.64
Relative Power	0.31***	1.37
Inducements	-0.23	0.79
Sender Regime Type	0.09**	1.10
Target Regime Type	0.06**	1.06
Sanction Bluntness	-0.10	0.89

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

To compare the effects of LPA_1 and the cost variables' upon sanctions effectiveness in the restricted models to the unrestricted model, I use two steps. First, I compare model 1.a with model 1.c, and then, compared model 1.b with model 1.c. For the first comparison (model 1.a—model 1.c), adding sender cost and target cost variables increases the P-R^2 (pseudo- R^2) value from .0653 to .0801, indicating that the unrestricted model had a better fit by about 23% ([.0801-.0653]/.0653)

by adding these variables, one of which is statistically significant (the target cost variable). Adding cost variables does not eliminate statistical significance of LPA_1, relative power, and regime type variables. The U.S. Involvement variable is statistically significant in the model without restrictions—Model 1.c—so that the U.S. involvement and target cost variables should be included together in the model.

For the second comparison (Model 1.b—Model 1.c), adding the LPA_1 variable to the model increases P-R^2 from .0702 to .0801, an improvement in goodness of fit of about 14%. This result makes sense because in the previous comparison, two variables were added, but one of them was significant. In the present comparison, one variable that also is significant was added to the model. With the addition of the LPA_1 variable, the magnitude of the target cost variable increases slightly and remains statistically significant. Introducing the LPA_1 variable suggests that the level of political agreement in the sender state may strengthen the effects of the target cost variable on sanctions effectiveness. This is explored in detail when testing the second hypothesis. The addition of the LPA_1 variable does not result in large changes in the effects of relative power, regime type, and U.S. involvement on sanctions effectiveness.

In both the restricted and unrestricted models, the coefficients for LPA_1 are statistically significant (the probability values for both < .10). All three models are a better fit than the null model, as indicated by the statistically significant likelihood ratio chi-square values.

The *first* hypothesis was as follows: the higher the level of political agreement on the sender's side, the more effective the economic sanctions. This hypothesis is supported. The coefficients on the LPA_1 variable are positive and statistically significant. For a one unit increase in the LPA_1, there is a 1.43 times increase in the log odds of target state choosing complete acquiescence to the sender state(s) after an economic sanctions episode, with all other independent

variables being fixed. The odds of the target state acquiescing completely after sanctions are imposed compared to the combined odds of all the other outcomes (negotiated settlement, partial acquiescence, stalemate, and capitulation) are multiplied by 4.167, when LPA_1 increases by one unit, holding all other factors fixed.

Statistical significance (95%) is higher for the target cost variable than the LPA_1 variable. There is a positive relationship between sanction effectiveness and target cost variables. For sanction effectiveness, a one unit increase in the target cost variable is expected to result in a 0.53 times increase in the log odds of target state choosing complete acquiescence to the sender state(s) after an economic sanctions episode, *ceteris paribus*. The value of log odds in favor of target state acquiescing completely after sanction imposition to the combined other outcomes (negotiated settlement, partial acquiescence, stalemate, and capitulation) is 1.268 to 1 when target cost variable increases one unit, *ceteris paribus*.

The following is the *second* hypothesis: the higher the level of political agreement on the sender's side and the greater costs experienced by the target, the more effective the economic sanctions. The regression results (Table 4.11) show that both LPA_1 and target state cost variables are positive and statistically significant. The level of political agreement in the sender state's (LPA_1), target cost, signaling, the US involvement, relative power, and regime type variables are all independent variables with statistically significant effects upon sanctions effectiveness in all three models.

The Regression Models for the Political Agreement Level in Target State (Model Group 2)

This model tests the influence of target state's level of political agreement (LPA_2) on sanctions effectiveness. Table 4.13 presents the regression results of two restricted and one unrestricted model. Table 4.14 presents the odds ratio scores for the model 2.c. First restricted

model (model 2.a) includes the level of political agreement in target state variable (LPA_2) and the other independent variables, but excludes the cost variables (i.e., sender cost and target cost variables). The second restricted model (model 2.b) includes the cost variables and other variables' it does not include the LPA_2 variable. The unrestricted model (model 2.c), however, includes all independent variables. For this analysis, the unrestricted model 2.c is the main model.

Table 4.13

Ordered Logit Regression Results for Model Group 2

Model 2	Model 2.a: Effectiveness (0-4)	Model 2.b: Effectiveness (0-4)	Model 2.c: Effectiveness (0-4)
LPA in Target State (LPA_2)	-1.67*** (0.42)	-	-1.72*** (0.42)
Sender Cost	-	0.41 (0.43)	0.34 (0.44)
Target Cost	-	0.45* (0.23)	0.53** (0.23)
Signaling	0.11 (0.20)	0.26 (0.20)	0.12 (0.21)
Alliance Scale	-0.50* (0.30)	-0.24 (0.29)	-0.53* (0.30)
Collaboration Scale	0.20* (0.11)	0.07 (0.11)	0.13 (0.11)
The US Involvement	-0.21 (0.24)	-0.45* (0.24)	-0.27 (0.24)
Relative Power	0.17* (0.10)	0.27*** (0.10)	0.12 (0.10)
Inducements	-0.10 (0.65)	-0.38 (0.64)	-0.20 (0.66)
Sender Regime Type	0.09*** (0.03)	0.11*** (0.04)	0.12*** (0.04)
Target Regime Type	0.06** (0.02)	0.05* (0.02)	0.06** (0.03)
Sanction Bluntness	0.04 (0.14)	-0.08 (0.14)	-0.03 (0.14)
Observations	125	125	125
LR Chi-Squared, χ^2	39.67***	27.70***	46.06***
Pseudo R^2	0.10	0.07	0.11

Standard errors in parenthesis
* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Table 4.14

Odds ratio values for the coefficients of Model 2.c

Independent Variable (X_i)	Model 2.c Coefficient (β)	Coefficient's Odds Ratio
LPA_2	-1.72***	0.17
Sender Cost	0.34	1.41
Target Cost	0.53**	1.69
Signaling	0.12	1.13
Alliance Scale	-0.53*	0.58
Collaboration Scale	0.13	1.14
The US Involvement	-0.27	0.75
Relative Power	0.12	1.13
Inducements	-0.20	0.81
Sender Regime Type	0.12***	1.13
Target Regime Type	0.06**	1.06
Sanction Bluntness	-0.03	0.96

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

For the first comparison (model 2.a—model 2.c) as shown on Table 4.13, adding sender cost and target cost variables increased the P-R^2 (pseudo-R^2) score from .1005 to .1167, a small improvement in goodness of fit. The target cost variable was statistically significant ($p < .05$). Adding cost variables to model 2.a is associated with only small changes in the coefficients for LPA_2, alliance scale and regime type variables. However, for two independent variables, collaboration scale and relative power, the coefficients were no longer statistically significant. For the second comparison (model 2.b—model 2.c), after adding LPA_2 variable to model 2.b, the P-R^2 score increased from .0702 to .1167, a sizeable improvement in the goodness of fit. LPA_2 in both restricted model 2.a and unrestricted model 2.c has sizable negative effects on sanctions effectiveness.

Adding the LPA_2 variable was associated with a small increase in the coefficient of the target cost variable that remained statistically significant. There was only a small changes to the coefficients for sender and target regime type after adding LPA_2, and they remained statistically significant. The change to the coefficient for US Involvement (from -0.45 to -0.27) after adding LPA_2 indicates its lesser impact in the unrestricted model (i.e., smaller effect in reducing the odds of sanctions effectiveness).The relative power variable was not significant in Model 2.c, although it was significant in Model 2.a and Model 2.b, and was highly significant in Model 1.c as seen in Table 4.13. This result reflects what happens when a model is underspecified and the magnitude and statistical significance of the coefficients of one or more independent variables already in a model change due to the inclusion of a new, relevant variable with which the independent variables already in the model are correlated.

Therefore, the level of significance of relative power is lower in Model 2.a, which included LPA_2 and excluded costs variables; however, it remained significant at 10% level. For the other sub-model, which excluded LPA_2, but included costs variable, the significance level for relative power variable increased to 99% level. The significant level was lower for relative power in Model 2.a than in Model 2.b because of the possible multicollinearity issue, which indicated that some of the significance level of relative power was absorbed into the LPA_2 variable in Model 2.a. However, in model 2.c, the relative power variable was not statistically significant, but adds a caveat to the nonsignificant interpretation of the relative power variable. We can ascribe this situation to the significance level of relative power variable was absorbed into the LPA_2 and the target cost variables because of possible multicollinearity issues. However, the correlation between LPA_2 and target cost should not have a high level of multicollinearity because relative power variable was still marginally significant with a very close score to 90% levels. As a result, we

should be skeptical about statistical nonsignificance of the relative power variable in the third model.

The restricted and unrestricted regression results of Model 2 in Table 4.13 indicated that LPA_2 has a sizeable and negative effect upon sanctions effectiveness. All three models show improved goodness of fit over the null model.

The *third* hypothesis is as follows: the higher the level of political agreement on the target's side, the less effective the economic sanctions. This hypothesis is supported. For the main model (model 2.c), the coefficient (-1.72) on LPA_2 is negative and statistically significant ($P< .01$). A one unit increase in the LPA_2 is associated with a -1.72 decrease in the log odds of the target state choosing complete acquiescence to the sender state(s) after an economic sanctions episode, given that all other independent variables were held constant. The higher the political agreement level on the target's side, the less effective the economic sanctions. The odds of target state acquiescing completely after sanction imposition compared to other sanctions outcomes (negotiated settlement, partial acquiescence, stalemate, and capitulation) is multiplied by 0.179 (i.e., is reduced) when LPA_2 increases one unit, holding all other independent variables constant.

The following is the *fourth* hypothesis: the higher the level of political agreement on the target's side and the less economic disutility, the less effective the economic sanctions. This hypothesis supported. Model 2.c in Table 4.13 shows that both LPA_2 and target cost variables help to explain sanctions effectiveness

In summary, the level of political agreement in target state (LPA_2), target cost, alliance scale, and regime type variables were statistically significant in all the three models. However, sender cost, signaling, inducements, and sanction bluntness variables were not statistically significant in any of the three models. The level of political agreement in target state (LPA_2)

variable among the independent variables had the largest [negative] effect on sanctions effectiveness.

The Regression Models for the International Level of Political Agreement (Model 3)

This model examines the influence of international level of political agreement (LPA_3) on sanctions effectiveness. Table 4.15 presents the regression results for the two restricted and one unrestricted models. Then, Table 4.16 presents the odds ratio for model 3.c. The first restricted model (model 3.a) includes the international level of political agreement variable (LPA_3) and other independent variables, but excludes the cost variables (i.e., sender cost and target cost variables). The second restricted model (model 3.b) includes the cost variables and other variables, it does not include the LPA_3 variable. The unrestricted model (model 3.c), however, includes all independent variables. For the regression analyses in this part, the unrestricted model specification (Model 3.c) is the main model representing the model 3 in general.

Table 4.15

Ordered Logit Regression Results for Model Group 3

Model 3	Model 3.a: Effectiveness (0-4)	Model 3.b: Effectiveness (0-4)	Model 3.c: Effectiveness (0-4)
International LPA (LPA_3)	1.04*** (0.35)	-	0.93** (0.37)
Sender Cost	-	0.41 (0.43)	0.21 (0.44)
Target Cost	-	0.45* (0.23)	0.37 (0.24)
Signaling	0.26 (0.21)	0.26 (0.20)	0.26 (0.21)
Alliance Scale	-0.22 (0.29)	-0.24 (0.29)	-0.23 (0.29)
Collaboration Scale	-0.27 (0.17)	0.07 (0.11)	-0.27 (0.17)
The US Involvement	-0.36 (0.23)	-0.45* (0.24)	-0.41* (0.23)

(continued)

Model 3	Model 3.a: Effectiveness (0-4)	Model 3.b: Effectiveness (0-4)	Model 3.c: Effectiveness (0-4)
Relative Power	0.33***	0.27***	0.29***
	(0.10)	(0.10)	(0.10)
Inducements	-0.39	-0.38	-0.47
	(0.64)	(0.64)	(0.65)
Sender Regime Type	0.07*	0.11***	0.08**
	(0.03)	(0.04)	(0.04)
Target Regime Type	0.06**	0.05*	0.06**
	(0.02)	(0.02)	(0.03)
Sanction Bluntness	0.02	-0.08	-0.04
	(0.14)	(0.144)	(0.14)
Observations	125	125	125
LR Chi-Squared, χ^2	31.58***	27.70***	34.53***
Pseudo R^2	0.08	0.07	0.08

Standard errors in parenthesis
* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Table 4.16

Odds Ratio Values for the Coefficients of Model 3.c

Independent Variable (X_i)	Model 3.c Coefficient (β)	Coefficient's Odds Ratio (OR)
LPA_3	0.93**	2.53
Sender Cost	0.21	1.24
Target Cost	0.37	1.44
Signaling	0.26	1.30
Alliance Scale	-0.23	0.79
Collaboration Scale	-0.27	0.75
The US Involvement	-0.41*	0.66
Relative Power	0.29***	1.34
Inducements	-0.47	0.61
Sender Regime Type	0.08**	1.09
Target Regime Type	0.06**	1.06
Sanction Bluntness	-0.04	0.96

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Model 3.a was compared to model 3.c, then, model 3.b was compared to model 3.c. For the first comparison (Model 3.a—Model3.c), adding sender cost and target cost variables increased the P-R^2 (pseudo- R^2) from .0800 to .0875, a slight increase in the goodness of fit. Adding the cost variables to model 3.a reduced the magnitude of the coefficient of LPA_2 slightly from 1.04 to 0.93. Adding the cost variables altered only slightly the coefficients on relative power, the regime type variables and the US involvement variable

For the second comparison (Model 3.b—Model 3.c), adding LPA_3 variable to the model 3.b increases the P-R^2 score from .0702 to .0875, a small improvement in the goodness of fit.

Adding the LPA_3 variable reduced slightly the magnitude of the target cost variable, and it is not significant in Model 3c. Again, the relative power and the regime type variables remained statistically significant.

The restricted and unrestricted regression results in Table 4.15 shows that the LPA_3 coefficient is positive and statistically significant in both Model 3a and Model 3c. The models both have similar goodness of fit, and very slightly better than Model 3b without LPA_3.

The following is the *fifth* hypothesis: the higher the level of political agreement on the international level, the more effectiveness of economic. This hypothesis is supported. For the main model, 3.c, the coefficient for LPA_3 is positive and statistically significant. A higher level of political agreement on the international level is associated with economic sanctions that are more effective. A one unit increase in the LPA_3 is expected to result in a 0.93 times increase in the log odds of the target state choosing complete acquiescence to the sender state(s) after an economic sanctions episode, given that all other predictor variables are held constant. For some sanction episodes, there are a few countries together with international institutions, such as the United Nations (UN) and European Union (EU) that are engaged in the implementation of economic

sanctions. However, in other episodes, a coalition of countries without involvement of any international institutions are implementing sanctions. This study assumed that the international level of political agreement is a function of both international coalitions and/or involvement of international institutions. Thus, LPA_3 variable incorporated all kinds of international cooperation in economic sanction episodes.

The following is the *sixth* hypothesis: the higher the level of political agreement on the international level and the greater the costs to the target, the more effective the economic sanctions. Regression results for the unrestricted model (Model 3.c) show that the coefficient for LPA_3 (0.93) is positive and statistically significant ($p < .05$). However, the coefficient for the target cost variable, although positive (0.37), is not statistically significant. Thus, this hypothesis is not supported, although the positive coefficient for the target cost variable is larger than its standard error.

In summary, international level of political agreement (LPA_3), US involvement, relative power, and regime type variables have sizable and statistically significant effects upon sanctions effectiveness.

The Regression Models for the Aggregated Level of Political Agreement (Model Group 4)

This model explains the influence of aggregated level of political agreement (LPA_4) on sanction effectiveness. The LPA_4 variable is a composite or index variable of levels of political agreement variables: (a) LPA in sender state, (b) LPA in target state, and (c) international LPA. The values for the LPA_4 variable are obtained using this formula:

$$LPA_4 = LPA_1 - LPA_2 + LPA_3$$

This study did not regress LPA_1, LPA_2, LPA_3, and LPA_4 together in any model because this would result in a problem of perfect collinearity due to their linear dependence. Besides,

standardized statistical computing packages will not estimate coefficients when there is perfect collinearity. By regressing the aggregated variable (LPA_4), representing the effects of sender, target, and international LPA variables together, with other controlling variables on sanction effectiveness, the collinearity problem is avoided.

Using an index variable has advantages and disadvantages. As argued above, using an index variable can help to avoid the problem of multicollinearity. LPA_4 should be very strong in terms of statistical significance and influential in model specifications. Therefore, one caveat should be that significance indicators, such as variable statistical significance levels and LR chi-squares, could be higher than ones in other models. Looking at the joint distribution of these variables, sanctions are not seen where higher LPA_1 coincides with lower levels of LPA_2 and higher levels of LPA_3. However, in terms of theoretical interpretation, using LPA_4 to explain sanction effectiveness might provide insights regarding the interaction between these variables. Therefore, partial effects of the combination of three variables ($LPA_{1,\ 2,\ and\ 3}$) are more indicative in terms of being meaningful and statistically useful.

Table 4.17 presents the regression results of two restricted models (Models 4a and 4b) and one unrestricted model (Model 4c) to assess the effects of aggregate agreement on sanction effectiveness. Table 4.18 presents the odds ratios for the model 4.c. The first restricted model (model 4.a) includes the aggregate level of political agreement variable (LPA_4) and other independent variables, but excludes the cost variables (sender cost and target cost variables). The second restricted model (model 4.b) includes the cost variables and other independent variables, but does not include the LPA_4 variable. The unrestricted model (model 4.c), however, includes all independent variables. The unrestricted model specification (i.e., Model 4.c) is the main model representing the model 4 in general.

Table 4.17

Ordered logit regression results for Model Group 4

Model 4	Model 4.a: Effectiveness (0-4)	Model 4.b: Effectiveness (0-4)	Model 4.c: Effectiveness (0-4)
Aggregated LPA (LPA_4)	3.05*** (0.64)	-	3.06*** (0.66)
Sender Cost	-	0.41 (0.43)	0.04 (0.46)
Target Cost	-	0.45* (0.23)	0.49** (0.24)
Signaling	0.14 (0.21)	0.26 (0.20)	0.13 (0.21)
Alliance Scale	-0.52* (0.30)	-0.24 (0.29)	-0.55* (0.30)
Collaboration Scale	-0.18 (0.12)	0.07 (0.11)	-0.24* (0.13)
The US Involvement	-0.23 (0.24)	-0.45* (0.24)	-0.28 (0.24)
Relative Power	0.27*** (0.10)	0.27*** (0.10)	0.22** (0.10)
Inducements	-0.00 (0.67)	-0.38 (0.64)	-0.03 (0.70)
Sender Regime Type	0.07** (0.03)	0.11*** (0.04)	0.09** (0.04)
Target Regime Type	0.08*** (0.03)	0.05* (0.02)	0.08*** (0.03)
Sanction Bluntness	0.02 (0.14)	-0.08 (0.14)	-0.04 (0.14)
Observations	125	125	125
LR Chi-Squared, χ^2	47.06***	27.70***	51.32***
Pseudo R^2	0.11	0.07	0.13

Standard errors in parenthesis
* $p<0.10$; ** $p<0.05$; *** $p<0.01$

Table 4.18

Odds ratio values for the coefficients of Model 4.c

Independent Variable (X_i)	Model 4.c Coefficient (β)	Coefficient's Odds Ratio (OR)
LPA_4	3.06***	21.27

(continued)

Independent Variable (X_i)	Model 4.c Coefficient (β)	Coefficient's Odds Ratio (OR)
The US Involvement	-0.28	0.75
Relative Power	0.22**	1.25
Inducements	-0.03	0.96
Sender Regime Type	0.09**	1.10
Target Regime Type	0.08***	1.08
Sanction Bluntness	0.04	0.95

* $p<0.10$; ** $p<0.05$; *** $p<0.01$

I compare Model 4.a with Model 4.c; then, I compare model 4.b with model 4.c. For the first comparison (Model 4.a—Model 4.c), adding sender cost and target cost variables increases the goodness of fit somewhat. Adding cost variables to model 4.a has little effects upon the magnitude of the coefficient for LPA_4 and only modest effects upon the magnitudes of coefficients for the other independent variables with coefficients that are also statistically significant.

For the second comparison (Model 4.b—Model 4.c), adding the LPA_4 variable to model 4.b increased the goodness of fit substantially, with the P-R2 score increasing from .07 to .13. Both restricted and unrestricted regression results in Table 4.17 indicate that LPA_4 has a positive and statistically significant effect upon sanctions effectiveness.

The following is the *seventh* hypothesis: The higher the level of aggregate political agreement, the more effective are the economic. This hypothesis is supported. From model 3.c results on Table 4.14, the coefficient for the LPA_4 variable was positive and statistically significant. For sanction effectiveness, a one unit increase in the LPA_4, is associated with a 3.06 increase in the log odds of the target state choosing complete acquiescence to the sender state(s) after an economic sanctions episode, given that all other predictor variables are held constant. Higher levels of aggregate political agreement are associated with more effective sanctions. The

odds in favor of target state acquiescing completely after sanction imposition to the combined other outcomes (negotiated settlement, partial acquiescence, stalemate, and capitulation) is 21.27 to 1 when LPA_4 increases one unit, holding all other independent variables constant (Table 4.18).

The target cost variable was significant at the 95% level, with a positive relationship found between sanction effectiveness and target cost variables. For sanction effectiveness, a one unit increase in the target cost variable was expected to result in a 0.49 times increase in the log odds of target state, choosing complete acquiescence to the sender state(s) after economic sanctions episode, ceteris paribus. The value of log odds in favor of target state acquiescing completely after sanction imposition to the combined other outcomes (negotiated settlement, partial acquiescence, stalemate, and capitulation) is 1.632 to 1, when the target cost variable increases one unit, holding all other factors constant.

In summary, the aggregate level of political agreement (LPA_4), target cost, alliance scale, collaboration scale, relative power, and regime type variables all have effects on sanctions effectiveness. However, sender cost, signaling, inducements, and sanction bluntness variables do not have effects that are statistically significant. Aggregate level of political agreement variable, LPA_4 has the largest odds ratio and thus arguably the largest positive effect on sanctions effectiveness among the independent variables in Model Group 4.

Regression Models Summary and Comparisons

Four sets of independent variables have effects upon sanctions effectiveness as gauged by their coefficients' magnitudes, signs, and statistical significance across three groups of models : (a) the level of political agreement, (b) costs borne by the target, (c) relative power, and (d) regime type variables. Conversely, other independent variables, including sender cost, signaling, and inducements were not statistically significant across three groups of models. Other independent

variables (i.e., alliance scale, collaboration scale, and the US involvement) were significant in some models but not others. Table 4.19 is a summary of the significance levels for variable coefficients across all four models. As for robustness check, all models were analyzed by ordered probit regression.

Table 4.19

Summary of Ordered Logistic Regression Results across all Models

Sanction Effectiveness	Model 1.c Coefficients	Significance Level	Model 2.c Coefficients	Significance Level	Model 3.c Coefficients	Significance Level	Model 4.c Coefficients	Significance Level	Conclusion
LPA $_{(1, 2, 3, 4)}$	1.43	*	-1.72	***	0.93	**	3.06	***	Strong
Sender Cost	0.23	n/a	0.34	n/a	0.21	n/a	0.04	n/a	N/A
Target Cost	0.53	**	0.53	**	0.37	n/a	0.49	**	Moderate
Signaling	0.27	n/a	0.12	n/a	0.26	n/a	0.13	n/a	N/A
Alliance Scale	-0.32	n/a	-0.53	*	-0.23	n/a	-0.55	*	Moderate
Collab. Scale	0.023	n/a	0.13	n/a	-0.27	n/a	-0.24	*	Weak
The US Involvement	-0.43	n/a	-0.27	n/a	-0.41	*	-0.28	n/a	Weak
Relative Power	0.31	***	0.12	n/a	0.29	***	0.22	**	Moderate
Inducements	-0.23	n/a	-0.20	n/a	-0.47	n/a	-0.03	n/a	N/A
Sender Regime Type	0.09	**	0.12	***	0.08	**	0.09	**	Strong
Target Regime Type	0.06	**	0.06	**	0.06	**	0.08	***	Strong
Sanction Bluntness	-0.10	n/a	-0.03	n/a	-0.04	n/a	-0.04	n/a	N/A
LR Chi-Squared, χ^2	31.6		46.1		34.5		51.3		125 Observations

Sanction Effectiveness	Model 1.c Coefficients	Significance Level	Model 2.c Coefficients	Significance Level	Model 3.c Coefficients	Significance Level	Model 4.c Coefficients	Significance Level	Conclusion
Pseudo R^2	0.08		0.12		0.09		0.13		

Strong Marginal Effects: a variable is significant in 4 models;
Moderate Marginal Effects: a variable is significant in 2 or 3 models;
Weak Marginal Effects: a variable is significant in 1 model;
N/A (No Marginal Effects): a variable is not significant across all models.

Both logit (logistic) and probit regressions belong to the maximum likelihood estimation models (MLE) family, and both are appropriate models for the analysis of binary and ordinal dependent variables. Although their applications are quite similar, they differ theoretically. As seen in log odds assumption before, ordered logit regressions use the cumulative likelihood function of logistic distribution, whereas probit regression uses a different function, which is the cumulative function of standard normal distribution.

Interpretation of logistic regression is easier than probit regression models. For logistic regressions, coefficients are the change in the log odds with respect to a one-unit increase in the independent variable, ceteris paribus. However, for probit regressions, coefficients are the change in z-scores associated with a one-unit increase in the independent variable, ceteris paribus. Probit regression and logistic regression often lead to very similar results. As a result, scientists commonly use these two MLE models interchangeably. Therefore, I also estimated ordered probit regression models to assess the similarity of the results with logistic regression. Ordered probit regression results offered similar findings regarding effects upon sanctions effectiveness for nearly all of the same independent variables. Based on these findings, the regression results from ordered logit regressions are very similar to those from ordered probit regression. . For comparisons of the four models (model 1.c, 2.c, 3.c, and 4.c) see Table C.1 in Appendix C. Very similar significance

levels were obtained for the same independent variables using both ordered logistic and ordered probit regression.

Alternative Explanations and Robustness Tests

In this section, I use a dichotomized dependent variable for sanction effectiveness to measure the effects of the four LPA variables. Since effectiveness measure is an ordinal variable, this section will work with a sanctions effectiveness measure that is binary, dichotomized into 0 and 1, where a score of 0 means unsuccessful outcome for an economic sanctions episode, and a score of 1 means a successful one. There are advantages and disadvantages for using dummy variables as dependent variable. For instance, logistic regression results for a binary dependent variable are easier to interpret, but at the cost of lost information.

Since the objective for the sender state for imposing economic sanctions is to change the target state's behavior, sanctions success variable was coded as "0" when the sanction outcome is either capitulation by the sender or a stalemate. However, when the outcome is either partial acquiescence, negotiated settlement, or complete acquiescence, it is assumed to be a success, and the dependent variable is coded "1."

Table 4.20 presents the logit regression (not "ordered [ordinal] logistic regression") coefficients across four models with the same independent variables. I also used probit regression reliability tests for all of the logit regressions. For reliability tests of the four logit models below, see the probit regression (not ordered probit regression) results presented in Table C.2 in Appendix C. The probit regression analyses yielded very similar results as the using logistic regressions.

Table 4.20

Logit Regression Results across Four Models

Sanction Success	Model 1.c	Model 2.c	Model 3.c	Model 4.c
LPA_1	1.22 (0.84)	-	-	-
LPA_2	-	-1.41** (0.56)	-	-
LPA_3	-	-	0.49 (0.46)	-
LPA_4	-	-	-	2.36*** (0.84)
Sender Cost	0.65 (0.64)	0.73 (0.69)	0.68 (0.66)	0.61 (0.69)
Target Cost	0.61* (0.33)	0.61* (0.34)	0.55* (0.33)	0.56* (0.33)
Signaling	0.39 (0.24)	0.32 (0.25)	0.40* (0.24)	0.31 (0.25)
Alliance Scale	-0.05 (0.37)	-0.21 (0.37)	0.01 (0.36)	-0.20 (0.37)
Collaboration Scale	0.08 (0.14)	0.14 (0.14)	-0.04 (0.21)	-0.14 (0.17)
The US Involvement	-0.18 (0.29)	-0.09 (0.29)	-0.16 (0.29)	-0.03 (0.30)
Relative Power	0.20 (0.13)	0.04 (0.13)	0.16 (0.12)	0.11 (0.13)
Inducements	0.15 (0.90)	0.19 (0.86)	-0.07 (0.88)	0.35 (0.91)
Sender Regime Type	0.09* (0.04)	0.11** (0.04)	0.09* (0.04)	0.08* (0.04)
Target Regime Type	0.03 (0.03)	0.01 (0.03)	0.02 (0.03)	0.03 (0.03)
Sanction Bluntness	-0.11 (0.18)	-0.05 (0.18)	-0.07 (0.18)	-0.05 (0.19)
Observations	125	125	125	125
LR Chi-Squared, χ^2	21.6**	26.8***	20.7*	28.3***
Pseudo R^2	0.14	0.17	0.13	0.18

Standard errors in parenthesis
* $p<0.10$; ** $p<0.05$; *** $p<0.01$

From the logit regression results in the table above, LPA_1 and LPA_3 are not statistically significant variables. However, LPA_2 and LPA_4 hold statistical significance in both ordered logit and logit regression analyses as seen in Tables 4.19 and 4.20. In the ordered logit regression results (from Table 4.19); however, the LPA_1 variable is weakly significant at the 90% level and LPA_2 is negatively but highly significant at the 99% level. In the logit regression results (from Table 4.20); LPA_2 is significant at the 95% level with a negative relationship and LPA_4 with a 99% significance level. In model 2.c (from Table 4.20), a one unit increase in the level of political agreement in target state, LPA_2 is expected to result in a 1.41 decrease in the log odds of a successful economic sanctions outcome, holding all other factors constant. In model 4.c, a one unit increase in the aggregated level of political agreement, LPA_4 is expected to result in a 2.36 increase in the log odds of successful economic sanctions outcome holding all other factors constant.

In ordinal logistic regression results (from Table 4.19), coefficients for the target cost variables were significant at different levels, but they were all statistically significant. In the logistic regression results, the target cost variable across four models is statistically significant, although the significance pattern is weaker than the ordinal logistic regression analyses. In addition, the coefficients for target cost variables are similar across all models. Consequently, in model 1.c, 2.c, 3.c, and 4.c, a one unit increase in the cost incurred by the target state because of sanctions episode was expected to result in about 0.6 increase in the log odds of successful economic sanctions outcome, holding all other factors constant.

In logit regression, a coefficient that is positive is associated with an increase in the log odds of the dependent variable with a unit increase in the independent variable; one that is negative is associated with a decrease in the log odds. Taking the exponent of the coefficient yields a multiplier of the odds of the dependent variable resulting from a unit increase in the independent

variable. A log odds greater than one increases the odds (and probability). A log odds less than one decreases the odds (or probability).

The predicted probability of the dependent variable (P(y) = 1) given specific values of the independent variables can be calculated by converting the odds to a probability. In this study, I measured the predictive probability for sanction success for different values of the level of political agreement variables (LPA_1, LPA_2, LPA_3, and LPA_4). Since LPA variables are continuous, I used unique values for LPA variables. For example, although LPA_1 has 12 unique values, I used 10 values because 2 values were almost identical to other 2 values for calculating the predictive probabilities of LPA_1 variable.

Predictive probabilities also illustrate the marginal effects that each value of the LPA variables have upon sanctions success. For example, a one unit increase may be very increase for a continuous variable. Thus, the use of predictive probabilities makes the interpretation of an independent variable's effects much more meaningful. I also calculate confidence intervals, called predictive margins. Predictive margins are calculated both at the 95% (confidence ranges are shown with whiskers) and 99% (confidence ranges are shown with covered area) levels, as shown in the figures for each LPA variable.

When the confidence level gets larger (e.g., 95% to 99%), the confidence intervals become wider; and when the confidence level gets smaller (e.g., 99% to 95%), the confidence interval gets narrower. Consequently, the intervals with 99% confidence levels (with covered area in predictive margins Figures) are inevitably wider than the ones (with whiskers in Figures) at 95% confidence levels. Figures 4.5, 4.6, 4.7, and 4.8 below show the predictive margins of each LPA variable on sanctions success for the each of the four models.

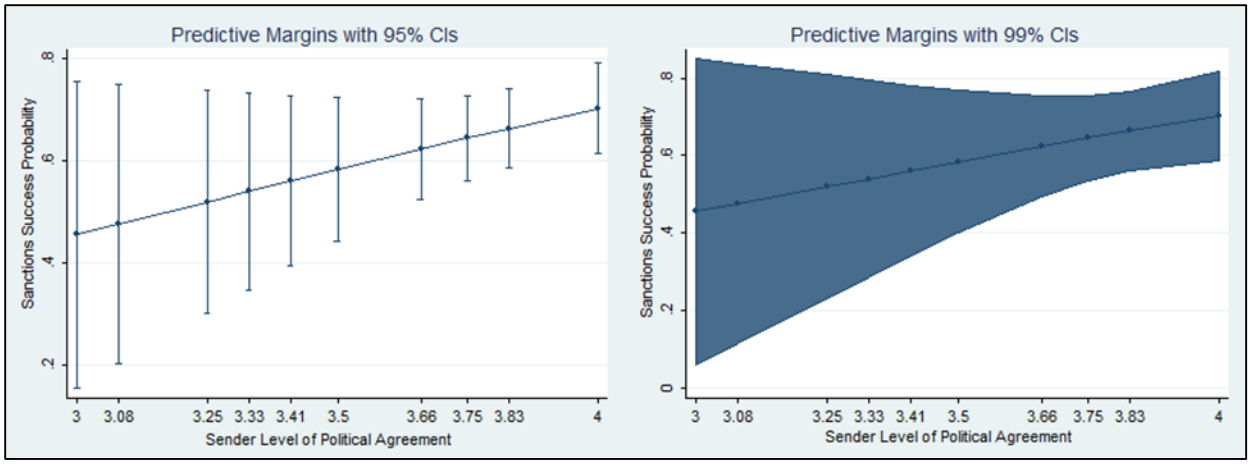


Figure 4.5: Predictive margins of LPA_1 variable on sanctions success probability

When the marginal effects for the sender state's level of political agreement is plotted, the probability of sanctions success increases as the LPA_1 increases (Figure 4.5). According to the standard logistic regression results in Table 4.20; LPA_1 is not a statistically significant variable. Therefore, I did not provide a detailed interpretation for this variable, but we can still have an idea about the probability of success rate of sanctions. The Table 4.21 shows the predictive probabilities and their 95% confidence intervals for each unique LPA_1 values.

Table 4.21

Predictive Margins with 95% Confidence Interval for LPA_1 Variable

LPA_1 Score	Margin Probability	95% Confidence Interval	
		Lower Bound	Upper Bound
3.00	0.45	0.15	0.75
3.08	0.47	0.20	0.75
3.25	0.51	0.29	0.73
3.33	0.53	0.34	0.73
3.41	0.56	0.39	0.72
3.50	0.58	0.44	0.72
3.66	0.62	0.52	0.72

(continued)

LPA_1 Score	Margin Probability	95% Confidence Interval	
		Lower Bound	Upper Bound
3.75	0.64	0.56	0.72
3.83	0.66	0.58	0.74
4.00	0.70	0.61	0.79

The LPA_2 variable is statistically significant, and according to the logit regression results on Table 4.20, a negative relationship was found between sanctions success and the level of political agreement in the target state. This finding is illustrated in Figure 4.6 that the pattern of the predictive margins goes down as the values of LPA_2 gets larger.

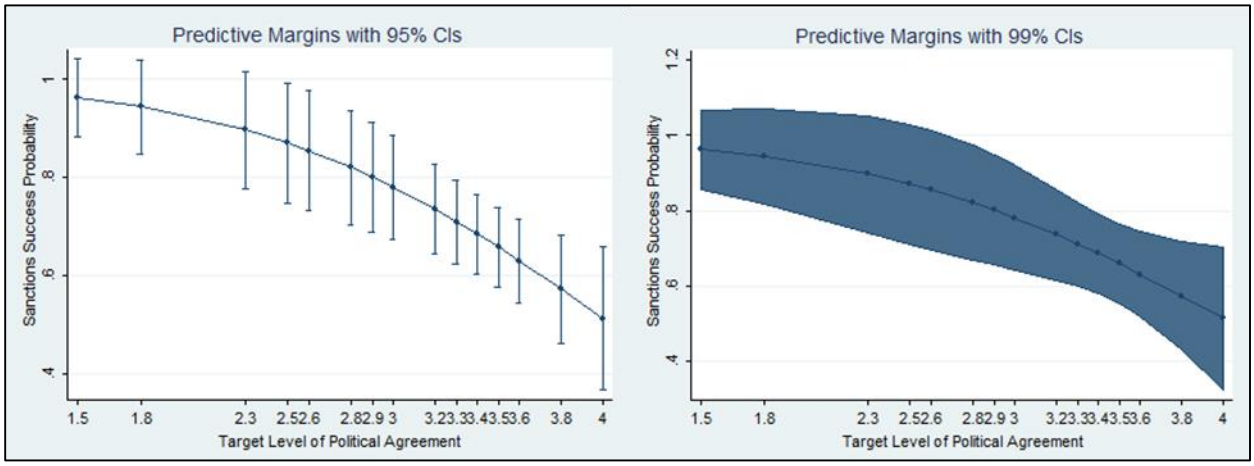


Figure 4.6: Predictive margins of LPA_2 variable on sanctions success probability

From the results presented on Table 4.22 below, the predicted probability of a successful sanction outcome is 0.96 (0.961712) for the lowest value of the level of political agreement in the target state, and 0.51 (0.514425) for the highest value of the level of political agreement in the target state holding other variables at their means. This finding is very interesting because it means when LPA_2 is at higher levels (i.e. there is lack of political agreement among the decision makers in the target state), it is almost certain that sanctions will be successful. Conversely, when LPA_2 is at the highest values, there is about a 50% chance that sanctions will fail. However, it is important

to note that it is not a common situation for the target state to have low levels of political agreement. This result means that if a sender state wants a successful sanctions outcome, then it should be implemented in a way that reduces the target state's level of political agreement.

From Figure 4.6, when LPA_2 is between 3.23 and 3.6, the confidence interval range narrows, but gets wider after 3.6. This is more noticeable when the confidence level is 99% (the covered area). This means that any LPA_2 value higher than 3.6 might have more risks of unsuccessful outcome although the sanctions success probability increases. This means that we can see more variations in LPA_2 scores at values higher than 3.6. Therefore, LPA_2 is a two-edged sword for sanctions success probability. For lower level of risks, narrower confidence interval ranges are preferred; for higher risks with higher success rates, broader confidence interval ranges are preferred.

Table 4.22

Predictive Margins with 95% Confidence Interval for LPA_2 Variable

LPA_2 Value	Margin Probability	95% Confidence Interval	
		Lower Bound	Upper Bound
1.50	0.96	0.88	1.04
1.80	0.94	0.84	1.04
2.30	0.89	0.77	1.01
2.50	0.87	0.74	0.99
2.60	0.85	0.73	0.97
2.80	0.82	0.70	0.93
2.90	0.80	0.69	0.91
3.00	0.78	0.67	0.88
3.25	0.73	0.64	0.82
3.30	0.71	0.62	0.79
3.40	0.68	0.60	0.76

(continued)

LPA_2 Value	Margin Probability	95% Confidence Interval	
		Lower Bound	Upper Bound
3.50	0.65	0.57	0.73
3.60	0.63	0.54	0.71
3.80	0.57	0.46	0.68
4.00	0.51	0.37	0.65

For the LPA_3 variable, the probability of sanctions success increases as the LPA_3 increases as in Figure 4.7. However, this is LPA variable with a coefficient that is not significant, similar to the LPA_1 variable. Hence, I did not analyze details for this variable, but we can nevertheless see that the probability of success rate of sanctions has a smooth pattern of increases. This means that as the international level of political agreement increases, the probability of successful sanctions increases with higher risks of ending up with unsuccessful sanctions, suggesting that cooperation is a risky endeavor in the international system. Table 4.23 shows the predictive probabilities and their 95% confidence intervals for the LPA_3 variable in detail.

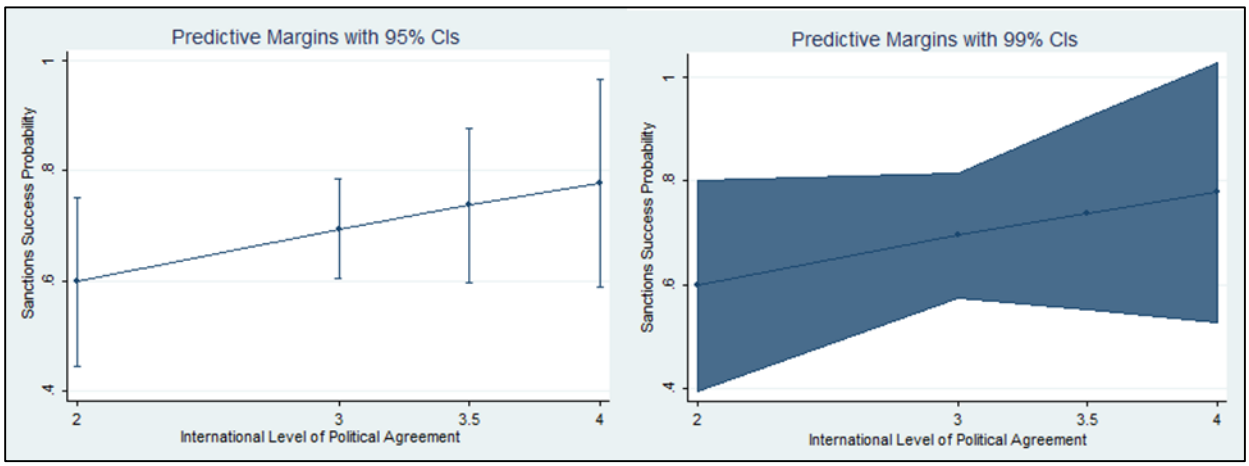


Figure 4.7: Predictive margins of LPA_3 variable on sanctions success probability

Table 4.23

Predictive Margins with 95% Confidence Interval for LPA_3 Variable

LPA_3 Value	Margin Probability	95% Confidence Interval	
		Lower Bound	Upper Bound
2.00	0.07	0.44	0.75
3.00	0.04	0.60	0.78
3.50	0.07	0.59	0.87
4.00	0.09	0.58	0.96

The LPA_4 variable is statistically significant, and according to logit regression results on Table 4.20, a positive relationship exists between sanctions success and the aggregate level of political agreement. However, the overall pattern in both 95% and 99% confidence levels show S-shaped (sigmoidal) pattern (Figure 4.8). As seen for predictive margins, the probability pattern gets higher as LPA_4 values increase. I created predictive probabilities of aggregate level of political agreement from 1.5 to 3.2 in increments of 0.1 holding other independent variables at their mean values.

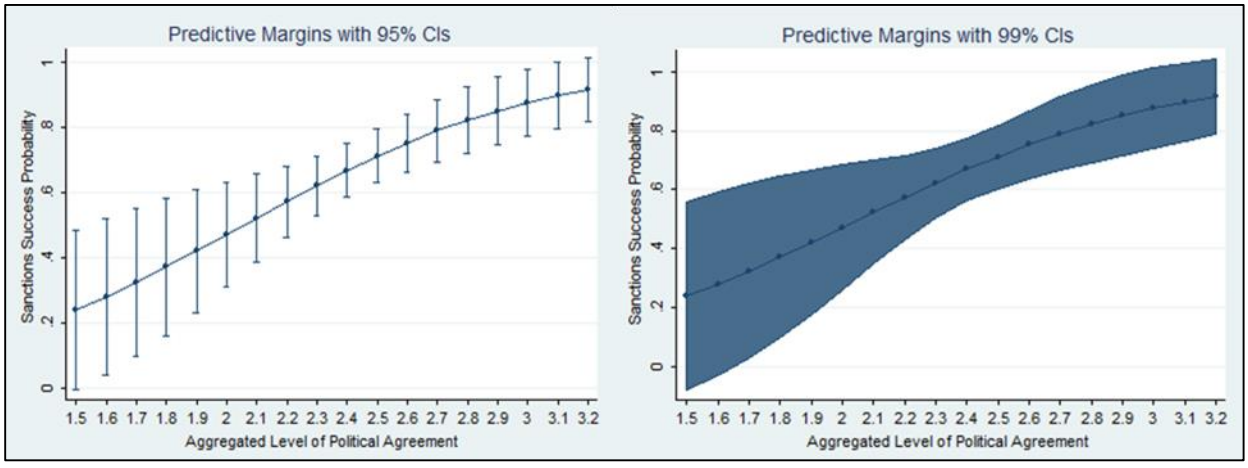


Figure 4.8: Predictive margins of LPA_4 variable on sanctions success probability

Table 4.24

Predictive Margins with 95% Confidence Interval for LPA_4 Variable

LPA_4 Value	Margin Probability	95% Confidence Interval	
		Lower Bound	Upper Bound
1.50	0.23	-0.00	0.48
1.60	0.28	0.04	0.51
1.70	0.32	0.09	0.55
1.80	0.37	0.16	0.583
1.90	0.42	0.23	0.60
2.00	0.47	0.30	0.63
2.10	0.52	0.38	0.65
2.20	0.57	0.46	0.68
2.30	0.62	0.53	0.71
2.40	0.66	0.58	0.74
2.50	0.71	0.62	0.79
2.60	0.75	0.6	0.84
2.70	0.78	0.694	0.88
2.80	0.82	0.72	0.92
2.90	0.85	0.74	0.95
3.00	0.87	0.77	0.97
3.10	0.89	0.79	0.99
3.20	0.91	0.81	1.01

From Table 4.24, as the aggregate level of political agreement variable value increases, the predicted probability of successful sanctions outcome being a one is also increasing from 0.23 to 0.91. Even though LPA_4 is a combination of other variables, we can say that LPA_4 has a larger and more consistent effect on predicted probability of successful economic sanction outcomes than any other LPA variables.

Chapter Summary

The level of political agreement (LPA) variables have sizable and statistically significant effects on sanctions effectiveness, as presented in the regression results of 12 ordered logistic regression models. Since the LPA_4 is an index variable that uses the information from LPA_1, LPA_2, and LPA_3 variables, I first examined the three individual LPA variables in more detail to understand the inner dynamics that explains sanctions effectiveness. Among these three variables, level of political agreement in target state (LPA_2) is the most important variable. For a detailed list of level of political agreement variables scores per each sanction case, see Appendix D.

Supporting Galtung's (1967) argument, findings from the present study suggest that domestic population may rally around the flag in reaction to sanctions because sanctions amount to target states meddling into their domestic affairs. When a leader of a target state can manipulate public opinion in this way, or when he or she can exploit this situation, it will solidify the state's ability to resist sanctions. The leader may be able to implement retaliatory policies against sender state that may lower the effectiveness of economic sanctions. This also shows that politically distressed targets are more likely to succumb to the sender because the leader cannot any longer use a narrative and rhetoric to rationalize his or her stand. Eventually, the leader will lose his or her popularity, his or her personal prestige internationally, as well as damage the state's international reputation. The dynamics between important groups within the target state is the most important factor in determining the success of sanctions. A rational sender will calculate the future level of political agreement within the target state that will result from implementing economic sanction policies.

This study also examined the relationships between LPA variables and target cost variables and their effects on sanction effectiveness by comparing restricted and unrestricted models. The

correlation between the international level of political agreement (LPA_3) and the target cost variables is positive. Higher levels of political agreement in the international system are associated with greater costs for target states. For target states, there is need to consider political costs along with economic costs.

When the political costs for target states are high, they cannot resist sanctions. Thus, there is incentive by the leaders of target states to engender higher levels of political agreement by exploiting the rally around the flag effect. Thus, while sanctions are more costly for target states, their leaders have the option of obtaining higher levels of agreement.

While regime type variables are statistically have effects that are statistically significant across models, sanctions are imposed mostly by democratic countries with higher Polity IV scores ($\mu_{\text{sender\_polity}} = 16.45$) and more decision makers against autocratic and anocratic countries with lower Polity IV scores ($\mu_{\text{target\_polity}} = 8.16$ and fewer decision makers. Thus, target states with fewer decision makers are better able to resist sanctions since there are fewer veto players. This might be one of the reasons why, in the international political economy literature, sanctions are considered to be inefficient foreign policy tools.

I used logit regression by transforming the dependent variable (sanction effectiveness) into a dichotomized outcome variable (success or failure). This was done for the purpose of determining whether the findings from the ordered logistic regression models were robust in the sense that similar finding would result from simple logistic regression with a dichotomous dependent variable. The findings were similar.

CHAPTER 5 CASE STUDIES

Three case studies are examined including: The United States v. Turkey (1974 to 1976), the United States and Canada v. South Korea (1975 to 1976), and the United States v. Brazil (1977 to 1984). These cases were selected in order to add narratives to theory set out in this study. Such narratives reinforce the validity of quantitative tests of theoretical arguments (Lijphart, 1971). Table 5.1 compares these cases with respect to sender, target, international level of political agreement variables, and sanctions effectiveness.

Table 5.1

List of the Case Studies

	Case Studies	LPA_1	LPA_2	LPA_3	Effectiveness
1)	The United States v. Turkey (1974-1976)	Moderate	High	N/A	Partial Effectiveness
2)	The United States & Canada v. South Korea (1975-1976)	High	Moderate	High	Effective
3)	The United States v. Brazil, (1977-1984)	Low	Moderate	N/A	No Effectiveness

Low, moderate, and high classifications in Table 5.1 have been derived from the summary statistics of each LPA variable's distribution. In other words, low levels have smaller values in terms of central tendency measures (mean and median) of the related LPA variable's distribution. Similarly, moderate levels have values close to the central tendency measure values. Finally, high levels have higher values than those of the central tendency measures belonging to the distribution of the related LPA variable. It is important to note that sender, target, and international LPA variables ($LPA_{1, 2, 3}$) have skewed distributions. Fortunately, the use of maximum likelihood estimation models (MLE) can provide robust regression estimates. However, one still needs to

account for skewness when interpreting the distribution. This caveat considered when interpreting case studies.

First, the level of political agreement in sender state (LPA_1) has a left-skewed (left-tailed) distribution. This means that LPA_1 values are accumulated to the right side of the distribution. Skewness index score is -1.543 for the LPA_1 variable. Since it is a negatively skewed pattern, the median score must have a greater value than the mean score. As a result, the mean score is 3.83, and the median score is 4.00 for the LPA_1 variable. Similarly, the level of political agreement in the target state (LPA_2) has a left-skewed distribution. The skewness index score is -0.814 for this variable. The mean score is 3.41, and the median score is 3.5 for the LPA_2 variable.

The international level of political agreement (LPA_3) variable has a distribution whose shape includes that is both right-skewed and bimodal. Skewness index score for the LPA_3 variable is 0.473 with a mean score of 2.74 and a median score of 2.0. The aggregated level of political agreement (LPA_4) variable has an almost normal distribution. This means that LPA_4 values are accumulated in the middle of the frequency distribution. The skewness index score is a very small value of -0.229. Since the distribution has a normal shape, the central tendency measures (such as the mean and median) should have very close values. For the LPA_4 variable, the mean score is 2.43 and the median score is 2.5. Note that the three LPA variable distributions are explored in more detail *in my analysis of* each case.

As regression results from Chapter 4 indicated, the level of political agreement in the target state variable (LPA_2) has the highest level of statistical significance on explaining economic sanction effectiveness. Higher LPA_2 scores on the target state are inversely related with sanctions effectiveness. International level of political agreement (LPA_3) has the second largest effect among the LPA variables (with a moderate statistical significance level of 95%) upon sanctions

effectiveness. Higher LPA_3 scores on international level are associated with greater sanctions effectiveness. Lastly, the level of political agreement in the sender state (LPA_1) has only a small effect upon sanctions effectiveness. Higher scores of LPA_1 are associated with greater sanctions effectiveness.

LPA_4 is an index measure of the aggregate level of political agreement for a specific case. It is not very useful for developing a narrative for specific sanctions episodes. Thus, the case studies will be refer to values on the first three LPA variables (i.e. sender, target, and international system level of political agreement variables—$LPA_{1, 2, 3}$). The three case studies are explored below in further detail. For each case, there's a discussion of descriptive statistics and explanations of the coding of LPA variables. Following, for each case, is a narrative describing the historical progression of the sanctions episode and assessment of each episode in terms of the level of political agreement variables and sanctions effectiveness.

Case Study 1: The United States v. Turkey (1974-1976)

Calculations of the LPA scores for The United States v. Turkey case

Identification number for this case from the overall dataset used in this study is 104407401001974091901 (see the 44th case in Table D.2, D.3, D.4, and D.5 in Appendix D). For this case, the level of political agreement in sender state (the United States) will be assessed first. Then, the LPA score in target state (Turkey) will be determined. Next, the level of political agreement in international system will be considered. Finally, an aggregate level of political agreement will be calculated given LPA_1, LPA_2, and LPA_3 scores.

The sender state (i.e. the United States) had a regime type of democracy. Main decision makers for this sanction period, on the sender side, were the president and the Congress. The first

researcher (R_1) coded sender state LPA scores as follows: for American government (the president) a score of 1 and for Congress a score of 2 was assigned between -2 and 2. The researcher then calculated the raw and overall scores for the LPA_1 of the first case. Raw scores are simply the average score of the values assigned to each actor (the president and Congress). Overall score was the concluding score of LPA_1 for the first researcher on this case. Note that since the range at first was from -2 to 2, the researcher had to sum the raw score with a score of 2 to get rid of negative values, if any. Raw and overall scores of the first researcher for the sender state were as follows:

$$Raw\ Score\ for\ LPA_1 = (1 + 2)/2 = 1.50 \qquad \text{(First researcher)}$$

$$Overall\ score\ for\ LPA_1 = 1.5 + 2 = 3.50 \qquad (1)$$

Similar measurement rules were followed by the other researcher (R_2). This researcher assigned a score of 2 between -2 and 2 for the president, and a score of 2 from -2 to 2 for Congress. Therefore, the raw and overall scores of the first researcher for the LPA_1 variable for this case were the following:

$$Raw\ Score\ for\ LPA_1 = (2 + 2)/2 = 2.00 \qquad \text{(Second researcher)}$$

$$Overall\ score\ for\ LPA_1 = 2 + 2 = 4.00 \qquad (2)$$

This study used LPA scores in general interpretations and for empirical analyses after taking the average score of the two researchers' overall assessments as shown in (1) and (2). Consequently, for this case, the final score of the LPA_1 was 3.75.

$$Regression\ score\ for\ LPA_1 = (3.5 + 4)/2 = 3.75$$

Figure 5.1 shows the LPA_1 score with an orange line, the mean score with a purple line, and the median score with a green line superimposed onto the LPA_1 variable distribution. As seen, the LPA_1 score of 3.75 is close in value to the mean score of 3.83. Thus, the LPA_1 score for this specific case is at the moderate level.

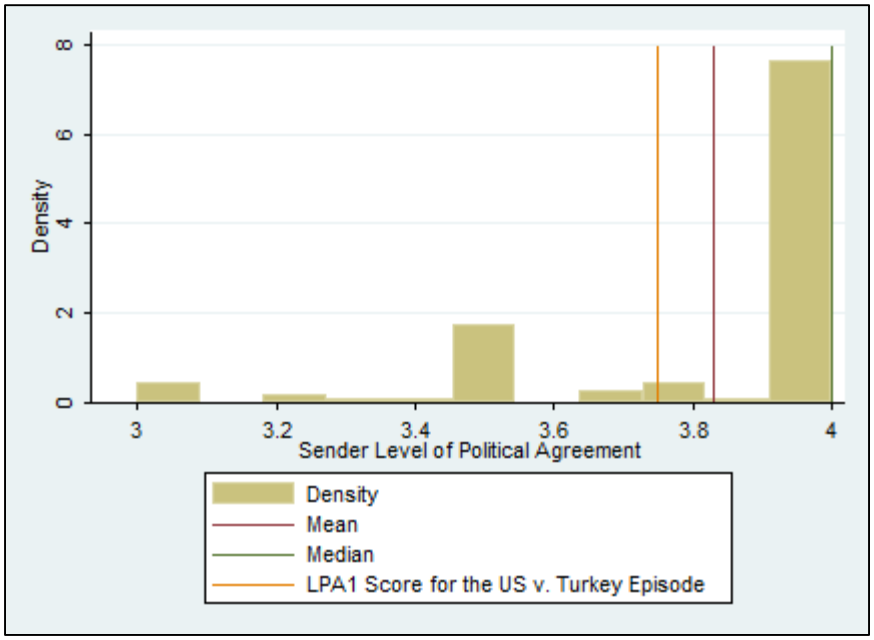


Figure 5.1: LPA_1 score of the first case study on the LPA_1 distribution

The mean score for the LPA_1 variable is 3.83 from all of the sanctions episodes. For this sanction episode, however, the LPA for the sender (LPA_1) is a score of 3.75. Note that the LPA scores range from 3 to 4 with a left-skewed distribution. Thus, the LPA_1 score, with a value of 3.75 for this case, is a score even lower than the mean score of the level of political agreement for a sender state

Target state (i.e. Turkey), also has a democratic regime type with a parliamentary system. Given the nature of the regime, two main actors are crucial for this episode: government and the main opposition party. Therefore, the first researcher (R_1) coded target state LPA_1 scores as follows: for the government a score of 2 was assigned and for the main opposition party a score of 2 was also assigned between -2 and 2.

$$Raw\ Score\ for\ LPA_2 = (2+2)/2 = 2.00 \qquad \text{(First researcher)}$$

$$Overall\ score\ for\ LPA_2 = 2+2 = 4.00 \qquad (3)$$

As a result, for the LPA_1 variable, the overall score for the first researcher was a score of 4.00. The second researcher (R_2) assigned a score of 2 between -2 and 2 for the government and a score of 2 between -2 and 2 for the main opposition party in Turkey for this same period.

$$Raw\ Score\ for\ LPA_2 = (2 + 2)/2 = 2.00 \qquad \text{(Second researcher)}$$

$$Overall\ score\ for\ LPA_2 = 2 + 2 = 4.00 \qquad (4)$$

Therefore, for the LPA_2 variable, the overall score was 4.00 for the second researcher as well. The mean score of the two overall scores then constituted the final LPA_2 score for this case. As seen below, the final score calculated from (3) and (4) for the LPA_2 for this case is 4.00.

$$Regression\ score\ for\ LPA_2 = (4 + 4)/2 = 4.00$$

Figure 5.2 shows the LPA_2 score with an orange line, the mean score with a purple line, and the median score with a green line superimposed onto the LPA_2 variable's histogram distribution. As seen, LPA_2 (with score of 4.00) is at the higher levels given the distribution pattern for this variable.

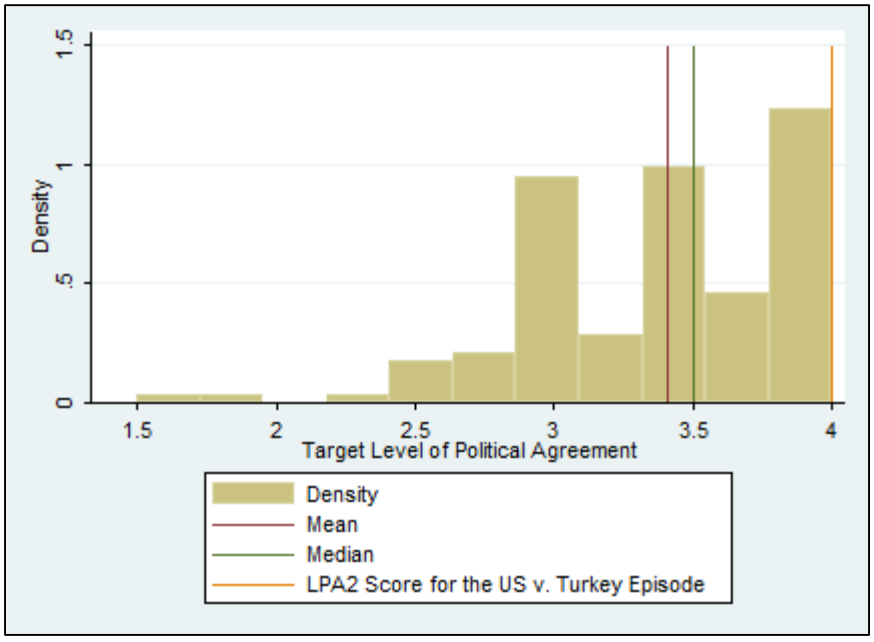


Figure 5.2: LPA_2 score of the first case study on the LPA_2 distribution

Target state level of political agreement (LPA_2) for this case (Turkey) is high, with a score of 4.00 (from a range between 1.5 and 4), which is also left-skewed with the majority of the data points gathered toward to right side of the distribution.

The international system was neutral to this economic sanction episode according to the both researchers. Therefore, as there is one sender state and one target state, this episode is a unilateral sanction case, which means that international level of political support is not available for the dyad. Both researchers equaled the LPA_3 value to a value of zero between -2 and 2 for this sanction episode. Thus, the LPA_3 regression score for this case becomes 2.00, the average of overall scores for both researchers.

$$Raw\ score\ for\ LPA_3 = 0 \qquad \text{(For both researchers)}$$

$$Overall\ score\ for\ LPA_3 = 0 + 2 = 2.00 \qquad \text{(For both researchers)}$$

$$Regression\ score\ for\ LPA_3 = (2 + 2)/2 = 2.00$$

In order to calculate the aggregated political agreement score (LPA_4) score, the individual LPA variable scores needed to be plugged into the general LPA_4 formula. Since international system is neutral for this case, only LPA_1 and LPA_2 were plugged. The calculation for the aggregated LPA value for this case utilized in the regression analysis is shown below:

- $First\ Researcher's\ Raw\ Score\ for\ LPA_4 = LPA_1 - LPA_2 = 1.50 - 2.00 = -0.50$
- $First\ Researcher's\ scaled\ score\ for\ two\ LPAs = -0.50/2 = -0.25$
- $First\ Researcher's\ overall\ LPA_4 = -0.25 + 2 = 1.75$ (5)
- $Second\ Researcher's\ Raw\ Score\ for\ LPA_4 = LPA_1 - LPA_2 = 2.00 - 2.00 = 0.00$
- $Second\ Researcher's\ scaled\ score\ for\ two\ LPAs = 0.00/2 = 0.00$
- $Second\ Researcher's\ overall\ LPA_4 = 0.00 + 2 = 2.00$ (6)
- $Final\ score\ for\ LPA_4 = (1.75 + 2.00)/2 = 1.87$

Figure 5.3 shows the LPA_4 score with an orange line, the mean score with a purple line, and the median score with a green line superimposed onto the LPA_4 variable histogram distribution. As seen, the LPA_4 score of 1.87 (average score from [5] and [6] above) is a lesser value.

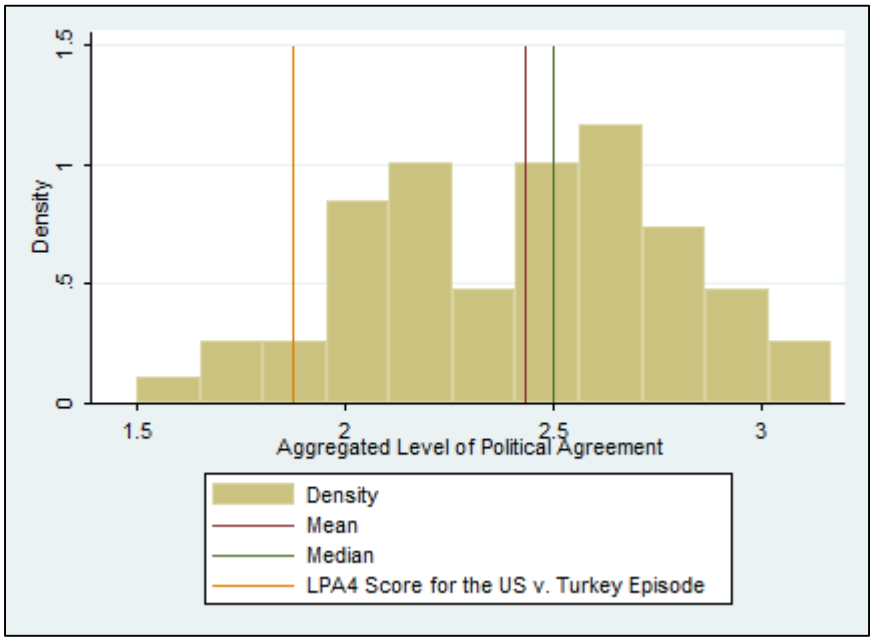


Figure 5.3: LPA_4 score of the first case study on the LPA_4 distribution

Historical progression and the assessment of the United States v. Turkey case

Longstanding Greek-Turkish conflict over Cyprus erupted in 1974 when Turkish troops wrested control of over 40% of the island, generating discontent that culminated in the ushering of partially effective sanctions on Turkey by the United States (Legg, 1981). The story of the historic struggle between Greece and Turkey over Cyprus is rooted in the 16th century when the Ottoman Empire in 1571 annexed the island as one of its territories. Over time, the ascendency of the Ottomans gradually decayed with the simultaneous rise of Western powers (chiefly the British Empire) that leased the island from the Sultan in 1878. These events occurred during the Tanzimat Ottoman era, ushering in colossal legal, social, and political transformations. This lease was short-

lived once the Ottomans joined with the Germans and Austro-Hungarian Empire during the Great War fought against Britain and its allies. In London, no question existed about the Ottoman lands that enjoyed special dominance by Britain (like Egypt or Cyprus). The British simply claimed control over them after ousting the Turks who were forced to retreat to their heartland in Anatolia and thus putting an end to their protectorate status on November 5, 1914. The British Empire eventually weakened after the Second World War and relinquished control of the island to its inhabitants (mostly Greeks and Turks).

The inhabitants in Cyprus reached an agreement where the newly freed island became the new Republic of Cyprus. Resistance groups within each community thrived, however, and gained popular support from their respective communities. On the Greek side the Organization for the Greek Fighters (EOKA— Εθνική Οργάνωσις Κυπρίων Αγωνιστών in *Greek*) and on the Turkish side The Turkish Resistance Organization (TMT— Türk Mukavemet Teşkilatı in *Turkish*) both engaged in violence against one another and initiated fierce political campaigns to gain more control over the island's government and politics (French, 2015). Both groups and their zealous advocates were supported by the military junta in Greece and the Republican government in Turkey respectively. In 1974, the Greek government stationed around 600 military officers in Cyprus as part of a plan to facilitate a coup d'etat against the Cypriot government at the time (Borowiec, 1983).

On July 15th, 1974, the Greek supported groups overthrew the government of Archbishop Makarios III who was the first president of Cyprus ("Cyprus: Big Troubles," 1974). Under the pretense that peace and stability should be restored if violence erupted in the island, as specified in a treaty signed in 1960, Turkish troops responded by landed to the north of Cyprus on July 20th.

Two days later, once the Turkish military established control over 40% of the island, a cease-fire between the Greeks and the Turks was signed bringing an end to active hostilities.

At the time, the United States was dealing with one of its worst political scandals in modern history, the Watergate scandal, resulting in President Nixon resigning on August 8th, 1974. Nevertheless, the US political establishment was unhappy with the Turkish involvement, and Indiana Representative John D. Brademan proposed in Congress a ban on military aid for Turkey. Two bills for ceasing aid were passed in Congress only to be vetoed by newly elected President Ford who sought to stabilize his domestic and foreign rule by avoiding controversial deals and decisions. Ultimately, however, Ford agreed to delay signing of the cut-off bill until December1974. Prior to the end of the year, the president awarded Turkey additional aid and postponed the cutoff to the following February (Legg, 1981). An additional $230 million worth of military equipment was sold by the US Department of Defense to the Turkish government before the deadline for the postponement in February of 1975. The State Departments' efforts, orchestrated by Henry Kissinger, failed to convince the Turks to change their position on the Cyprus issue and resulted in the cut-off going into effect.

In Turkey, the new government led by Prime Minister Bulent Ecevit in a coalition with Mr. Necmettin Erbakan rallied the populace in support of the invasion. Further, the main opposition headed by the Justice Party and its leader Suleyman Demirel joined forces with the government to advocate for Turkish dominance. The Turkish public at large vocalized their allegiance to the government in defending Turkish interests in Cyprus. Therefore, it can be concluded that the Turkish state and its people were united in their cause against the Greeks in Cyprus. Responding to the American sanctions, the Turkish government limited military activity of US troops in its

mainland. Further, the government closed American bases and terminated cooperation with the Department of Defense for a brief period following the sanctions being handed down by Congress.

In May of 1975, the US Senate voted to lift the American military embargo on Turkey by issuing a new deal that allowed for military equipment sales to the Turkish government. A few months later, in August, the House of Representatives passed a new bill specifying further military sale agreements between the two governments. Shortly thereafter, President Ford unveiled a new four-year plan to grant Turkey $1 billion in military equipment as an exchange for the reopening of 26 bases utilized by American forces within the country. By 1978, this aid package was limited to a smaller amount and Turkey was deemed to act in good faith by the Carter Administration, ending the sanctions period.

This sanctions episode was only partially effective as Turkey did not escalate its military operation because of the further American retaliation. Simultaneously, the Americans did not achieve their desires, namely a Turkish withdrawal from the island, rendering their sanctions to be deemed less effective than desired by the policy makers in Washington. Turkey and the United States came into agreement quickly after the incident, with both parties concluding that they were on good terms since each satisfied part of what the other party needed. Aid was received by Turkey while the US was able to continue operating their forces from bases within the country. In short, this episode was neither fully effective nor a complete failure, achieving results somewhere in the middle.

The outcome of the US-Turkey sanctions supports the argument made by this study: since the level of political agreement within the senders' state was not strong, the sanctions were less effective. Executive agencies (like the DoD and Whitehouse, alongside Congress) were not unanimous in their decision nor willingness to encroach on Turkish interests and prevent them

from placing their troops in Cyprus. The Watergate crisis further rendered level of agreement on foreign policy matters during this time.

In addition, the level of political agreement within the target state (Turkey) was high, with all relevant political actors within the country rallying behind the decision of Mr. Ecevit's government to use the military option for the island of Cyprus. As a result, the sanctions epoch was less effective. The absence of international support also played a role in diminishing the impact of the sanctions, with no decisive support being present for either the Turkish government or the American administration in their respective efforts.

Overall, the level of political agreement on the sanctions was low, resulting in a less effective episode. One of the main factors why sanctions were moderately effective is that the military operations of US troops within a strategic ally like Turkey was in question. Going in heavily with sanctions, or incentives such as attractive military aid deals, carried significant leverage for the United States in the decision-making of the Turkish government.

Case Study 2: The United States and Canada v. South Korea (1975-1976)

Calculations of the LPA scores for the United States and Canada v. South Korea case

Coding number for this case was 104707501001975069901 (see the 47th case in Table D.2, D.3, D.4, and D.5 in Appendix D). Because the main sender (The United States) state has a regime type of consolidated democracy, at least two important veto players are involved in decision-making processes. For this case, main decision makers on the sender side (the US) are, yet again, the government (the presidency) and the Congress. Sender state LPA scores were recorded by the first recorder as follows: for American government, a score of 2 was assigned and for Congress a score of 2 was assigned between -2 and 2. Therefore, the first researcher's (R_1) raw LPA_1 score is

the average of the two. Summation of 2 with the resulting raw score eliminates any possible negative value from -2 to 2. As a result, raw and overall scores by the first researcher for the LPA_1 variable in this case was calculated as follows:

$$Raw\ Score\ for\ LPA_1 = (2 + 2)/2 = 2.00$$

$$Overall\ score\ for\ LPA_1 = 2 + 2 = 4.00 \qquad (7)$$

A score of 2 between -2 and 2 was assigned by the second researcher (R_1) for the first actor (presidency), and a score of 2 between -2 and 2 was assigned for the role of Congress of the sender state in this episode. Therefore, raw and overall scores for the second researcher were:

$$Raw\ Score\ for\ LPA_1 = (2 + 2)/2 = 2.00$$

$$Overall\ score\ for\ LPA_1 = 2 + 2 = 4.00 \qquad (8)$$

The mean score of both researchers' overall LPA scores as seen in (7) and (8) constituted the final LPA_1 score used in the analysis for this specific sanction episode.

$$Regression\ score\ for\ LPA_1 = (4 + 4)/2 = 4.00$$

Figure 5.4 shows the LPA_1 score with an orange vertical line, the mean score of this variable's distribution is represented by a vertical purple line, and the median score is shown with a vertical green line superimposed onto the LPA_1 variable's density histogram distribution. As seen, the LPA_1 score is in the higher levels with a value of 4.00.

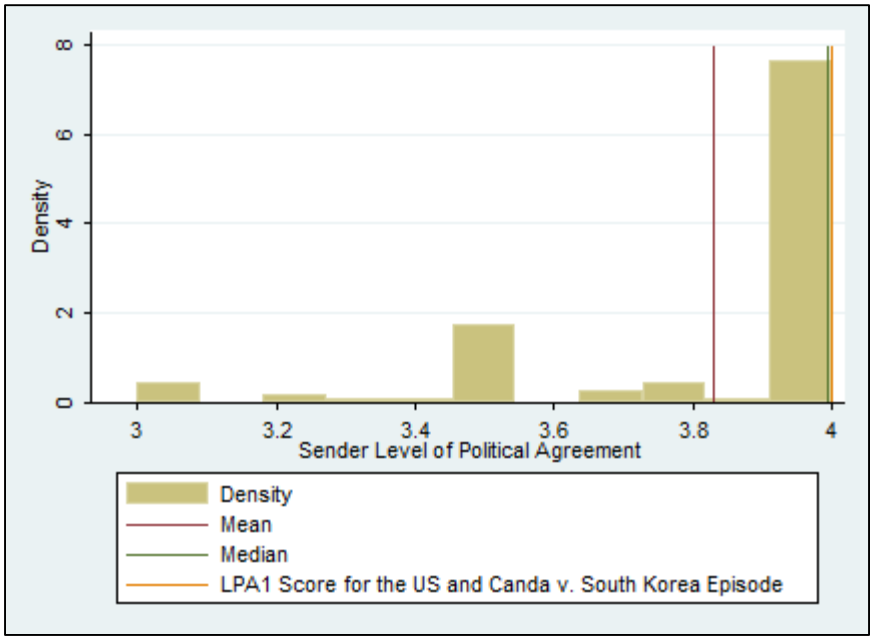


Figure 5.4: LPA_1 score of the second case study for the LPA_1 distribution

Target state (South Korea) has a non-democratic regime type, therefore only one important actor—the government—is included for this sanction episode. The first researcher (R_1) coded target state LPA scores as follows: for the government a score of 2 was assigned between -2 and 2, thus the overall score for LPA_2 became 4.00.

$$Raw\ Score\ for\ LPA_2 = 2.00$$

$$First\ Researcher's\ Overall\ score\ for\ LPA_2 = 2 + 2 = 4.00 \qquad (9)$$

Note that since there is only one important actor in the target state, there is no need to average the score between different actors. A score of 1 between -2 and 2 was assigned by the second researcher (R_2) for the government in target state.

$$Raw\ Score\ for\ LPA_2 = 1$$

$$Second\ Researcher's\ Overall\ score\ for\ LPA_2 = 1 + 2 = 3.00 \qquad (10)$$

After calculations, the overall LPA_2 score for the second researcher was 4.00. The regression score then became the mean of the overall scores, as seen in (9) and (10), from both researchers. Consequently, a final score for LPA_2 for this case (3.50) was identified.

$$Regression\ score\ for\ LPA_2 = (4 + 3)/2 = 3.50$$

Figure 5.5 shows the LPA_2 score with an orange line, the mean score with a purple line, and the median score with a green line superimposed on the LPA_2 variable distribution. As seen, a LPA_2 score of 3.50 is a moderate value given the LPA_2 variable distribution.

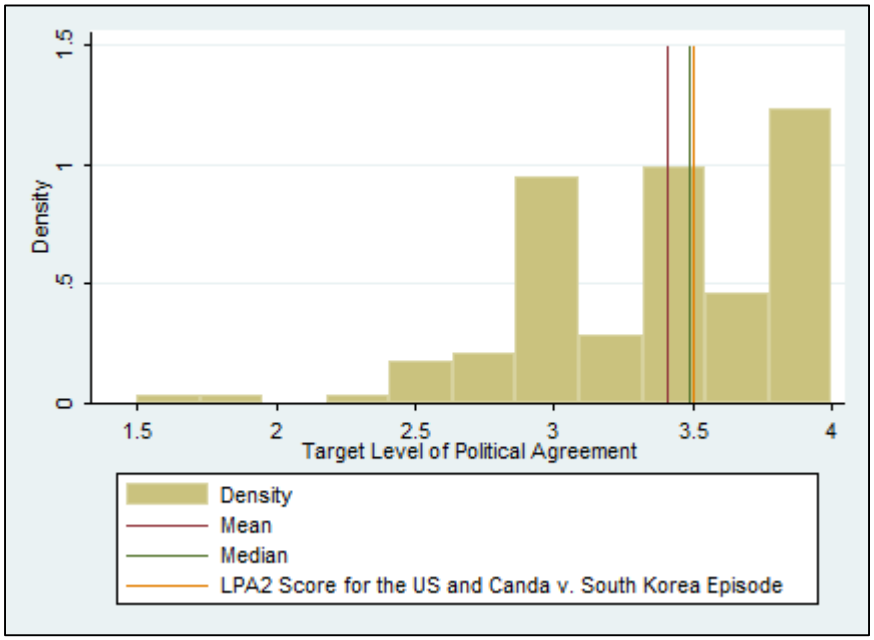


Figure 5.5: LPA_2 score of the second case study on the LPA_2 distribution

The mean score for LPA_2 was 3.41 across 125 economic sanction episodes. For this case, however, LPA for the target state (LPA_2) is a score of 3.50. Although the range for the LPA_2 scores ranged between 1.5 and 4 in a left-skewed distribution, the resulting LPA_2 score with a value of 3.50 is very close in value to both the median and mean scores.

This sanction episode was instigated by a coalition of countries (the United States and Canada), with the main sender being the US. Other countries also informally supported the sanctioning coalition. Therefore, international system is not assumed to be neutral against South Korea on the issue of nuclear reprocessing. As a result, the first researcher (R_1) coded the international LPA value (LPA_3) with a score of 2 between -2 and 2. Consequently, the LPA_3 score for the first researcher was 4.00 as seen below:

$$Raw\ Score\ for\ LPA_3 = 2.00$$

$$First\ Researcher's\ Overall\ score\ for\ LPA_3 = 2 + 2 = 4.00 \qquad (11)$$

The second researcher (R_2) also assigned a score of 2 between -2 and 2 for the LPA_3 variable. Thus, the overall LPA_3 score on this case for the second researcher was also 4.00, as seen from the calculation below:

$$Raw\ Score\ for\ LPA_3 = 2.00$$

$$Second\ Researcher's\ Overall\ score\ for\ LPA_3 = 2 + 2 = 4.00 \qquad (12)$$

Averaging of the overall scores, (11) and (12), from both researchers constituted the final LPA_3 score, for a mean of 4.00. Figure 5.6 shows the LPA_3 score for this case, the mean score of the LPA_3, and the median score of the LPA_3 variable. As seen, it is a high value given the general variable distribution and when compared with the central tendency measures of the distribution.

$$Regression\ score\ for\ LPA_3 = (4 + 4)/2 = 4.00$$

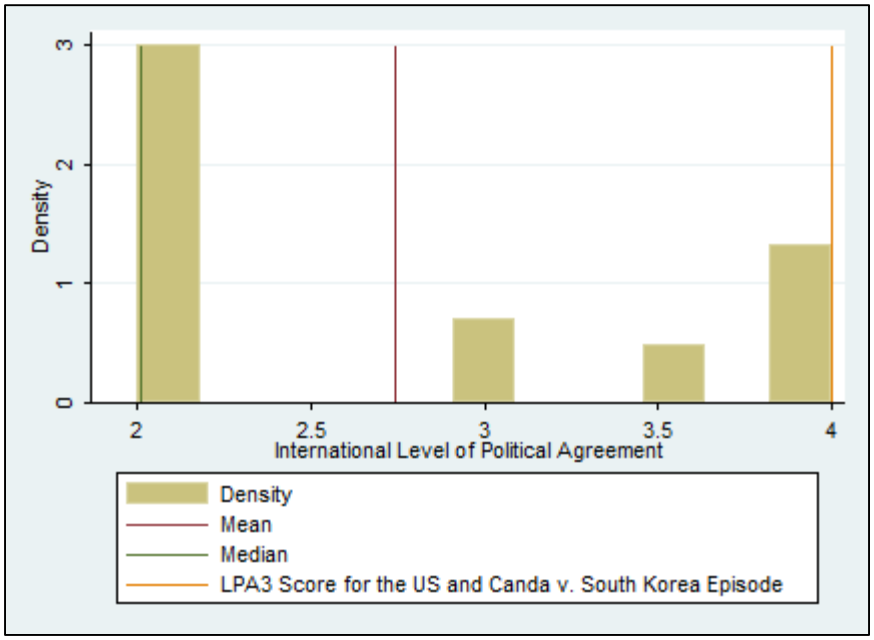


Figure 5.6: LPA_3 score of the second case study on the LPA_3 distribution

In order to calculate the aggregated level of political agreement (LPA_4) score, the individual three LPA variable scores were plugged into the LPA_4 formula. Raw scores for each researcher were used first, followed by scaled scores obtained for each researcher and overall scores finally being calculated for each. An average of the two overall scores, representing the resulting LPA_4 score for this sanction episode, resulted. Calculation procedure was as seen below:

- $First\ Researcher\ Raw\ Score\ for\ LPA_4 = LPA_1 - LPA_2 + LPA_3 = 2 - 2 + 2 = 2$
- $First\ Researher\ Scaled\ Score\ for\ LPA_4 = 2/3 = 0.66$
- $First\ Researcher's\ Overall\ Score\ for\ LPA_4 = 0.66 + 2 = 2.66$ (13)
- $Second\ Researcher\ Raw\ Score\ for\ LPA_4 = LPA_1 - LPA_2 + LPA_3 = 2 - 1 + 2 = 3$
- $Second\ Researcher\ Scaled\ Score\ for\ LPA_4 = 3/3 = 1$
- $First\ Researcher's\ Overall\ Score\ for\ LPA_4 = 1 + 2 = 3.00$ (14)
- $Regression\ score\ for\ LPA_4 = (2.66 + 3)/2 = 2.83$

Figure 5.7 shows the LPA_4 score together with the mean and median scores of the LPA_4 variable distribution. As seen, LPA_4, with a score of 2.83 in the variable distribution, is at higher levels given the variable distribution in general.

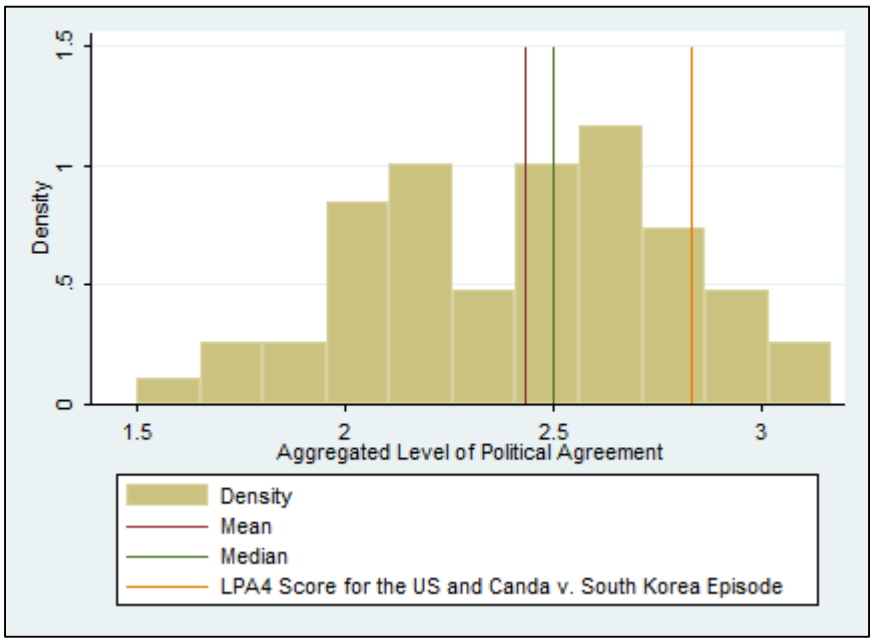


Figure 5.7: LPA_4 score of the second case study on the LPA_4 distribution

Historical progression and the assessment of the US and Canada v. South Korea case

Western nuclear powers, namely the United States and Canada supported by France, successfully sanctioned South Korean General Park's government to abandon its nuclear program in the mid-1970s (Wohistetter, 1976). A chief factor behind the effectiveness of these sanctions was the consensus among the Western powers on the need to immediately mitigate the destabilizing effects that South Korean nuclear capability would have in the region. Further, South Korea lacked global supporters able to supply them with nuclear reprocessing plants and materials. Dealing with the Soviet Union was not a consideration for the South Korean regime given the heavy militarization of the country by American troops and the colossal economic packages financing the country's industries that were channeled through the Western powers. In addition,

the international community, spearheaded by major powers like the US, Canada, and France along with key organizations such as the United Nations, negatively viewed the South Korean attitude and behavior toward possession of nuclear capabilities. Therefore, the diplomatic campaign run by Henry Kissinger (along with key officials from France and Canada) was equipped with serious economic sanctions if necessary, and compelled Park's government to abandon its decision to acquire nuclear capabilities.

While the reasons General Park wanted nuclear weaponry capability in the mid-1970s is unclear, recent research conducted by South Korean investigators revealed several concerns over American commitment to the security of South Korea. Park's interest in nuclear weapons should not be surprising given the decisive outcome of the atomic bombs which brought the Japanese to peace toward the end of the Second World War; a welcome eventuality for the Koreans who suffered greatly under Japanese colonial rule at the time. Syngman Rhee, Park's predecessor, invested in nuclear research as early as the 1950s in an attempt to solidify the country's new position following the Korean War. Subsequent to the political turmoil of the early 1960s, Park Chung-he rose to power and declared himself president of the country. Throughout the Vietnam War, Park aided Washington's troops with immediate logistical support in order to cultivate a close relationship with the Americans.

Park's wish to obtain nuclear weapons originated with his goal of achieving an autonomous defense strategy in case of American inaction, limited intervention, or total abandonment. This motive was informed by the modest interventions by the United States in the late 1960s when there was political and military instability in the Korean peninsula and when the US stopped military aid to South Vietnam and its government collapsed due to the North's military invasion and conquest. Considered a wakeup call, Park was convinced that the United States may not be fully

committed to the safety of his nation despite its emerging industrial strength. Simultaneously, the Soviets were backing the North Korean nuclear project, and new tests were carried out in the Indian sub-continent. These concerns by Park were further reinforced when President Nixon authorized the withdrawal of 20,000 troops (decreasing the 63,000 troops stationed at that time in South Korea) in an attempt to stabilize the peninsula (Engel, 2016).

In 1974, Park's government requested from France a nuclear reprocessing facility capable of generating plutonium from spent reactor fuel. This was an action contrary to American efforts at promoting the non-proliferation of nuclear weapons around the World, and would have given South Korea the ability to develop nuclear weaponry in a few years (by 1980) according to declassified reports from the National Security Archive. The United States quickly realized that in order to successfully thwart the Korean attempt, they needed to act swiftly in garnering the support of global allies who supply nuclear machinery and goods. Officials in Washington quickly moved to convene with their French counterparts in an attempt to form a coalition that exercised leverage over the Koreans in order to change the course of their actions. Canada, who agreed to finance Korean enterprises related to nuclear capabilities, were also involved since they were concerned about an upcoming test similar to that carried out earlier in the decade in India.

Multiple visits by top American officials (such as the heads of the Department of State and Defense Department) were carried out in 1975 and 1976. Goals for these meetings were to reaffirm American promises on the security of South Korea and to persuade Park to abandon his desire for obtaining nuclear capability. Once the Americans secured the Canadian and French support by cancelling and changing the terms of their deals, Park realized that achieving a nuclear Korea was untenable. He also could not simply bluff his way through due to ties between the Western powers

and South Korea's massive industrial complex. Prior to his assassination, Park publicly and reluctantly declared that South Korea would officially abandon its nuclear weaponry capability.

The diplomatic and economic threats to Park by the White House and its Western allies worked, effectively changing the attitude and behavior of the South Korean government. The chief reasons for this success were the unanimous agreement between all relevant political actors within the United States and its allies. Congress and President Ford held identical views regarding the issue. The administration quickly voiced their concerns and a desire to change South Korea's course of action. Congress gave the President freedom in dealing with the crisis since it did not desire a nuclear South Korea, especially after the Vietnam War. The level of political agreement in the senders' state was thus at its highest. Similarly, the international community (represented by Western powers like France and Canada) reflected an agreement on the issue: no proliferation of nuclear weapons. Therefore, the level of political agreement by the international community was also high. This exerted a significant amount of force on the South Korean government's decision to change its course with regard to nuclear weapons.

While South Korea was run by Park (a General-led dictatorship that rendered other actors' attitudes and behaviors less important) many South Korean domestic forces further pressured the decisions of his regime's. South Korea in the 1970s was witnessing a massive industrialization campaign that eventually moved the country from a poor nation to one of the wealthiest in the world. Much uproar and uncertainty were thus generated within the business community over a possible fracture in Korean-Western relations, especially with the United States, due to the ongoing political crisis caused by Park. Stakeholders in the economy desired stronger ties with the West. They benefited from global economic integration where their goods and services would be sold and exported to markets far beyond South Korea's borders. They also wanted access to global

capital for their individual projects. Understandably, they did not appreciate the way Park was running the nuclear campaign, generating a factor of disagreement within the target state. Therefore, one may conclude that the level of political agreement within South Korea was low at the time, facilitating the effectiveness of the sanctions episode initiated by the Americans.

Case Study 3: The Unites States v. Brazil (1977 - 1984)

Calculations of LPA scores for the Unites States v. Brazil case

Coding number for this case was 106107707001977022404 (see the 61st case in Table D.2, D.3, D.4, and D.5 in Appendix D). This is another example of a unilateral sanction episode. For this dyad the US has a democratic regime type, whereas the target state (Brazil) has a non-democratic regime. Therefore, there are two significant actors in the sender state. Sender actors' level of political agreement (LPA_1) scores were recorded by the first researcher (R_1) as follows: for the president a score of 2 was assigned between -2 and 2, and for Congress a score of 1 was assigned between -2 and 2.

$$Raw\ Score\ for\ LPA_1 = (2 + 1)/2 = 1.50$$

$$Overall\ score\ for\ LPA_1 = 1.5 + 2 = 3.50 \qquad (13)$$

The second researcher (R_2) assigned a score of 1 from -2 to 2 for the presidency and assigned a score of 1 between -2 and 2 for the role of Congress during this episode. Thus, the raw and overall scores for the second researcher results in one and three, as seen below:

$$Raw\ Score\ for\ LPA_1 = (1 + 1)/2 = 1.00$$

$$Overall\ score\ for\ LPA_1 = 1 + 2 = 3.00 \qquad (14)$$

The mean score of both researchers' overall LPA scores ([13] and [14]) then constitute the final LPA_1 score that was used in the regression analyses for this sanction episode.

$$Regression\ score\ for\ LPA_1 = (3 + 3.5)/2 = 3.25$$

Figure 5.8 shows the LPA_1 score for this case with an orange vertical line, the mean score of this variable's distribution with a purple line, and the median score with a green line superimposed onto the LPA_1 variable's density histogram distribution. As seen, the LPA_1 score of 3.25 is at very low levels within the LPA_1 variable's distribution.

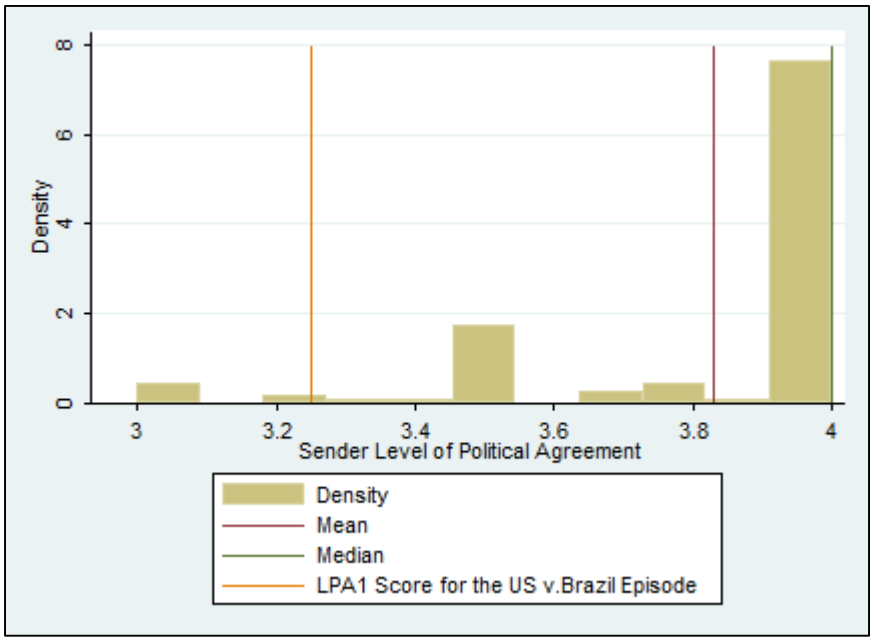


Figure 5.8: LPA_1 score of the second case study on the LPA_1 distribution

Target has a non-democratic regime type, therefore there are two important actors (the government and factions) for the first researcher of this sanction episode. The researcher (R_1) coded target state LPA scores as follows: for the government a score of 2 was assigned between -2 and 2, and for the factions a score of 0 was assigned between -2 and 2. Thus, the overall score for LPA_2 was 3.00 after calculations as shown below:

$$Raw\ Score\ for\ LPA_2 = (2 + 0)/2 = 1.00$$

$$First\ Researcher's\ Overall\ score\ for\ LPA_2 = 1 + 2 = 3.00$$

For the second researcher (R_2), there was only one important actor, namely the government in target state. A score of 2 between -2 and 2 was therefore assigned for the government in Brazil. Since there is only one important actor in target state, there was no need to average the score of the different actors.

$$Raw\ Score\ for\ LPA_2 = 2.00$$

$$Second\ Researcher's\ Overall\ score\ for\ LPA_2 = 2 + 2 = 4.00$$

After calculations, the overall LPA_2 score for the second researcher was 4.00. The final score then becomes the average of the overall scores from both researchers. Consequently, the final score for the LPA_2 variable of the US v. Brazil case is 3.50.

$$Regression\ score\ for\ LPA_2 = (3 + 4)/2 = 3.50$$

Figure 5.9 shows the LPA_2 score with an orange line, the mean score with a purple line, and the median score with a green line superimposed on the LPA_2 variable distribution. As seen, the LPA_2 score of 3.50 is a moderate value given the LPA_2 variable's histogram distribution.

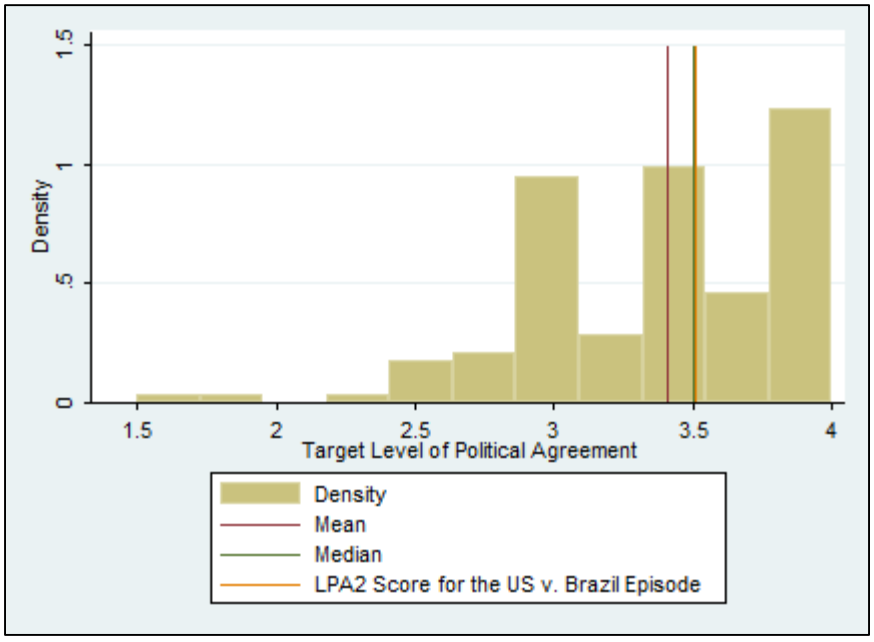


Figure 5.9: LPA_2 score of the second case study on the LPA_2 distribution

This is a unilateral economic sanction episode without international influence, so international system has been assumed to be neutral. As a result, the raw score for the international level of political agreement (LPA_3) value equals zero in this case. The average value for both researchers' overall score same, the regression score becomes 2.00.

$$Raw\ Score\ for\ LPA_3 = 0 \qquad \text{(For both researchers)}$$

$$Overall\ Score\ for\ LPA_3 = 0 + 2 = 2 \qquad \text{(For both researchers)}$$

$$Regression\ score\ for\ LPA_3 = 2.00$$

The aggregated level of political agreement (LPA_4) score was 1.87 (the average score of [15] and [16] in the step below) as shown in Figure 5.10. Calculation steps are shown in detail below:

- $First\ Researcher's\ Raw\ Score\ for\ LPA_4 = LPA_1 - LPA_2 = 1.50 - 1.00 = 0.50$
- $First\ Researcher's\ scaled\ score\ for\ two\ LPAs = 0.5/2 = 0.25$
- $First\ Researcher's\ overall\ LPA_4 = 0.25 + 2 = 2.25$ (15)
- $Second\ Researcher's\ Raw\ Score\ for\ LPA_4 = LPA_1 - LPA_2 = 1.00 - 2.00 = -1.00$
- $Second\ Researcher's\ scaled\ score\ for\ two\ LPAs = -1.00/2 = -0.50$
- $Second\ Researcher's\ overall\ LPA_4 = -0.5 + 2 = 1.5$ (16)
- $Final\ score\ for\ LPA_4 = (2.25 + 1.5)/2 = 1.87$

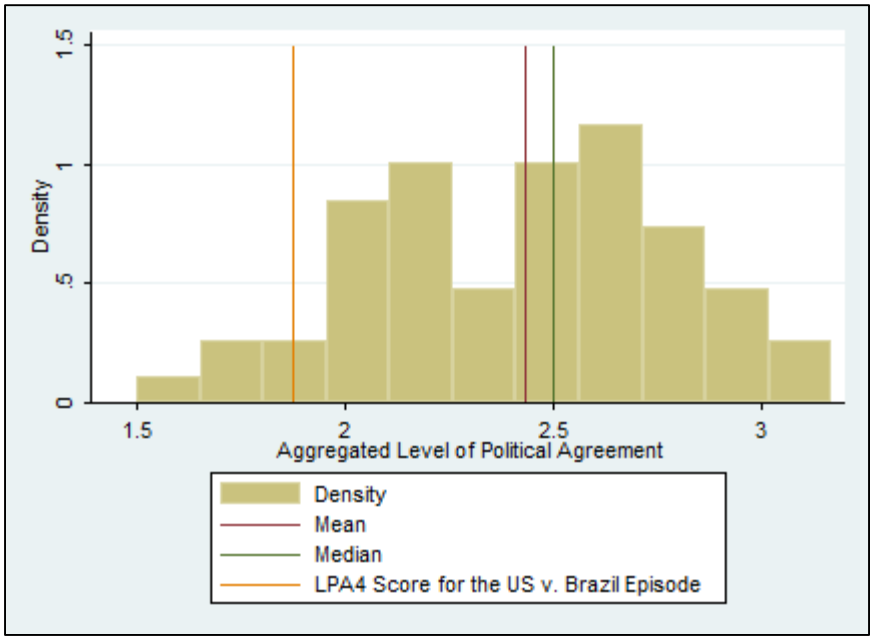


Figure 5.10: LPA_4 score of the second case study on the LPA_4 distribution

Historical progression and the assessment of the United States v. Brazil case

The economic sanctions that the United States under the Carter administration placed against the Brazilian government between 1977 and 1984 were not effective. This is due to the lack of heavy handedness by the sender state, with Congress and the president not joining ranks or exhibiting zeal in executing the sanctions. Further, the Brazilian government voluntarily refused American military aid in a gesture signaling retaliation against Washington's behavior (Keesing's Contemporary Archives, 1977). In addition, the international community did not exhibit robust support for the American government's desire to curtail human rights abuses by the military regime in Brazil.

Tumultuous political events in the 1950s and 60s led to the establishment and consolidation of military run dictatorships in Brazil until the mid-1980s. With the rise of Soviet influence in the developing world, communist ideals regarding agricultural and industrial developments were rampant among the labor organizations and their supporters in Brazil. A 100% wage increase was

legislated by the Labor Minister in the late 1950s as a result, prompting more socialist policies that culminated in a heated conflict between the country's conservative-industrialist communities and the working masses. The military, therefore, started to crack down on liberal politicians and consolidated its hold on political power to a point where the populist president, Getúlio Vargas, committed suicide.

This instability gave opportunity to the military to create a prime minister position that would assume most of the executive powers previously held by the president. This, however, failed to gain the support of the Brazilian public who subsequently voted in favor of dismantling the office and restoring presidential powers to João Goulart, a former labor minister who became Brazil's most powerful president in 1964. The military, along with the landowning and industrialist classes, did not subscribe to the policies and attitudes of the new Brazilian regime and orchestrated a military coup that same year which installed a harsh reactionary government that cracked down on the leftist opposition.

This new regime in Brazil launched a political deterrence campaign utilizing tactics such as kidnapping, mass political imprisonment, elimination of constitutional protections for citizens, and a wide array of other human rights abuses in hopes of quelling political opposition. Many opponents were held in jail without due process for years, and many others simply disappeared and were never found. The situation in Brazil alarmed many governments around the world, chiefly the United States headed by President Carter. Carter's administration sought to broker peace around the world and decrease human rights violations (culminating in the historic Camp-David accords between Sadat's Egypt and Israel in the Middle East for example), and began investigating the reported abuses in Brazil. Brazilian officials considered this as a direct interference into their domestic politics.

With General Ernesto Giesel establishing his rule over Brazil in 1975, promises were made to democratize the country and shift away from the repression of those expressing opposition. Receiving assistance and security aid from the United States, Brazil was one of the 82 countries that the White House that needed to submit a report to Congress highlighting their human rights records. As a courtesy measure, the US embassy in Brazil sent copies of the report to the Brazilian government (Wesson, 1981). Disgruntled by the US move, the Brazilian government abrogated the military deal signed previously in 1952 specifying the terms and amounts of military aid given to Brazil from the United States. By 1978, the Brazilian government terminated the US naval mission and joint military commission which had existed between both countries since the end of World War II. This situation remained until President Ronald Reagan reauthorized the sale of weapons to Brazil in 1984.

In summary, the US sanctions failed to induce behavioral change on the part of the Brazilian government. This was due to high agreement levels present among Brazilians regarding opposition to US intervention in their domestic politics. It was also the result of a lack of consensus on the part of the US administration regarding the amount of pressure and degree of sanctions during the Brazilian agreement. An ancillary, yet important, factor was also the neutrality of the international community, where no legitimate support or advocacy for the sanctions was exhibited by other organizations or governments.

An important observation concerning the US-Brazilian economic sanction episode is that the Brazilian government, unlike South Korea, did not desire nuclear weapons. While the issue of human rights abuses were of importance to strategic stakeholders in American foreign policy (namely the Department of Defense and the White House), human rights simply did not match the importance of the possibility of a South Korea with nuclear weapons. While Brazil did desire to

develop a nuclear capability during the 1970s, it simply lacked the infrastructure to develop an atomic bomb quickly in comparison to South Korea whose high rate of industrialization by the late 1970s gave them such a capability. Further, the strategic importance of South Korea, located adjacent to North Korea (an intransigent autocratic regime that has continuously challenge US supremacy) added an important factor that made the US sanctions episode in South Korea more effective in comparison to those in Brazil or Turkey.

Chapter Summary

The US-Turkish sanctions case study indicates a moderate level of effectiveness because of the lower levels of political agreement in sender state (the U.S.) and the higher level of political agreement against sanctions in the target state (Turkey). This is due to relationship between issue type, security, and sender (the US) and the target (Turkey). For the United States, the level of political agreement among domestic actors was low given the non-essential nature of the Cyprus issue at hand. For the U.S., it was only indirectly related to the security interests of the U.S. On the other hand, Turkey had an inherent security interest in the matter given Cyprus' close proximity to the southern Mediterranean coast of Turkey. This made domestic actors within Turkey, including the government and opposition, unified against the sanctions, thereby signaling a high level of political agreement within the target state.

The U.S.-Canadian coalition sanctions against South Korea were effective. This is due to the high level of political agreement within the sender state and low level of political agreement within the target state (South Korea) and high level of international political agreement supporting sanctions policy. The reason behind the unanimous agreement of the domestic actors within the US and Canada is due to the salient nature of nuclear proliferation, a highly security-related issue.

On the other hand, within South Korea, the U.S. with the support of Canada exploited domestic opposition and recruited it to oppose the ruler, thus leading to a low political agreement.

The U.S.-Brazilian sanctions is an example of a failed sanctions episode. This is due to the non-security related issue at hand, human rights. Besides, within the United States, levels of political agreement was low among the White House and Congress. On the contrary, in Sao Paulo, the level of political agreement against the American sanctions was uniform. Therefore, the level of political agreement within the target was high and sanctions were not effective.

CHAPTER 6 CONCLUSION

This study has demonstrated the difficulty of answering the question of whether economic sanctions are effective or not. Out of 125 cases analyzed in this study, 30 episodes (24%) were found to be effective using a restrictive definition of sanctions success. Once the effectiveness threshold is raised to any form of success (negotiated or non-negotiated), 59 cases (47%) were effective to some degree. The average of the two different definitions of sanctions success is about 35% similar to the original findings by HSE in 1990. Similarly, the most recent update for the TIES dataset, including a total of 1412 cases, found that economic sanctions were effective using the restrictive definition for 27% of the cases and using the non-restrictive definition for 40% of the cases, , including the missing cases in their dataset. Such statistics are similar to the findings of this study, confirming that economic sanctions are effective only about a third of the time they are initiated.

This study reinvigorates the debate on the utility and effectiveness of economic sanctions as foreign policy instruments. Pape (1997) has criticized HSE's optimism by stating that "proponents of the new conventional wisdom are aware that sanctions have limits and do not always work, but, by and large, they believe that sanctions are often an efficient instrument for achieving important political goals." Pape (1997) believes that sanctions were only successful in a handful of episodes, disagreeing with the 30% statistic as claimed by the HSE. Therefore, Pape (1997) argues that economic sanctions are effective under a narrow set of conditions. These include high commitment (both economic and political) from the sender state, high political disagreement within the target state concerning the sanctions, and a high level of support for the sender state from the international community. This study has matched HSE cases with TIES effectiveness scores, finding that 59 cases out of 125 (about 47%) received a score of 3 or 4 (relative to absolute

effectiveness). Sanctions may not change policy positions, but they prevent eventual wars by decreasing the military spending and power of target countries (Rogers, 1996).

Since estimates of sanctions success vary between 30 and 50 percent (like in the TIES dataset when missing data was excluded, thus yielding a 56% effective rate in the non-restrictive case), it is plain that there is sharp disagreement in the economic sanctions literature over the conceptualization and measurement of economic sanctions effectiveness. Conventional wisdom cited by many authors, like Pape (1998; 1997) and others (Preeg, 1999; Kunz 1997; Morgan & Schwebach, 1997), argues that economic sanctions should almost never be utilized because they are unsuccessful for yielding the coercer's demands and thwarting the actions of the target. Further, such authors also argue that in many instances economic sanctions lead to disastrous unintended outcomes, such as in the case of Iraq in 1990 where around half a million innocent civilians perished.

In spite of this conventional wisdom, a policy maker who reads the actual statistics showing that 35% of all sanctions studied were successful in the strict sense, and about 50% were successful with a modicum of diplomacy and negotiations, will realize that economic sanctions do work, at least in some settings. Such an understanding is not wrong or misleading. It seems that there is a bias in the literature and that it has generally sided with the negative view of economic sanctions, despite the evidence. Therefore, the general picture in world politics on the effectiveness of economic sanctions is contrary to the evidence. If a foreign policy tool works about half of the time it is utilized, that is sufficient evidence that it can work in particular and not necessarily uncommon circumstances.

Political scientists have traditionally put too much emphasis on gauging the economic sanctions effectiveness in economic terms while largely ignoring their political effects. The

conventional economic theory suggests that if targets suffer enough, they will change their policies. This economic suffering has been measured in a number of ways, leading to the inevitable determination that the net welfare of the target is decreased. However, this study suggests that the political effects of economic sanctions are just as important and should be the focus of future research. If political agreement levels within the target are low, economic sanctions can be more effective due to the disagreement between key stakeholders within the target state. Nevertheless, as Galtung (1967) argued, once a sender initiates sanctions, the target's leaders will try to rally the population, institutions, and key players behind opposition to the sanctions. If successful, there will be a heightened level of political agreement, and the sanctions will be less effective.

This study also supports in part existing international relations scholarship that argues that economic sanctions are ineffective. The argument is based on the notion that sender states use economic sanctions primarily for symbolic purposes—that is, to just send a message that they are unhappy and want the target state to change its behavior. They are used more as a warning call than as a tool to compel an immediate change in behavior by the target state because the sanctions will inflict substantial harm on the target state. For a majority of sanctions, senders use them as a threat but do not follow through with by imposing substantial economic and political costs. Senders that use sanctions for symbolic purpose—to send a message—may not get what they want from the target state. If the target fails to get the message, and this is followed by harsher sanctions, sanctions may backfire. Target states will become increasingly unified in their opposition to the senders and their sanctions. Sanctions generate a mindset of survival (acquired not only by the governing regime but also subscribed to by a significant portion of the populace), and this results in a rally around the flag effect. For example, the harsh economic sanctions against Saddam

Hussein failed despite their grave human impacts. Saddam was able to mobilize sufficient internal support and remain in power until the Bush administration's unilateral military invasion in 2003.

Previous studies of the intersection between world politics and economic sanctions have failed to highlight the role of domestic players within senders and targets. This has led not only to modeling misspecification but also to omitted variable biases. Such problems plague findings produced by statistical models using regression and other methods. Therefore, the introduction of additional independent variables that measure internal opposition, public opinion, and the views of other relevant domestic actors is essential. The existing literature on economic sanctions has included mainly international political variables, such as whether the episode is unilateral or multilateral and political economic interactions between states. While such variables are important in determining sanctions effectiveness, the level of domestic agreement or the role of opposition is equally important.

The goal of this study has been to explore the factors that explain international economic sanctions effectiveness. To accomplish this, the focus was upon the effects of two important variables: the level of political agreement (LPA) and the costs to the target state of economic sanctions. This study is the first to look at the effects of political agreement within the senders' state, target state, and the international community upon sanctions effectiveness. It is the first study to measure the level of political agreement among the relevant political actors within sender and target states. For instance, in the United States, the positions of both the president and the Congress were considered to develop an ordinal level measure for political agreement for US sanctions episodes.

Levels of political agreement vary for both sender state and target state depending upon the sanctions episode. Their effects also vary based on the findings of this study. First, the level of

political agreement in the sender state (LPA_1) has only a weak effect on economic sanctions effectiveness when compared with other LPA variables (LPA_1, LPA_2, and LPA_3). The second LPA variable, the level of political agreement in the target state (LPA_2), has the largest effect on sanctions effectiveness among the LPA variables. The third LPA variable, international level of political agreement (LPA_3), has moderate effects on sanctions effectiveness. The aggregate level of political agreement (LPA_4) has a large effect due to it being a combination of other LPA variables that have effects. This study mainly focused on the first three LPA variables.

In order to test for the causal importance of these variables, seven hypotheses were proposed. From these tests, the study has shown that higher levels of LPA_1 are associated with increased levels of sanctions effectiveness. Conversely, higher levels of LPA_2 are associated with lower levels of sanctions effectiveness. Finally, higher levels of LPA_3 are associated with higher levels of sanctions effectiveness. Out of these three political agreement variables, the effect size of the target state's level of political agreement (LPA_1) are larger than both the LPA_2 and LPA_3 variables. Typically, high levels of LPA_2 may explain why economic sanctions often are often not very effective foreign policy tools.

While this study addresses the political explanation for the effectiveness of economic sanctions, it does not neglect Pape's emphasis on the economic dimension. This study therefore agrees with the general economic argument that if sufficient losses are incurred by the target's economy, the target is more likely to concede to the demands of the sender. Target costs are important in most models, lending support to this overarching argument. This importance, however, decreases when a model includes political agreement within the target. This is due to the important effect of target political agreement on sanctions effectiveness.

A clear majority of the economic sanctions literature has emphasized the importance of economic variables (like target cost) as important determinants for effective sanctions (Allen, 2008; Lektzian and Souva, 2007; Bonetti, 1998). While such economic variables are of utmost importance, political variables are of equal importance. This study shows that the level of political agreement within the sender and target states must be included in models analyzing the effectiveness of economic sanctions. There is need for better measures of political agreement. For example, if there is domestic opposition to sanctions, such opposition can include multiple stakeholders with varying reasons for opposing sanctions. In democracies, the government is not the only important political actor when deciding to support or oppose sanctions, and both public opinion and domestic opposition should also be considered.

This dissertation has also highlighted the limited influence of international organizations and actors upon sanctions effectiveness. Senders and targets typically do not incorporate the world community's views or demands into their actions. Nevertheless, if the sender garner the support of international actors, organizations, and/or other powerful states, the target state is more likely to perceive that sanctions will really be imposed. In such sanctions episodes, sanctions are more likely to be effective. The United States has instigated about half of the total number of sanctions in the TIES dataset (48% out of 1,412 cases). However, most of these episodes did not involve the international community. Economic sanctions, like many other state actions in world politics, seldom involve the cooperative behavior of other states in the international arena.

Findings from the ordered logistic models in Chapter 4 have been consistent with previous studies concerning target cost. All the models, excluding one (which included the level of political agreement on the international level), found target cost to have a positive and sizable effect upon sanctions effectiveness. Therefore, the more resources that a target state's economy suffers because

of economic sanctions, the more willing it is to concede to the demands of the sender in order to avoid further economic losses. This is particularly true in smaller economies when compared to the United States, the largest economic sanctions initiator in the world. These economies simply cannot withstand the economic power of the US, and therefore are more willing to change their positions or at least modify them.

While the effect of target cost is not large in a model that includes a variable for the international level of political agreement, this finding may be misleading. First, the coefficient for target cost is positive and its size does approach statistical significance. Second, this study is the first to examine the level of political agreement at the international level. The measure is the extent to which the sender state garnered support from international actors participating in the sanctions episode. It is not a measure of support that the target state was able to get from international actors not participating in the sanctions episode.

It is noteworthy, however, that most sanctions were issued by a unilateral actor (mostly the United States), thus making less important as an explanatory variable political agreement among sanctioning actors at the international level. Also, if political agreement among sanctioning actors at the international level is low, target states may be able to find support from non-participating international actors, buttressing their ability to withstand the sender's economic sanctions.

Relative power is an important variable for explaining economic sanctions effectiveness. Senders, like the United States, have extensive control over many products such as advanced machinery, electronics equipment, and agricultural goods on the global market, allowing them to leverage this control to accentuate the effects of sanctions. Therefore, when considering the effectiveness of sanctions, researchers must also consider the degree to which senders hold a monopoly over essential goods or services provided to the target. The sender may also use such

control to exert influence over their international allies, encouraging them to approve and condone the sanctions.

Relative power in this study was important in explaining economic sanctions effectiveness. The higher the power differential between the sender and the target, the more likely sanctions are to be effective. In one model, including the variable for target political agreement, relative power did not have large or statistically significant effects. This may be due to the heightened level of power within targets during a period of economic sanctions. It is likely that the target strengthens its political and economic strongholds in opposition to the episode, thus decreasing the power differential and at least nominally decreasing its potential effect.

Relative power also influences the effectiveness of economic sanctions through the bargaining mechanism. When sender states are more powerful in comparison to target states, they can leverage their political and economic resources to compel the target to change its behavior. They can use their political alliances, economic blocs, and targeted pressure on important actors in order to strengthen their bargaining position(s) in an attempt to force a change in the target's behavior. Similarly, when target states are powerful, they can leverage their resources to weaken the sender's power by getting support from international organizations, other powerful states, or even by securing support within the sender states.

This study has been one of the first systematic analyses to examine the effects of relative power upon the effectiveness of economic sanctions. Prior research, including studies using the HSE's and TIES's datasets and their subsequent assessments, tend not to include a variable for capability levels with other independent variables. A measure of relative power for this manuscript was extracted from the Correlates of War project dataset. This measure was calculated by dividing the Composite Index of National Capabilities (CINC) of the sender by the CINC of the target.

Higher scores thus corresponded to a higher power differential between the sender and the target. Adrian, Ang, and Peksen (2007) tested the effect of relative power on sanctions effectiveness and found it to be insignificant. This may be due to the fact that they utilized the HSE measure which is different than the measure used in this study.

Strong sender states like the United States, where power differentials are very large, signal a serious threat to target states. Weak targets, expect very bad outcomes if they do not concede to the request of the sender of economic sanctions. Sanctions are an action between diplomacy and war, and once they fail and stalemate occurs, a war can ensue. I would speculate that the descent into war can occur quickly in cases where relative power is high; therefore, sender states are more likely to engage in wars with states that are much weaker in comparison to them. For instance, Saddam Hussein's regime refused to change its attitude and behaviors and stalemate occurred with the United States and its allies. Given that the gap in relative power was much higher between the two states, war resulted in 2003.

This study's findings differ from Bapat, et al. (2013) and the subsequent TIES empirical evaluations of sanctions' effectiveness. First, capability ratio using the TIES's analytical framework was found to be modestly important. This study, however, found capability ratio (measured in relative power) to be substantively, as well as statistically, significant. The contradictory results may be due to the different measures of relative power. Bapat, et al. (2013) searched the literature and constructed a measure based on earlier studies, a meta analytic approach, while this study simply used that of the Correlates of War project.

Results of this study also are consistent with bargaining theory's expectations for economic sanctions. That is to say, sanctions amount to a sender's signal to the target that it has greater power than the target (Strandow, 2006). This use of sanctions is especially true when a sender state is

powerful economically and militarily, such as the US or Russia. Therefore, sanctions are more effective when the target perceives the sender to be powerful, as was the case in a majority of effective sanction episodes analyzed in this dissertation. Such perceptions can be inaccurate, however, if the information held by both parties on military and economic power is poor. Nevertheless, the bargaining power of the sender is greater if they have a record of economic and military power.

Second, Bapat, et al. (2013) found instability and domestic discontent to be of little to no significance when determining the effectiveness of sanctions (most coefficients were close to 0 as reported in their diagrams). This study found that the level of target political agreement is a better concept than instability, and indeed is one of the most important independent variables affecting economic sanctions effectiveness. This study supported the argument made by Major (2012) that domestic discontent is of foremost importance for economic sanctions effectiveness.

While this result is different, it may be due to the fact that instability was measured by the number of riots, strikes, and demonstrations in the TIES data while only political agreement explicitly voiced by the relevant actors within the target was considered here. Further, their study was based on many earlier findings while the current study only uses those cases included in both the TIES and HSE. This number of cases is much smaller in comparison to the original TIES dataset.

This study also expands the black box proposed by Bapat, et al. (2013), which highlights the importance of the level of determination. It does so by enlarging these two concepts by proposing a three-level political agreement framework (sender, target, and international). For each variable, the level of agreement is taken into consideration. Voicing of support and opposition to economic sanctions is also taken into consideration. Therefore, this study presents an expansionist

view of Bapat, et al.'s (2013) original argument that the senders' agreement, or any involved actors' agreement for that matter, helps to explain economic sanctions effectiveness.

While this dissertation accepts and adopts the coding scheme of TIES, it raises considerable debate on how to conceptualize and measure sanctions effectiveness. Pape (1998) critiqued HSE's approach, as they included sanctions within a conglomerate of foreign policy tools that also included military force and diplomacy. Pape (1998) argued that many cases were erroneously coded "effective" by HSE since other explanations for the change of the target existed (namely, the threat of or actual military intervention). Originators of the TIES data set examined the success of sanctions as the change in target behavior due to the threatened or imposed sanctions. Other tools could be deployed by the sender, however, making it difficult to isolate the effect of economic sanctions on the target's behavior while controlling for other foreign policy tools such as threats or actual force.

This study regards expropriation cases as valid economic sanctions episodes, thereby diverging from Pape's conceptualization. HSE has reasoned that economic pressure is used for economic gains as well as political victories in expropriation cases. For instance, nationalization of foreign-owned enterprises or firms falls under the category of expropriation cases, with HSE (1990) coding only a few cases of economic sanctions as successful while Pape (1997) disagrees and excludes them from the cases included. This study has matched HSE cases with the TIES dataset, however, thereby arguing that expropriations are sanctions. This has increased the number of effective sanctions episodes coded by this study. There is need for further theoretical work in developing and improving measures of the concept of economic sanctions effectiveness. This study also shared Pape's policy recommendations for the use of sanctions. First, economic sanctions should only be deployed when there is high confidence that they will work. For instance,

if senders are using them symbolically to signal their power or facilitate a foreign policy objective, they should not be used. In many cases, economic sanctions have resulted in higher numbers of death than wars. The humanitarian crises generated by economic sanctions can be disastrous, such as seen in Iraq. Further, the sender should also seek support from the international community, commit actual economic and political resources toward backing its claim, promote disagreement within the target state, and inflict strong and short-term economic impacts on the target's economic markets.

This study also challenges political scientists to reassess the impact of sanctions on future relations among the world's nations. While many are of the opinion that sanctions thwart warfare, sanctions may actually lead to lengthy and entrenched warfare. This is especially true when autocratic leaders exercise a modicum of power or legitimacy within their states. For instance, Gaddafi's regime in Libya resisted change even after strong opposition and public uprisings, and his regime was only deposed by a large scale NATO intervention on March 2011 after U.N. Security Council Resolution 1973. Such a regime fits the resistant category for economic sanctions. Regimes that are wealthy can also be expected to resist sanctions until the end, as exhibited by the Arab Spring. Therefore, escalation with such regimes through economic sanctions will likely result in further destabilization and use of force rather than diplomacy or the changing of the target's behavior.

This study also supports the argument presented by McCormack and Pascoe (2017) for the effectiveness of sanctions in some situations for preventing wars. When relative power is high, the target states' resources are expected to be depleted at a faster rate in comparison to those of the sender. Sanctions could be used to thwart military action by the target. Senders, like the United States, have often used this strategy against rival powers such as Russia over the past few decades

in a manner similar to the Ukraine episode of 2014. As a result of the sanctions, Russia's military spending decreased (Hille, 2018), thus limiting its commitment to initiating a prolonged conflict against the United States. The regression results support this argument, suggesting a higher level of ratio disparity in relative power is associated with more sanctions effectiveness. Further, the international agreement results suggest that a higher level of disagreement, meaning that resources of the target are replenished by other actors, decreases the sanctions effectiveness.

Supporting the economic explanation for economic sanctions effectiveness, this study also found support for the importance of target costs, or the welfare argument. Conventional wisdom establishes that the net welfare effect experienced by the target or the more economic hardship a target experiences, the more effective are the sanctions. The larger and wider the reach of the target's economy, the less it suffers from sanctions. Therefore, when relative power differentials are large, the sender may leverage its political power to rally other parties in support of sanctions against a target.

The findings of this study are also consistent with the argument by Lektzian and Patterson (2015) based upon the active role of economic circles of power. In countries where trade and marketplaces are open, the authors argue that the powerful economic actors affected within those circles will actively lobby for policy changes that will end the sanctions. Countries with large and open markets have a plethora of powerful economic actors, including the owners of multinational corporations, and key stakeholders in the target state's economy. Therefore, they, with the assistance of their surrogates, are expected to lobby extensively against the target in order to change their policies. Powerful actors, such as the United States, Western Europe, and Russia, have large markets that are fairly open and connected globally. Therefore, once they sanction a weak target, the likelihood of the sanctions being effective is much higher.

Chapter Summary

Chapter one presented the problems observable in existing sanctions literature and proposed that levels of political agreement are important factors for considering economic sanction outcomes. A comprehensive literature review on international economic sanctions was then presented in chapter two and provided discussion on the limited attempts that have been made to connect economic sanctions with political agreement.

The focus of chapter three, therefore, was to introduce the variables, methods of data collection, and analyses used in this current study. This chapter also provided a detailed description of the regression models used in the following chapter. This chapter also presented a brief game theoretical approach on the influence of decision makers' consensus on economic sanctions outcomes. It was shown that sanctions can bring out better outcomes when the opposition party in a sender state supports the government on its economic sanctions policy against a target state.

Chapter four presented empirical results and discussions of ordered logit regression analyses with an ordinal level dependent variable, sanction effectiveness. Four main models were utilized for four LPA variables (i.e. $LPA_{1, 2, 3, \text{and } 4}$) with each model having three additional sub-models. Thus, a total of 12 regression models were used in this part. The last sub-model had an unrestricted specification that represented the whole model in question. Sub-model specifications were decided in accordance with the inclusion or exclusion of the LPA and target cost variables. The second part of the fourth chapter presented the same analysis, utilizing the same specifications with a dichotomized dependent variable (sanction success) as an alternative explanation. The results in chapter four confirmed previous studies and has provided evidence of the statistical significance of the target cost, regime type, and relative power variables. On the other hand, sender cost, signaling, inducements, and sanction bluntness variables have been shown to hold no

statistical significance across all models. Ordered logit models provided more information for explaining the effects of the three LPA variables on sanction effectiveness, while the logit models provided easier interpretation for LPA variables' influence on sanction outcomes.

In chapter five, three case studies were presented to explore these relationships, namely the United States v. Turkey, the United States and Canada v. South Korea, and the United States v. Brazil. The first case served as an example of low levels of sanction effectiveness while the second case exemplified effective sanctions. An example of ineffective economic sanction outcomes with regard to levels of political agreement in the sender, target, and international system variables was then presented in the third case.

In chapter six, it was concluded that especially three variables are important for explaining economic sanctions outcomes; namely, level of political agreement, economic cost on target states, and relative power. It has been shown that political cost helps to explain economic sanction outcomes better than economic cost as politics matters more than economics (especially for unstable regimes). For example, the United Nations imposed economic sanctions on the Iraqi regime after its invasion of Kuwait on August 2, 1990. These sanctions lasted more than two decades and were very costly for the target regime. However, sanctions were not effective for changing the Iraqi regime's behavior. In fact, Saddam Hussein's regime actually gained power. Therefore, this study has focused on the effects of political agreement on economic sanction outcomes.

Contribution to the Literature

Often, studies of economic sanctions have overemphasized the effects of costs on the success of economic sanctions. This ignores many relevant variables, especially political factors. This study has provided insight on the significance of political agreement within three distinct

political units: the sender, the target, and the international system. Three groups of models were set out and tested, with the important finding that if relevant political actors within the sender state and the international community joined forces in support of the sanctions episode the sanctions were more likely to be effective. This study urges researchers in future studies to focus more on political factors when considering the dynamics of economic sanctions effectiveness.

Further, the case studies presented here highlight the importance of issue type on the success of sanctions. For instance, nuclear proliferation fared better than human rights violations in terms of whether relevant actors (involved or not) supported the sanctions episode. This study has thus confirmed earlier findings on the salience of political issues. However, it goes further by highlighting the need for better conceptualization and measurement of issue types.

In addition, the two datasets (TIES and HSE) have both been heavily criticized by earlier researchers despite their continued regular use by political scientists. According to some of these critics, a few of the observations cannot be counted as economic sanctions outcomes. This study, however, has matched 125 observations between these two sources and has thus contributed to the literature by focusing on the least controversial observations for conducting analyses.

This study contributes to theory by highlighting a gap in the literature on economic sanctions that has not a comprehensive theory to explain variations in sanctions effectiveness. Too often, researchers have emphasized only the effects of costs. This study, however, has demonstrated that cost is not the single decisive factor for determining the effectiveness of a sanctions episode. Political factors also account for sanctions effectiveness, notably differing types of political agreement.

Limitation of the study

For the regression analyses, regression models belonging to the maximum likelihood estimation (MLE) family were used due to the ordinal level of measurement of the dependent variable. For MLE models R-square scores cannot be used; a different measure, pseudo-R-square, was utilized. However, there are several caveats when using pseudo-R-square. Pseudo-R-square scores typically tend to be low. However, they still help when comparing the goodness of fit of different model specifications

Recommendations

Findings from this study have shown that Galtung's (1967) "rally around the flag" effect is relevant. Therefore, one of the best countermeasures a target state can utilize during an economic sanctions episode is to mobilize state institutions and the populace in opposition to the sanctions. This has a powerful effect in thwarting the success of economic sanctions, as seen in episodes such as Iraq during the 1990s and Iran for most of the early 2000s. Concurrently, for the international community or the sender's state, there's need to rally domestic supporters within the target state for their cause in order to break the "rally around the flag" phenomenon.

This study has also shown and supported the arguments made by Major (2012) that politically distressed targets are more likely to succumb to the sender. The leader of the target state won't be able to use just rhetoric to justify his or her position. Eventually, speeches and words only will result not only in the loss of their personal prestige but also damage the state's international reputation. Therefore, as a policy recommendation a sender needs to wait until the three are lower levels of political agreement in the target state. Alternatively, the sender can estimate future level of political agreement within the target state after the implementation of economic sanctions.

One of the most useful strategies for sender states to implement a successful sanctions episode is to recruit the support of international actors. Many sanctions episodes have exemplified this phenomenon, such as the Iranian nuclear episode. Once the United States obtained the support of the European Union, the Iranians were more likely to acquiesce to a deal and alter some of their behaviors. While the Iranian economic sanctions cannot be considered a complete success, they still achieved a modicum of behavioral change by the Iranian state.

Future research

The study of economic sanctions needs further improvement in conceptualization and measurement. Excessive use of binary and ordinal measures with limited variability has led to lost information and diminished explanatory power. Therefore, this study urges the construction of indexes or scales based on factors that have been widely cited as determinants of sanctions effectiveness.

Further, there are limitations in the modeling of sanctions effectiveness. Researchers have not acknowledged the all of the limitations inherent in their methods. Future researchers need to be open and explicit about the limitations of their data, methods, and models. Logistic and ordered logistic regressions are not equivalent to ordinary least squares in their capacity for producing accurate predictions, especially when there are measurement errors due to researchers using binary or ordinal measures.

Building on the findings of this study, future researchers should expand the number of relevant political actors and improve measurements. For instance, public opinion, civil society, and large economic stakeholders within a state all have political influence to varying degrees, and they should be considered to be relevant political actors.

APPENDIX A

GAME THEORY

Game Theory Part

The game trees in Figure A.1 below shows two formal bargaining models; one is without an opposition in sender state (S_1), and one with a strategic opposition in the sender state, under imperfect information environment. Several assumptions are made for these games: (a) political parties value their payoffs with the probability of re-election, (b) opposition parties have better understanding of the real goals of the government on implementing a policy more than other actors, such as target or rival state.

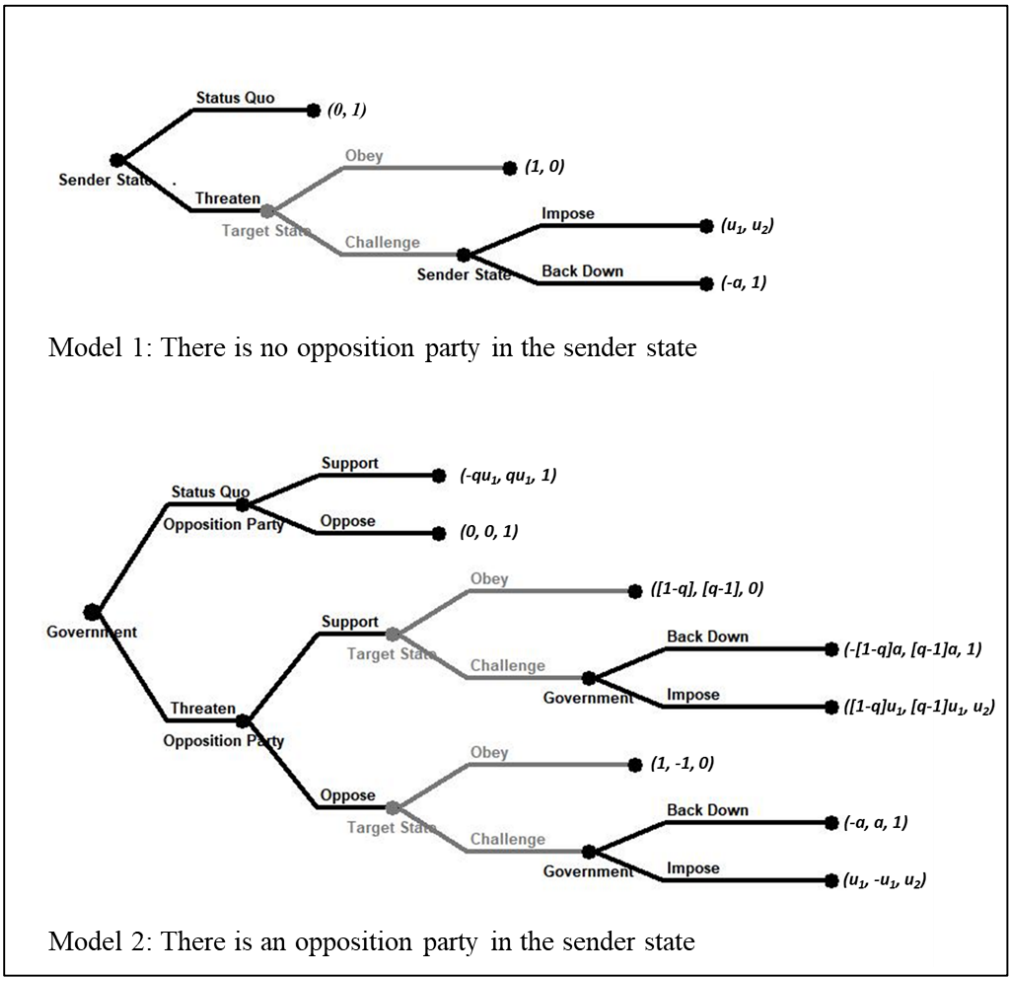


Figure A.1: Extensive form of the game theoretical models

The bargaining model presented here is based on deterrence and crisis bargaining games (e.g., Bueno de Mesquita, Morrow & Zorick 1997; Fearon 1994) in which a crisis happens when one state challenges another state. Then, each state has an opportunity to escalate or de-escalate the conflict based on their utility maximization.

Payoffs:

a. Assume that the cost of economic sanctions is c_i. Here, c_1 is a value from $[0, C_1]$ for the sender state (S_1); and c_2 is cost of sanctions, which is a value from $[0, C_2]$, for the target state (S_2).

b. Assume that the utility obtained from sanctions is u_i. Here, u_1 is for the sender state (S_1), and u_2 is for the target state (S_2).

c. Probability of economic sanctions threatening and/or imposition is p.

d. The ultimate payoffs for players are the difference between utility obtained from economic sanctions minus the cost of sanctions, $u_i \, x \, p - c_i$. For simplicity, the cost is assumed as a constant value, and the utility of sanctions is a function $F(x)$. Again, for simplicity, $u_1 \sim F(u_1)$ on $[p\text{-}C_1,p]$ for S_1, *and* $u_2 \sim G(u_2)$ on $[1\text{-}p\text{-}C_2,1\text{-}p]$ for S_2.

e. Government and opposition in sender state know c_1; target state, S_2, knows c_2. So, it is assumed that each player knows his or her own cost, but not the opponent's cost.

f. Credit that the opposition gets for supporting current policy is denoted as q. This also reduces Government (S_1) payoff by factor of $(1\text{-}q)$.

g. Reputation loss for backing down, also known as audience cost, is coded as a for S_1.

First Model: the Model without Opposition in S_1

Model 1 in Figure A1 is the extensive form of the game. Two main actors are in this game: Government (S_1) and target state (S_2). Players update their beliefs according to Bayesian

probabilities because of the contingent nature of their strategies. For example, the probability of a Government that chooses the strategy of imposing economic sanctions (IS) given that sanctions were threatened (TH) is:

$$p(Gov\ IS|TH) = \frac{p(Gov\ IS)p(Gov\ TH|IS)}{p(Gov\ IS)p(Gov\ TH|IS) + p(Gov\ BD)p(Gov\ TH|BD)}$$

The equation above shows that the probability of a Government that chooses the strategy of imposing economic sanctions (IS) given that sanctions were threatened (TH) equals to the probability of Government imposing economic sanctions times the probability of Government threatening economic sanctions given sanctions are imposed divided with the summation of probabilities of all possible actions of Government ($S_{1)}$ given sanctions were threatened. These are: (a) the probability of sender state government ($S_{1)}$ imposing economic sanctions times probability of sender state government ($S_{1)}$ threatening economic sanctions given sanctions are imposed and (b) the probability of sender state government ($S_{1)}$ choosing the strategy of backing down times probability of sender state government ($S_{1)}$, threatening economic sanctions given choosing the action of backing down at first.

To calculate this, the cumulative distribution function (CDF) is needed for this game, where there is no strategic opposition. Assuming, we have normal probability distribution for this type of game; Figure A2 is the hypothetical CDF for S_1, (the distribution is not necessarily a smooth line like the one below).

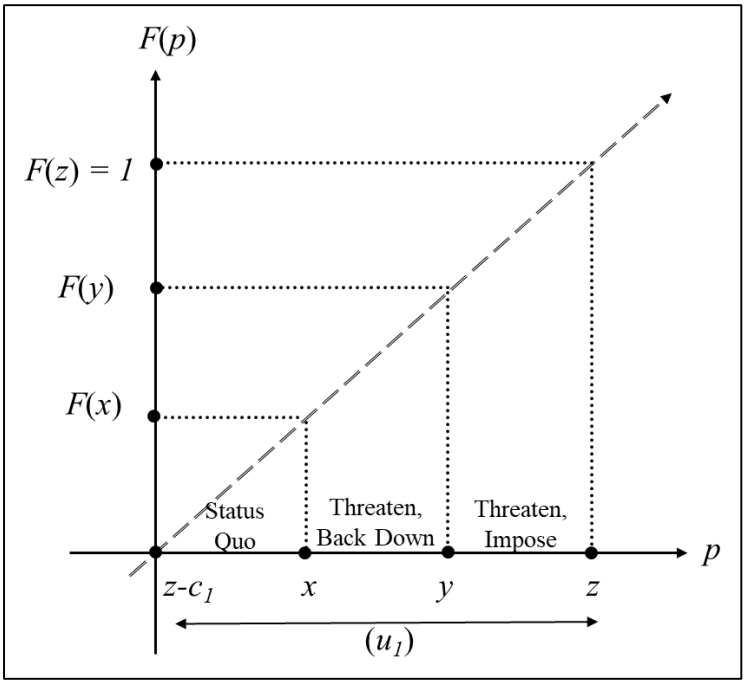


Figure A.2: CDF diagram for sanctions without opposition

From Figure A.2 above, the probability of government choosing the option of imposing economic sanctions is equal to the difference between 1 and the corresponding probability value of utility of y, which is $F(y)$, divided with the all-possible situations, which is 1. In other words,

$$p(Gov\ IS) = \frac{\big(1 - F(y)\big)}{1}$$

For this study, sanctions are imposed after being threatened. The probability of government threatening economic sanctions given sanctions are imposed becomes 1.00. In other words,

$$p(Gov\ TH|IS) = 1$$

The same reasoning is used when calculating the probability values of all other actions of S_1. Therefore, the probability of a government that chooses the strategy of imposing economic sanctions (IS) given that sanctions were threatened (TH) becomes by using the Bayesian probability:

$$p(Gov\ IS|TH) = \frac{\frac{\left(1-F(y)\right)}{1}(1)}{\frac{\left(1-F(y)\right)}{1}(1) + \frac{\left(F(y)-F(x)\right)}{F(y)}F(y)} = \frac{1-F(y)}{1-F(x)}$$

Again, the Bayesian probability needs to be calculated because of contingency of $p(Gov\ BD|TH)$, which means the probability of government ($S_{1)}$ that chooses the strategy of backing down (BD) given that sanctions were threatened (TH):

$$p(Gov\ BD|TH) = \frac{p(Gov\ BD)p(Gov\ TH|BD)}{p(Gov\ BD)p(Gov\ TH|BD) + p(Gov\ IS)p(Gov\ TH|IS)}$$

Again, similar reasoning is used when calculating probability values from Figure A.1. As a result, the obtained equation is:

$$p(Gov\ BD|TH) = \frac{\frac{\left(F(y)-F(x)\right)}{F(y)}F(y)}{\frac{\left(F(y)-F(x)\right)}{F(y)}F(y) + \frac{\left(1-F(y)\right)}{1}(1)} = \frac{F(y)-F(x)}{1-F(x)}$$

Cumulative Distribution Function (CDF) Probability Values:

Now we need to calculate the actual probability values to plug them in the two Bayesian probability results above. Probabilities were calculated by using the number of the cases provided by the TIES dataset. For each sanction episode, the first three causes with different issue types (coded in 15 categories) were provided by the dataset. Table A.1 presents the numbers of the economic sanctions according to issue types and the probability scores with respect to escalation patterns of crises from threatening to imposition stages.

Table A.1

Cumulative distribution frequency probabilities

	TIES Issue Code	Number of Crises	Not Threatened	Threatened	Not Imposed	Imposed
First Cause	1	38	0	38	21	17
	2	75	28	47	25	22
	3	49	22	27	8	19
	4	46	15	31	15	16
	5	26	14	12	6	6
	6	22	9	13	3	10
	7	126	27	99	58	41
	8	84	21	63	38	25
	9	29	6	23	14	9
	10	20	2	18	7	11
	11	14	5	9	7	2
	12	47	13	34	22	12
	13	681	180	501	255	246
	14	49	3	46	40	6
	15	106	8	98	51	47
Second Cause	1	10	3	7	4	3
	2	24	9	15	3	12
	3	4	1	3	0	3
	4	4	3	1	0	1
	5	15	7	8	1	7
	6	6	2	4	1	3
	7	16	3	13	3	10
	8	23	12	11	1	10
	9	9	3	6	4	2
	10	4	1	3	2	1
	11	4	2	2	1	1
	12	0	0	0	0	0
	13	22	7	15	8	7
	14	6	0	6	2	4
	15	0	0	0	0	0
Third Cause	1	1	0	1	0	1
	2	3	1	2	1	1
	3	1	0	1	0	0
	4	3	2	1	0	1
	5	4	0	4	1	3
	6	0	0	0	0	0
	7	5	2	3	0	3
	8	3	1	2	0	2
	9	0	0	0	0	0
	10	1	0	1	0	0
	11	0	0	0	0	0
	12	0	0	0	0	0
	13	1	0	1	0	1
	14	1	1	0	0	0
	15	0	0	0	0	0
Totals	N/A	1582	413	1169	602	565
Probabilities	N/A	1.00	0.26	0.74	0.38	0.36

From Table A.1, according to the TIES data (Bapat et. al., 2014), there are 1582 cases, with 413 of them ending up with the status quo (no threats or imposition of sanctions); however, states threatened economic sanctions in 1169 cases. From this number, sender states backed down in 602 cases and imposed sanctions in 565 cases (note that this data set does not give any information on 2 cases where sanctions were threatened, escalated to imposition or backed down; these cases were ignored for simplicity). Note that cases sanctions were imposed without threatening at the first stage were not considered in this analysis.

Given this distribution, the probability of a state choosing status quo is 26% because $413/1582 = 0.261$; whereas the probability of a state choosing backing down given sanctions were threatened 38% because $602/1582 = 0.380$, and the probability of a state imposing economic sanctions given that sanctions were threatened is 36% because $565/1582 = 0.357$. An updated CDF diagram with probability scores was presented in Figure A.3.

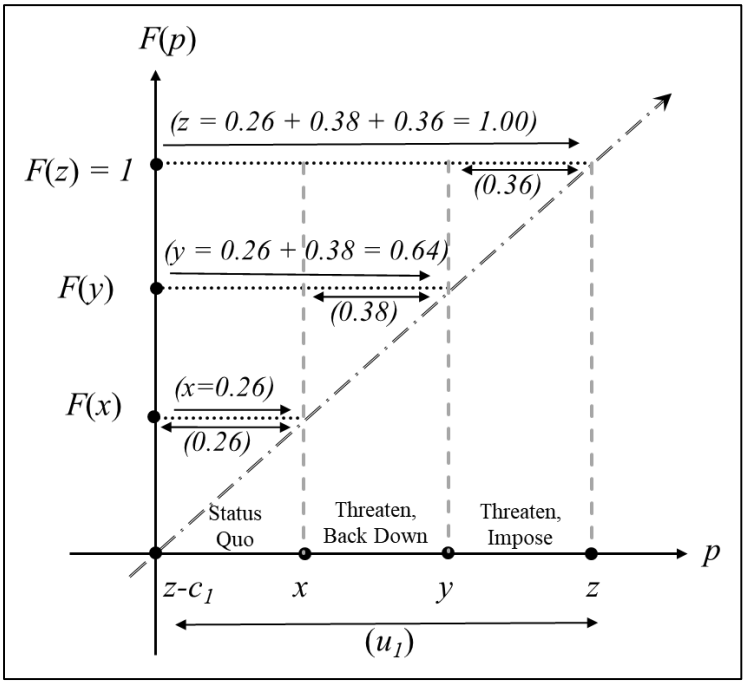


Figure A.3: Updated CDF diagram for the game model without opposition

Considering the game with no opposition power for sanctions is related to the political goals category and the normal probability distribution with given probabilities above, Government chooses the strategy of imposing economic sanctions when

$$-a < u_1 \qquad (1.1)$$

This result is obtained from the extensive form of the first game (model 1) in Figure A1.

- Similarly, from model 1 in Figure A1, S_2 concedes only when:

Let *x* be type of S_1 which is indifferent between escalating the crisis (threatening sanctions) and deescalating the crisis (accepting the status quo, SQ). Let y be the type of S_1, which is indifferent between escalating the crisis to the second level (imposing sanctions, IS) and de-escalating the crisis from the second level (backing down, BD) that ends the game. Thus:

$$0 \geq 1\left(\frac{F(y)-F(x)}{1-F(x)}\right)+(u_2)\left(\frac{1-F(y)}{1-F(x)}\right)$$

If S_1 threatens economic sanctions to S_2, S_2 gets a payoff of 0 if it obeys, and u_2 if it challenges given that the sanctions are imposed after threatening. Using the probabilities calculated by Bayesian updating beliefs in the game tree, the results are:

$$(1)*\left(\frac{(0.26+0.38)-0.26}{1-0.26}\right)+(u_2)*\left(\frac{1-(0.26+0.38)}{1-0.26}\right)$$

$$=(1)*\left(\frac{0.38}{0.74}\right)+(u_2)*\left(\frac{0.36}{0.74}\right)=0.513+(u_2)*0.486>0$$

$$Then, the\ result\ if\ u_2>-1.06 \qquad (1.2)$$

Therefore,

- S_2 challenges only when $u_2 > -1.06$ in the game with no domestic opposition. S_1 also knows that S_2 challenges only if $u_2 > -1.06$. If S_1 believes that u_2 is small (u_2 < -1.06),

then S_1 will always impose economic sanctions (no matter what u_1 is equal to) because it knows S_2 will obey.

- If S_1 believes that u_2 is high enough ($u_2 > -1.06$), S_1 will impose economic sanctions only if $u_1 > -a$.
- Combining the obtained results from 1.1 and 1.2 above, we get the payoffs of $u_1 > -a$ for sender state (S_1), and $u_2 > -1.06$ for target state (S_2).

Second Model: The Model with Opposition in S_1

Given the payoffs from the extensive form of the game in Model 2 in Figure A1, if government plays status quo, the opposition party supports the government only when

$$qu_1 > 0 \quad => \quad u_1 > 0 \qquad (2.1)$$

Government imposes economic sanctions when opposition supports the policy of economic sanctions only if

$$-(1-q)\,a < (1-q)\,u_1 \quad => \quad -a < u_1 \qquad (2.2)$$

Thus, government chooses to impose when opposition is against the policy of imposition of economic sanctions only if ($-a < u_1$). As a result, the opposition party has no effect when the government plays the strategy of imposing sanctions given that economic sanctions were threatened at the first place.

So, the question becomes when does opposition support or not support the sanction policy? For this, we need to have an idea about the cut-point location of opposition's strategies in the CDF distribution. Again, the only way that this can be calculated is through the use of Bayesian probabilities of strategies.

The opposition party typically has more information about government's strategies on its implementation of economic sanctions policy than the target state, S_2. Therefore, the strategies applied by the opposition will show the level of political agreement in sender state. Moreover, S_2 expects that when S_1 threatens economic sanctions, it will be highly probable that government will impose these sanctions, if S_2 does not obey.

Having said that, the opposition party should only support the policy if economic sanctions have the potential to escalate from the threat stage to the imposition stage. As a result, the cut-point (*k*) for opposition's strategies, whether to support or does not support the sanctions policy, should be somewhere between *y* and *p* in as shown Figure A3. From the hypothetical CDF diagram in Figure A3, (a) the lowest value of *k*, the cut-point for opposition's strategies, should be *y*, so any probability lower than this value, opposition can be expected to choose not to support. Similarly, (b) the highest value of *k* should be *z.* Any probability value higher than this value, opposition can be expected to choose to support the sanction. For simplicity, this study assumes the value for *k* is in the middle of *y* and *z*. Consequently, the cut-point (*k*) location in CDF diagram can be illustrated for opposition's decision representing these two situations as:

$$k = \frac{(y + z)}{2}$$

Assuming normal probability distribution and after introducing the cut-point for domestic opposition, updated *CDF* values for the model with opposition in sender state can be as shown after conditional probabilities were calculated from Table A.1 and plugged into the CDF diagram as seen in Figure A.4.

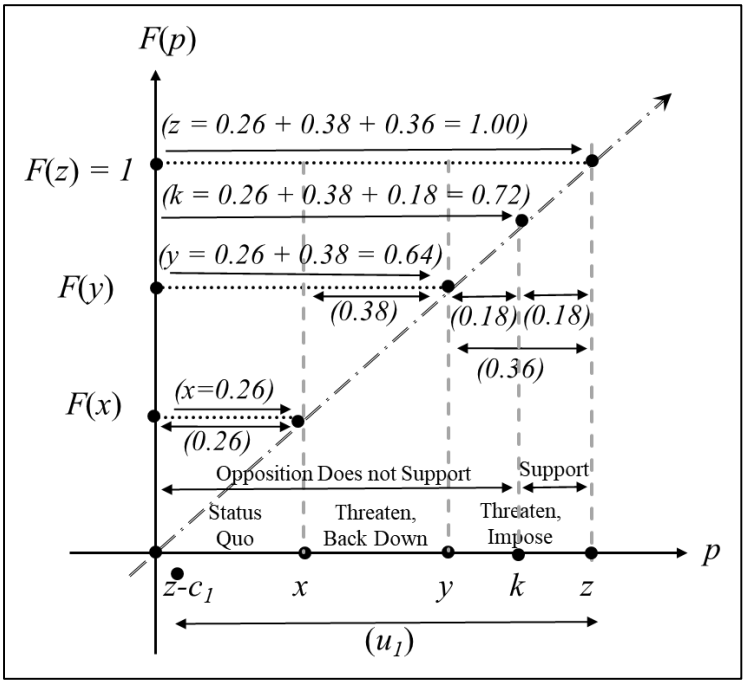


Figure A.4: Updated CDF diagram for the game model with opposition party

Now, Bayesian probabilities of S_1's actions conditional on the opposition party's choices can be calculated with the updated CDF diagram. Given the cumulative probability that results from the table above, probability of a state with a domestic opposition choosing the strategy of status quo for a political dispute is 0.26, the probability of choosing the strategy of backing down of a state with domestic opposition given sanctions were threatened is 0.38, and the probability of choosing the strategy of imposing sanctions of a state with domestic opposition given sanctions were threatened is 0.36. The probability of an opposition party choosing the strategy of supporting government's sanction policy is 0.18. Given these probability values of players' strategies, cumulative distribution frequency values become as follows:

$$F(x) = 0.26$$

$$F(y) = 0.26 + 0.38 = 0.64$$

$$F(k) = 0.26 + 0.38 + 0.18 = 0.82$$

(1) Probabilities when opposition supports

Probability of a government (Gov) backing down (BD) when opposition (Op) supports (SP):

$$p(Gov\ BD|Op\ SP) = \frac{p(BD)p(SP|BD)}{p(BD)p(SP|BD) + p(IS)p(SP|IS)}$$

$$= \frac{\frac{\big(F(y) - F(x)\big)}{F(y)} * 0}{\frac{\big(F(y) - F(x)\big)}{F(y)} * 0 + \frac{\big(1 - F(y)\big)}{1} * \frac{\big(1 - F(k)\big)}{1}} = \frac{0}{0 + \big(1 - F(y)\big) * \big(1 - F(k)\big)} = 0$$

Probability of government imposes sanctions when opposition supports:

$$p(Gov\ IS \mid Opp\ SP) = \frac{p(IS)p(SP|IS)}{p(IS)p(SP|IS) + p(BD)p(SP|BD)}$$

$$= \frac{\frac{\big(1 - F(y)\big)}{1} * \frac{\big(1 - F(k)\big)}{1}}{\frac{\big(1 - F(y)\big)}{1} * \frac{\big(1 - F(k)\big)}{1} + \frac{\big(F(y) - F(x)\big)}{F(y)} * 0} = \frac{\frac{\big(1 - F(y)\big)}{1} * \frac{\big(1 - F(k)\big)}{1}}{\frac{\big(1 - F(y)\big)}{1} * \frac{\big(1 - F(k)\big)}{1}} = 1$$

These two results indicate that government does not back down when opposition supports, and government always imposes sanctions when opposition supports the economic sanctions policy. Then, S_2 faces payoffs of 0, if it obeys and a combination of 1 and u_2 if it challenges, where

$$p(Gov\ BD|Op\ SP) * (1) + p(Gov\ IS \mid Opp\ SP) * (u_2)$$

Now comparing payoffs of challenge and obey, we get:

$0*(1) + 1*(u_2) > 0$, then $u_2 > 0$

Therefore, S_2 can be expected to challenge the sanctions only if

$u_2 > 0.$ (2.3)

Combining the obtained results from 2.2 and 2.3 above, we get the payoffs of $u_1 > -a$ for sender state government (S_1), and $u_2 > 0$ for target state (S_2).

(2) Probabilities when opposition does not support

Probability of a government (Gov) backing down (BD) when opposition (Op) does not support sanctions (no support NS):

$$p(Gov\ BD|Op\ NS) = \frac{p(BD)p(NS|BD)}{p(BD)p(NS|BD) + p(IS)p(NS|IS)}$$

$$= \frac{\frac{\big(F(y) - F(x)\big)}{F(y)}F(y)}{\frac{\big(F(y) - F(x)\big)}{F(y)}F(y) + \frac{\big(F(k) - F(y)\big)}{F(k)}F(k)} = \frac{F(y) - F(x)}{F(k) - F(x)} = \left(\frac{0.64 - 0.26}{(0.82 - 0.26}\right)$$

$$= \left(\frac{0.38}{0.56}\right) = 0.68$$

Probability of government imposes sanctions when opposition does not support sanctions:

$$p(Gov\ IS|Opp\ OP) = \frac{p(IS)p(OP|IS)}{p(IS)p(OP|IS) + p(BD)p(OP|BD)}$$

$$= \frac{\frac{\big(F(k) - F(y)\big)}{F(k)}F(k)}{\frac{(F(k) - F(y))}{F(k)}F(k) + \frac{\big(F(y) - F(x)\big)}{F(y)}F(y)} = \frac{F(k) - F(y)}{F(k) - F(x)}$$

$$= \left(\frac{0.82 - 0.64}{0.82 - 0.26}\right) = \left(\frac{0.18}{0.56}\right) = 0.32$$

Then, S_2 faces payoffs of 0, if it obeys and a combination of 1 and u_2 given Bayesian probabilities if it challenges. Comparing the two, then we get:

$$0.68 * (1) + 0.32 * (u_2) > 0 \quad => \quad u_2 > -2.2 \qquad (2.4)$$

Therefore, S_2 will challenge only if $u_2 > -2.2$.

The results obtained in (2.3) and (2.4) show that S_1 knows that S_2 challenges when

$$u_2 > 0 \quad \text{and} \quad u_2 > -2.2$$

Opposition supports sanctions only if $u_2 > 0$ and Opposition does not support economic sanctions only if $u_2 > -2.2$. As a result, if S_1 believes that u_2 is really small ($u_2 < -2.2$), S_1 can be expected to impose economic sanctions (no matter what u_1 is equal to) because it recognizes that S_2 will choose to play the strategy of Obeying the demands put forward by S_1. Now, consider the situation where

$$-2.2 < u_2 < 0$$

If S_1 believes that $-2.2 < w_2 < 0$, S_1 will impose economic sanctions only if

$$u_1 > -a$$

Combining (2.2) and (2.4), we get the payoffs of $u_1 > -a$ for sender state (S_1), and $u_2 > -2.2$ for target state (S_2).

APPENDIX B

LEVEL OF POLITICAL AGREEMENT VARIABLES SCORES

This study uses level of political agreement (LPA) variables as the primary independent variable. There are four different types of LPA variable. The fourth LPA variable type, the aggregated LPA (LPA_4), is calculated based on the sender state's level of political agreement (LPA_1), the target state's level of political agreement (LPA_2), and the international level of political agreement (LPA_3). This study assumed that the LPA variable had a three-dimensional structure, comprised of the LPA_1, LPA_2, and LPA_3 variables. Two researchers reviewed each sanction episode in terms of these dimensions, the first three LPA variables, and assessed a score between -2 and 2. Their assessment scores were mostly based on the questions below for each sanction episode:

1. Are there retaliatory sanctions threatened or imposed against the sender state?
2. Is there any actor in the target state welcoming the sanctions threat/imposition?
3. Do other actors in the target state blame the target state's ruler/government for the threat/imposition of sanctions?
4. Are there any protest movements by social factions for or against the economic sanctions in the sender and/or target state?
5. Can the target state's leader/ruler/government use the "rally round the flag" effect?
6. Are there any statements made by actors that can escalate or deescalate the conflict?
7. Is there a significant change in public support for the leader(s)?
8. Does the other country (or countries) in the sanction coalition implicitly follow along with the implementation of the economic sanctions?

9. Is there any country, or group of countries, acting against the sender state or sanctioning coalition?
10. Are there any countries supporting or opposing the sanctioning coalition indirectly?
11. Is the sending government dedicated in its economic sanction policy?
12. Is the cause for economic sanction imposition related to security or non-security issues?
13. Did any bureaucrats make a statement for or against the economic sanctioning regime?
14. Do other veto players of decision-making mechanisms support or oppose the government's sanction policy?
15. Are there retaliatory sanctions threatened or imposed by the state?
16. Is there any actor(s) in the target state welcoming the sanctions threat and imposition?
17. Do other actors blame the target government for the threat and imposition of the sanctions?
18. Can the government of the target state use the "rally round the flag" effect?
19. Is there a significant change in public support for the leader(s)?

When researchers analyzed each economic sanction episode, they considered the main actors in sender and target state dyads. A score from -2 to 2 was assigned for the main actors in these dyads. Table B.1 presents the average scores for actor(s) used when calculating the level of the political agreement variable's final score for the sender state (LPA_1). Table B.2 presents score averages for actor(s) used when calculating the level of the political agreement variable's final score for the target state (LPA_2).

Table B.1

Score meanings for LPA_1 variable

Level of Political Agreement in Sender State (LPA_1)	
2	Strongly supporting sanctions policy
1	Supporting sanctions policy
0	Impartial to sanctions policy or not supporting as one might expect
-1	Against sanctions policy
-2	Strongly against sanctions policy

Table B.2

Score meanings for LPA_2 variable

Level of Political Agreement in Target State (LPA_2)	
2	Strongly supporting sanctions policy of the target (strongly against sender's sanction policy)
1	Supporting sanctions policy of the target (against sender's sanction policy)
0	Impartial to sanctions policy of the target (impartial against sender's sanction policy)
-1	Against sanctions policy of the target (supporting sender's sanction policy)
-2	Strongly against sanctions policy of the target (strongly supporting sender's sanction policy)

In democracies, there are at least two main actors who are influential on economic sanction episodes. In parliamentary systems, there is at least the government and the main opposition party. For presidential systems, such as in the United States, the two main actors are the president and Congress. In addition, there may be third actors in addition, such as social factions, lobbyists, high-level bureaucrats, etc. However, only up to three main actors have been selected per sanction episode.

For other more restrictive forms of government, however, there is usually a single actor (consisting of the ruler or leader) who maintains influence on economic sanctions. Sometimes, however, entities such as opposition groups, social factions, and similar organizations may also be seen supporting or opposing economic sanctions. This study has also, therefore, considered these

situations in its assessment for non-democracies. After a score was assigned to each actor, the mean score was calculated. The average score of both researchers was then calculated for both of the sender and target states' final LPA scores.

Researchers assigned a score, from -2 to 2, for the international level of political agreement variable based on their assessment of the international influence on the economic sanction episode in question. Usually, coalitional sanctions have been considered when assessing the international level of political agreement variable. If there is no international support or opposition, this study assumed that the international system is neutral toward the economic sanctions episode. Table B.3 presents the score definitions used when calculating the final score for the international level of political agreement variable (LPA_3).

Table B.3

Score meanings for LPA_3 variable

International Level of Political Agreement (LPA_3)	
2	strongly supporting sanctions policy of the sender state
1	supporting sanctions policy of the sender state
0	impartial to sanctions policy of the sender state
-1	Against sanctions policy of the target (supporting sender's sanction policy)
-2	Strongly against sanctions policy of the sender state

LPA score calculation procedure with a hypothetical situation

Let's assume a situation where a sender state (S_1) has a consolidated democracy with a presidential system and is contemplating imposing economic sanctions against another state which has a government with no opposition. The target state is acting against international security and in the interests of the sender state simultaneously. As a result, the president seeks to discourage the sender state's aggressive behaviors (assuming the second actor in this state is Congress, and it also supports the president's economic sanction policy). In addition, some advocacy groups also

support the president. After observing these developments, some countries in the international system also support the sender state's sanction policy. On the target side, however, the government generally exploits the situation by pursuing "rally round the flag" policies. Therefore, the target state government also receives some support for its retaliatory measures against the sender state's sanction policy.

Table B.4 illustrates the calculation procedure for LPA_1 and LPA_2 variables, Table B.5 illustrates the calculation procedure for LPA_3 variable in this study. Table B.6 illustrates the calculation procedure for the LPA_4 variable. When calculating LPA_1, a score of 2 was assigned for the president, a score of 1 for the Congress, and a score of 2 for public support. When calculating LPA_2, a score of 2 was given for the government of the target state and a score of 1 for public support of their retaliatory sanctions policy. After considering the international reaction to the sanction episode, a score of 1 was assigned for the international level of political agreement. These assigned scores, called raw scores. Total score (TS) is the summation of raw scores. Mean score (MS) is the average of total score. Finally, regression score (RS) is obtained when a score of two (2) added to the mean score.

Table B.4

Calculating LPA_1 and LPA_2 variables

Calculating Level of Political Agreement in Sender and Target State ($LPA_{1,2}$) Score:		
	LPA_1	LPA_2
a. Raw score for the government (a score from -2 to 2):	2	2
b. Raw score for the main opposition party (a score from -2 to 2):	1	n/a
c. Raw score for the other actor, if any (a score from -2 to 2):	2	1
d. Total Score, TS (summation of above, this score can be between -6 and 6):	5	3
e. Mean Score, MS (mean of TS, resulting score is always between -2 and 2):	1.67	1.5
f. Regression Score, RS = MS+2 (always positive, a score from 0 to 4):	3.67	3.5

Table B.5

Calculating LPA_3 variable

Calculating International Level of Political Agreement (LPA_3) Score:	
	LPA_3
a. Raw score for international level of political agreement (a score from -2 to 2):	1
b. Total Score, TS (same with raw score, this score can be between -2 and 2):	1
c. Mean Score, MS (same with raw and total score, this score is always between -2 and 2):	1
d. Regression Score, RS = MS+2 (always positive, a score from 0 to 4):	3

Table B.6

Calculating LPA_4 variable

Calculating Aggregated Level of Political Agreement (LPA_4) Score	
Section 1	
a. LPA_4 calculation formula:	$(LPA_1 – LPA_2) + (LPA_3)$
b. Total Score (raw scores are obtained from $LPA_{1,2,3}$)	(1.67 - 1.5) + 1 = 1.17
c. Mean Score of left and right sides shown in the formula above (resulting score is always between -2 and 2)	1.17 / 3 = 0.39
d. Regression Score, RS = MS+2 (always positive, a score from 0 to 4):	2.39
Section 2	
a. LPA_4 calculation formula if LPA_3 score was not present (LPA_3=0):	$LPA_1 – LPA_2$
b. Total Score (raw scores are obtained from total scores of $LPA_{1,2}$)	1.67-1.5=0.17
c. Mean Score of TS (note that denominator is 2, rather than 3)	0.17/2= 0.085
d. Regression Score, RS = MS+2 (always positive, a score from 0 to 4):	2.085

Since there are multiple researchers assessing the LPA variables, the final score for each LPA variable became the average score of the two researchers. This is also explained in more detail in the case studies section (see Chapter 5) of this dissertation.

Some notes on the dependent variable (HSE success equivalence score)

Although sanction effectiveness scores are based on the final outcome scores obtained from the TIES dataset, sometimes a limited number of sanction episodes are presented without a final outcome score. For these cases, this study examined the HSE dataset's success scores. If the cases matched exactly, then this study utilized the HSE dataset's score after converting them into sanction effectiveness scores as seen in Table B.7.

Table B.7

TIES final outcome - HSE success score equivalence

HSE success score and sanction effectiveness score					
HSE Dataset Sanctions Success Score = Policy Result X Sanction Contribution (Possible scores are 1, 2, 3, 4, 6, 8, 9, 12, and 16)		1x1=1	1x2=2	1x3=3	1x4=4
		2x1=2	2x2=4	2x3=6	2x4=8
		3x1=3	3x2=6	3x3=9	3x4=12
		4x1=4	4x2=8	4x3=12	4x4=16
HSE success score	1	2,3	4,6	8,9	12,16
This study's effectiveness score	0	1	2	3	4

APPENDIX C
RELIABILITY TESTS

Table C.1

Summary of Ordered Probit Regression Results (Ordinal Dependent Variable)

Sanction Effectiveness	Model 1.c Coefficients	Significance Level	Model 2.c Coefficients	Significance Level	Model 3.c Coefficients	Significance Level	Model 4.c Coefficients	Significance Level	Conclusion
LPA_1	0.76	*	-	-	-	-	-	-	Strong
LPA_2	-	-	-0.94	***	-	-	-	-	
LPA_3	-	-	-	-	0.57	***			
LPA_4	-	-	-	-	-	-	1.74	***	
Sender Cost	0.14	n/a	0.15	n/a	0.10	n/a	0.007	n/a	N/A
Target Cost	0.30	**	0.30	**	0.23	*	0.27	*	Strong
Signaling	0.15	n/a	0.09	n/a	0.15	n/a	0.08	n/a	N/A
Alliance Scale	-0.17	n/a	-0.27	n/a	-0.11	n/a	-0.29	*	Weak
Collaboration Scale	0.03	n/a	0.08	n/a	-0.14	n/a	-0.12	*	Weak
The US Involvement	-0.24	*	-0.16	n/a	-0.21	n/a	-0.15	n/a	Weak
Relative Power	0.18	***	0.07	n/a	0.16	***	0.12	**	Moderate
Inducements	-0.23	n/a	-0.17	n/a	-0.39	n/a	-0.09	n/a	N/A
Sender Regime Type	0.05	**	0.07	***	0.05	**	0.05	**	Strong
Target Regime Type	0.04	**	0.03	*	0.03	**	0.04	***	Strong
Sanction Bluntness	-0.03	n/a	-0.009	n/a	-0.04	n/a	0.01	n/a	N/A
LR Chi-Squared, χ^2	31.7		44.5		35.7		50.4		125 Observations
Pseudo R^2	0.08		0.11		0.09		0.13		

Strong Marginal Effects: a variable is significant in 4 models;
Moderate Marginal Effects: a variable is significant in 2 or 3 models;
Weak Marginal Effects: a variable is significant in 1 model;
N/A (No Marginal Effects): a variable is not significant across all models;

Table C.2

Summary of Probit Regression Results (Binary Dependent Variable)

Sanction Success	Model 1.c	Model 2.c	Model 3.c	Model 4.c
LPA_1	0.70 (0.51)	-	-	-
LPA_2	-	-0.83 (0.32)**	-	-
LPA_3	-	-	0.30 (0.26)	-
LPA_4	-	-	-	1.36 (0.48)***
Sender Cost	0.39 (0.38)	0.42 (0.40)	0.42 (0.39)	0.34 (0.40)
Target Cost	0.35 (0.19)*	0.35 (0.19)*	0.32 (0.19)*	0.31 (0.19)
Signaling	0.23 (0.14)	0.18 (0.15)	0.24 (0.14)*	0.17 (0.15)
Alliance Scale	-0.03 (0.21)	-0.12 (0.22)	0.00 (0.21)	-0.09 (0.22)
Collaboration Scale	0.05 (0.08)	0.09 (0.08)	-0.03 (0.12)	-0.07 (0.10)
The US Involvement	-0.10 (0.17)	-0.05 (0.17)	-0.10 (0.17)	-0.02 (0.17)
Relative Power	0.12 (0.07)	0.03 (0.08)	0.10 (0.07)	0.07 (0.07)
Inducements	0.06 (0.49)	0.12 (0.49)	-0.05 (0.49)	0.14 (0.48)
Sender Regime Type	0.05 (0.02)**	0.07 (0.02)**	0.05 (0.02)*	0.05 (0.02)*
Target Regime Type	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.02 (0.02)
Sanction Bluntness	-0.06 (0.10)	-0.01 (0.11)	-0.04 (0.10)	-0.01 (0.11)
Observations	125	125	125	125
LR Chi-Squared, χ^2	21.6	27.0	21.1	28.2
Pseudo R^2	0.14	0.17	0.13	0.18

Standard errors in parenthesis
* p<0.10; ** p<0.05; *** p<0.01

APPENDIX D

LIST OF THE CASES

There are 125 cases used in this study. These cases were matched between the HSE and TIES datasets. Then, matched cases were combined with LPA data. This is illustrated in the coding of each case (see Table D.1). Case identification system helps in locating each case with its TIES and HSE equivalent as well as other relevant information. There are four other lists presented in following pages to show the matched cases and LPA scores. Table D.2 presents the list of all cases used in this study for regression analyses and case studies. Table D.3 presents level of political agreement in sender state (LPA_1) scores; Table D.4 presents level of political agreement in target state (LPA_2) scores; Table D.5 presents the international level of political agreement (LPA_3) scores; and Table D.6 presents aggregated level of political agreement (LPA_4) scores.

Table D.1

Case coding system for each case used in this study

	Case Identification Number	Explanation
1)	XXXXXXXXXXXXXXXXXXXXX	There are 22 characters that show the identification for each case used in this study.
2)	A BBB CCCCC DD EEEEEEEEEE	Each identification system includes five different types of information as illustrated A, B, C, D, and E.
3)	**1**XXXXXXXXXXXXXXXXXXXX	The first character means the version of LPA data created by the two researchers. Thus, all case identification numbers start with the number of one (1) in this study.
4)	X**123**XXXXXXXXXXXXXXXXX	The next three characters show the order of a case used in this study. For example, "006" means the sixth case in the order of all other cases used in this study.
5)	XXXX**12345**XXXXXXXXXXXXX	The next five characters show HSE case code numbers. For example, "04804" means that the case of 48-4 from HSE dataset.

(continued)

	Case Identification Number	Explanation
6)	XXXXXXXXXX**12**XXXXXXXXXX	The next two characters show the number of matches between HSE and TIES datasets. For example, 11 means there is one TIES case matched with the HSE case. In addition, 21 means that a case from HSE dataset was matched with two cases from TIES dataset, and it is the first of the two matches. Similarly, 22 means the second of the two matches. So, the first digit designates the number of the matches, and the second digit designates the order of the matches for a specific case used in this study.
7)	XXXXXXXXXXXX**1234567891**	The next ten characters indicate the TIES dataset identification code. The first four characters designates the start year, fifth and sixth characters designates the start month, the seventh and eighth characters designated the start day of a case. Ninth and tenth characters designates the order for a case when there are more than one sanction episode at same date. For example, "1948070301" means that a specific sanction started on July 3rd, 1948, and it is the first episode on this date.
8)	100604804221948070301 (1-A-B-C-D) (1-006-04804-22-1948070301)	This is an case identification number (CIN) for a case used in this study. It means (a) first version data used; (b) it is the 6th case in this study, see in Table D2; (c) HSE dataset case number is 48-4; (d) there are two cases matched from TIES dataset, and it is the second of them. The matched TIES dataset case number is 194807030.

Table D.2

List of the Cases Used in This Study

Case No	Case Name	Case Coding
1)	Arab League v. Israel	100104601001991042301
2)	US, Australia, Colombia, Syria v. Netherlands[1]	10020480100194812101
3)	USSR v. UK	100304803211948032502
4)	USSR v. US	10040480322194803250 1
5)	USSR v. Yugoslavia	10050480421194807010 2
6)	USSR v. Yugoslavia	10060480422194807030 1
7)	US, China Committee (ChinCom) v. China	10070490100195006290 1
8)	US, UN v. North Korea	10080500141195006250 1
9)	US, UK v. Iran	10090510100195106220 1
10)	USSR v. Australia	10100540100195404240 1
11)	India v. Portugal	10110540200195302030 1
12)	US v. North Vietnam	10120540400197504300 1
13)	US v. Israel	10130560131195610300 1
14)	US v. Israel	10140560132198106110 1
15)	US v. Israel	10150560133198206230 1
16)	UK, US, France v. Egypt	10160560200195607290 1
17)	US v. UK	10170560300195610310 2
18)	US v. Laos	10180560400196201050 1
19)	Indonesia v. Netherlands	10190570100195712030 1
20)	France v. Tunisia	10200570200195705230 1
21)	USSR v. Finland	10210580100195810990 1
22)	Venezuela, US v. Dom. Republic	10220600100196007010 1
23)	USSR v. China	10230600200196007990 1
24)	US, UK, and others v. Cuba[2]	10240600300195906110 1
25)	US v. Ceylon	10250610100196207070 1
26)	USSR v. Albania	10260610200196003990 1
27)	US v. Brazil	10270620100196202280 1
28)	UN v. South Africa	10280620200196003270 1
29)	US v. Egypt	10290630121196304990 1
30)	US v. Egypt	10300630122196412280 1
31)	US v. Indonesia	10310630400196308990 1
32)	US v. South Vietnam	10320630400196309120 1
33)	UN, OAU v. Portugal	10330630500196208110 1
34)	US v. India	10340650200196506310 1
35)	UK, UN v. Rhodesia	10350650300196511110 1
36)	Czechoslovakia v. Nigeria[3]	10360670100196805020 1
37)	US v. Peru	10370680100196710030 1
38)	US v. Peru	10380680200196810090 1
39)	US v. India[4]	10390710100197112010 1
40)	UK, US, and others v. Uganda	10400720100197208070 1
41)	S. Arabia (Arab League) v. US	10410730121197299990 1

(continued)

Case No	Case Name	Case Coding
43)	US v. South Korea	104307302001977090801
44)	US v. Turkey (*i.e., First Case Study*)	10440740l001974091901
45)	US, Canada v. India[6]	10450740200l974051801
46)	US, Canada v. Pakistan[7]	10460740300l974119901
47)	US, Canada v. S. Korea (*i.e., Second Case St.*)	10470750100l975069901
48)	US v. USSR	10480750200l972092201
49)	US v. South Africa	10490750300l977122001
50)	US v. Chile	105007505001973100201
51)	US v. Uruguay	10510760100l977022407
52)	US v. Taiwan	10520760200l976019901
53)	US v. Paraguay	105307701001977022406
54)	US v. Guatemala	10540770221l977022401
55)	US v. Guatemala	105507702221983111201
56)	US v. Argentina	10560770300l977022403
57)	Canada v. European Economic Community[8]	10570770400l977010101
58)	Canada v. Japan[9]	10580770400l977010102
59)	US v. Nicaragua	10590770500l977022402
60)	US v. El Salvador	10600770600l977022405
61)	US v. Brazil (*i.e., Third Case Study*)	10610770700l977022404
62)	US v. Ethiopia	10620770800l977031201
63)	China v. Albania	10630780100l977070801
64)	US v. India	10640780400l978020701
65)	US v. USSR	10650780500l978071801
66)	Arab League v. Egypt	10660780600l978092401
67)	China v. Vietnam	10670780700l978051201
68)	US and others v. Libya[10]	10680780800l977050801
69)	US v. Iran	10690790100l979111201
70)	US v. Pakistan	107007902221998051002
71)	Arab League v. Canada	10710790300l979060701
72)	US v. Bolivia	10720790400l979110201
73)	US v. USSR	10730800121l980010401
74)	US v. Iraq	10740800200l984073101
75)	US v. Nicaragua	10750810100l981040101
76)	US and others v. Poland[11]	10760810200l980121202
77)	US and others v. Russia[12]	10770810322l980121201
78)	European Community (Germany) v. Turkey	10780810400l981129901
79)	UK v. Argentina	10790820100l982040301
80)	Australia v. France	108008301001995061401
81)	US v. Zimbabwe	10810830321l983121901
82)	US v. Zimbabwe	10820830322l986071001
83)	US v. Romania	10830830500l985110101
84)	US v. Iran	10840840100l984012301
85)	US v. Lebanon	10850840200l995020801
86)	US v. Syria	10860860121l986010901
87)	US v. Panama	10870870100l987080701

(continued)

Case No	Case Name	Case Coding
88)	India, New Zealand, and Australia v. Fiji	108808704211987052401
89)	India, New Zealand, and Australia v. Fiji	10890870422200051901
90)	India v. Nepal	109008901001989030101
91)	US and others v. China[13]	10910890200198906 0601
92)	Azerbaijan, Turkey v. Armenia	109208904001991043004
93)	US, UN v. Iraq	109309001311990080202
94)	US, UN v. Iraq	109409001321992031001
95)	US, UN v. Iraq	109509001331990080201
96)	USSR v. Lithuania	109609005001990040901
97)	US v. Jordan[14]	109709006001990081301
98)	US and others v. Yugoslavia	109809101311991062501
99)	US and others v. Yugoslavia	109909101321996052301
100)	US and others v. Yugoslavia	110009101331998032501
101)	US v. China	11010910221199602 2101
102)	US v. China	11020310222200101 2201
103)	US v. Indonesia[15]	11030910400199206 2601
104)	US and others v. Haiti	11040910500199110 0101
105)	US v. USSR (Russia)[16]	11050910600199005 0101
106)	US v. Peru	11060910841199204 0701
107)	US v. Peru	11070910842199309 2701
108)	US v. Peru	11080910843199402 1201
109)	US v. Peru	11090910844199502 0303
110)	US, UN, ECOWAS and others v. Liberia	11100920100200008 0102
111)	US and others v. Togo[17]	11110920200199201 1201
112)	US v. Azerbaijan	11120920700199206 1101
113)	Russia v. Estonia	11130920900199207 1701
114)	US v. Libya[18]	11140921221199205 3001
115)	US v. Libya[19]	11150921222199507 2501
116)	Russia v. Latvia	11160921300199005 0501
117)	US v. North Korea[20]	11170930132200102 0101
118)	US v. North Korea[21]	11180930133199105 2001
119)	US, European Union v. Guatemala	11190930200199305 2501
120)	Germany v. Turkey[22]	11200950200199403 2101
121)	East African members of OAU v. Brundi	11210960100199608 0101
122)	US v. Colombia	11220960400199502 0301
123)	US v. India	11230980100199805 1001
124)	Turkey v. Italy	11240980300199811 1701
125)	UN v. Afghanistan	11250990100199705 2201

Some Notes on the Case List from Table D2:

[1]The HSE dataset assumed this sanction episode as a unilateral case between the U.S. and the Netherlands. The TIES dataset assumed it as a multilateral case. When there is a discrepancy between HSE and TIES datasets in terms the formation of sender state(s) and/or target state(s), this study accepts the information from TIES dataset.

[2]According to the HSE dataset, this is a unilateral sanction case where the only sender was the United States. According to TIES dataset, this is a multilateral case.

[3]For HSE dataset, this is a unilateral sanction case where the sender is Nigeria and the target is Biafra. For this case, this study used TIES sanction episode where the sender was Czechoslovakia and the target was Nigeria. Although there was no exact match for the HSE dataset case in TIES dataset, the HSE dataset still provided information about Czechoslovakia as a sender state against Nigeria and Biafra, which was formerly a part of Nigeria itself.

[4]HSE dataset assumed that there were two targets (India and Pakistan) for this sanction case, conversely TIES dataset assumed that there were only one target (India).

[5]The HSE dataset assumed that there were two targets (the U.S. and the Netherlands) for this episode, TIES assumed that there were only one, the Netherlands.

[6]The HSE dataset assumed that there was one sender, Canada; the TIES dataset assumed that there were two senders the U.S. and Canada for this sanction episode.

[7]The HSE dataset assumed that there were only one sender (Canada), the TIES dataset assumed that there were two senders US and Canada for this sanction episode.

[8]The HSE dataset assumed that there were two target states (Japan and European Economic Community [ECC]), the TIES dataset assumed that there was one target, which was EEC.

[9]The HSE dataset provided two targets (Japan and EEC), TIES provided that there is one target, Japan, for this specific case.

[10]This is a unilateral sanction case for the HSE dataset where the sender is the U.S., the TIES dataset assumed this case as a multilateral episode where sender states included the U.S., the U.K., Canada, France, and Italy.

[11]There is only one sender (the U.S.) for this episode provided by the HSE dataset. TIES dataset assumed that it is a multilateral case where sender states are the U.S., the U.K., Germany, France, and Belgium.

[12]There is only one sender (U.S.) for this episode for the HSE dataset. TIES dataset assumes that it is a multilateral case including countries such as U.S., U.K., Germany, France, and Belgium as senders.

[13]There is only one sender (U.S.) for this episode according to the HSE dataset. The TIES dataset assumed that it is a multilateral case where sender states are the U.S., the U.K., Japan, France, and German Federal Republic.

[14]According to the HSE dataset, this sanction case is a multilateral episode where senders are comprised of the U.S. and Saudi Arabia, and target states are Jordan and Yemen. According to the TIES dataset, this is a unilateral case where the sender is the U.S. and the target is Jordan.

[15]There are two senders (U.S. and Netherlands) for this episode according to the HSE dataset. The TIES dataset assumed that it as a unilateral sanction case where the dyad is comprised of the U.S. as the sender state and Indonesia as the target state.

[16]According to the HSE dataset, there are two sender states which are the U.S. and the European Community for this sanction episode. Conversely, the TIES dataset provided one sender state, the U.S., for this case.

[17]Although the HSE dataset provided information about the U.S. as one of the sender states, the dataset assumed European Union member states under France and Germany leadership as senders for sanction episode. The TIES dataset included U.S. together with other European states as a coalition of sender states for this sanction case.

[18]The HSE dataset provided information that the sanction was imposed by the U.N. under the U.S. influence against Libya. The TIES dataset assumed that it is a unilateral sanction episode where the dyad is comprised of the U.S. as the sole sender state and Libya as the target state.

[19]The HSE dataset assumed that sanction was imposed by the U.N. against Libya. The TIES dataset provided information that there is one sender, the U.S., and one target, Libya for this sanction case.

[20]The HSE dataset assumed that sanction was imposed by the U.N. as the main sender. The TIES dataset assumed that this is a unilateral sanction where the dyad is comprised of the U.S. and North Korea.

[21]The HSE dataset accepted sender as the U.N. for this sanction episode. The TIES dataset acknowledged the case as a unilateral where the U.S. is the only sender state.

[22] For this sanction episode, The HSE dataset assumed that the sanctions sender is the European Union in general. The TIES dataset assumed that it is a unilateral sanction episode where Germany is the sender state and Turkey is the target state.

(Table D3 starts from the next page)

Table D.3

List of Level of Political Agreement in Sender State (LPA_1)

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_1 Score	Second Researcher (R_2)			R_1 Overall LPA_1 Score	Regression LPA_1 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
1)	100104601001991042301	1	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
2)	100204801001948122101	4	2	2	2	4.00	2	2	n/a	4.00	4.00
3)	100304803211948032502	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
4)	100404803221948032501	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
5)	100504804211948070102	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
6)	100604804221948070301	0	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
7)	100704901001950062901	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
8)	100805001411950062501	1	2	2	2	4.00	2	2	2	4.00	4.00
9)	100905101001951062201	3	2	2	2	4.00	2	2	2	4.00	4.00
10)	101005401001954042401	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
11)	101105402001953020301	4	1	1	n/a	3.00	1	1	n/a	3.00	3.00
12)	101205404001975043001	3	2	1	1	3.33	2	1	1	3.33	3.33
13)	101305601311956103001	4	2	1	n/a	3.50	2	1	n/a	3.50	3.50
14)	101405601321981061101	0	2	1	0	3.00	2	1	0	3.50	3.25
15)	101505601331982062301	3	2	1	-1	2.67	2	1	n/a	3.50	3.08
16)	101605602001956072901	3	2	1	1	3.33	2	1	n/a	3.50	3.41
17)	101705603001956103102	4	2	2	2	4.00	2	1	0	3.50	3.75
18)	101805604001962010501	4	2	1	n/a	3.50	2	1	n/a	3.50	3.50
19)	101905701001957120301	4	2	1	n/a	3.50	2	1	n/a	3.50	3.50
20)	102005702001957052301	0	2	2	n/a	4.00	2	2	n/a	4.00	4.00
21)	102105801001958109901	4	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
22)	102206001001960070101	4	2	2	2	4.00	2	1	1	3.33	3.65
23)	102306002001960079901	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
24)	102406003001959061101	2	2	2	1	3.67	2	2	1	3.67	3.67
25)	102506101001962070701	3	1	1	n/a	3.00	1	1	n/a	3.00	3.00
26)	102606102001960039901	1	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
27)	102706201001962022801	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
28)	102806202001960032701	4	2	2	2	4.00	2	2	2	4.00	4.00
29)	102906301211963049901	0	2.	1	1	3.33	2	2	1	3.67	3.50
30)	103006301221964122801	2	2	2	0	4.00	2	2	n/a	4.00	4.00
31)	103106304001963089901	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
32)	103206304001963091201	3	2	1	n/a	3.50	2	1	n/a	3.50	3.50
33)	103306305001962081101	4	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
34)	103406502001965063101	4	2	1	n/a	3.50	2	1	n/a	3.50	3.50

(continued)

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_1 Score	Second Researcher (R_2)			R_1 Overall LPA_1 Score	Regression LPA_1 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
35)	103506503001965111101	3	2	2	2	4.00	2	2	2	4.00	4.00
36)	10360670100196805020l	0	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
37)	10370680100196710030l	0	2	2	n/a	4.00	2	2	2	4.00	4.00
38)	10380680200196810090l	3	2	2	1	3.67	2	2	1	3.67	3.66
39)	10390710010019711201O1	1	2	1	n/a	3.50	2	1	n/a	3.50	3.50
40)	10400720100197208070l	4	2	2	2	4.00	2	2	2	4.00	4.00
41)	10410730121197299990l	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
42)	104207301221973101703	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
43)	10430730200197709080l	0	2	2	n/a	4.00	2	2	n/a	4.00	4.00
44)	10440740100197409190l	3	1	2	n/a	3.50	2	2	n/a	4.00	3.75
45)	10450740200197405180l	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
46)	10460740300197411990l	0	2	2	n/a	4.00	2	2	n/a	4.00	4.00
47)	10470750100197506990l	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
48)	10480750200197209220l	3	2	2	2	4.00	2	2	2	4.00	4.00
49)	10490750300197712200l	4	2	2	2	4.00	2	2	2	4.00	4.00
50)	10500750500197310020l	0	2	2	n/a	4.00	2	1	n/a	3.50	3.75
51)	10510760100197702240l	0	2	2	2	4.00	2	2	1	3.67	3.83
52)	10520760200197601990l	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
53)	10530770100197702240l	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
54)	10540770221197702240l	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
55)	105507702221983111201	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
56)	10560770300197702240l	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
57)	10570770400197701010l	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
58)	10580770400197701010l	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
59)	10590770500197702240l	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
60)	10600770600197702240l	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
61)	10610770700197702240l	0	2	1	n/a	3.50	1	1	n/a	3.00	3.25
62)	10620770800197703120l	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
63)	10630780100197707080l	3	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
64)	10640780400197802070l	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
65)	10650780500197807180l	3	2	2	2	4.00	2	2	2	4.00	4.00
66)	10660780600197809240l	0	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
67)	10670780700197805120l	3	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
68)	10680780800197705080l	3	2	2	2	4.00	2	2	2	4.00	4.00
69)	10690790100197911120l	3	2	2	2	4.00	2	2	2	4.00	4.00
70)	107007902221998051002	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
71)	10710790300197906070l	4	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
72)	10720790400197911020l	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00

(continued)

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_1 Score	Second Researcher (R_2)			R_1 Overall LPA_1 Score	Regression LPA_1 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
73)	107308001211980010401	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
74)	10740800200198407310 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
75)	10750810100198104010 1	3	2	1	n/a	3.50	2	2	n/a	4.00	3.75
76)	10760810200198012120 2	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
77)	10770810322198012120 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
78)	10780810400198112990 1	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
79)	10790820100198204030 1	4	2	2	2	4.00	2	2	2	4.00	4.00
80)	10800830100199506140 1	0	2	2	2	4.00	2	2	2	4.00	4.00
81)	10810830321198312190 1	0	2	1	n/a	3.50	2	1	n/a	3.50	3.50
82)	10820830322198607100 1	0	2	1	n/a	3.50	2	1	n/a	3.50	3.50
83)	10830830500198511010 1	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
84)	10840840100198401230 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
85)	10850840200199502080 1	0	2	2	n/a	4.00	2	2	n/a	4.00	4.00
86)	10860860121198601090 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
87)	10870870100198708070 1	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
88)	10880870421198705240 1	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
89)	10890870422200005190 1	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
90)	10900890100198903010 1	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
91)	10910890200198906060 1	0	2	2	2	4.00	2	2	2	4.00	4.00
92)	10920890400199104300 4	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
93)	10930900131199008020 2	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
94)	10940900132199203100 1	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
95)	10950900133199008020 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
96)	10960900500199004090 1	4	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
97)	10970900600199008130 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
98)	10980910131199106250 1	4	2	2	2	4.00	2	2	2	4.00	4.00
99)	10990910132199605230 1	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
100)	11000910133199803250 1	4	2	1	n/a	3.50	2	2	2	4.00	3.75
101)	11010910221199602210 1	0	2	2	n/a	4.00	2	2	n/a	4.00	4.00
102)	11020310222200101220 1	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
103)	11030910100199206260 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
104)	11040910500199110010 1	4	2	2	2	4.00	2	2	2	4.00	4.00
105)	11050910600199005010 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
106)	11060910841199204070 1	2	1	2	n/a	3.50	1	2	n/a	3.50	3.50
107)	11070910842199309270 1	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
108)	11080910843199402120 1	0	2	1	n/a	3.50	2	1	n/a	3.50	3.50
109)	11090910844199502030 3	0	1	2	n/a	3.50	1	2	n/a	3.50	3.50
110)	11100920100200008010 2	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00

(continued)

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_1 Score	Second Researcher (R_2)			R_1 Overall LPA_1 Score	Regression LPA_1 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
111)	111109202001992011201	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
112)	111209207001992061101	2	2	2	2	4.00	2	2	2	4.00	4.00
113)	111309209001992071701	4	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
114)	111409212211992053001	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
115)	111509212221995072501	0	1	2	n/a	3.50	1	2	n/a	3.50	3.50
116)	111609213001990050501	0	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
117)	111709301322001020101	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
118)	111809301331991052001	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
119)	111909302001993052501	4	2	2	n/a	4.00	2	2	n/a	4.00	4.00
120)	112009502001994032101	0	2	1	n/a	3.50	1	2	n/a	3.50	3.50
121)	112109601001996080101	2	2	1	n/a	3.50	2	1	n/a	3.50	3.50
122)	112209604001995020301	4	2	2	2	4.00	2	2	2	4.00	4.00
123)	112309801001998051001	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
124)	112409803001998111701	1	2	2	2	4.00	2	2	2	4.00	4.00
125)	112509901001997052201	2	2	2	2	4.00	2	2	2	4.00	4.00

(Table D.4 starts from the next page)

Table D.4

List of Level of Political Agreement in Target State (LPA_2) Scores

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_2 Score	Second Researcher (R_2)			R_2 Overall LPA_2 Score	Regression LPA_2 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
1)	100104601001991042301	1	2	2	2	4.00	2	2	n/a	4.00	4.00
2)	10020480100194812101	4	2	1	0	3.00	2	1	0	3.00	3.00
3)	10030480321194803250 2	0	2	2	2	4.00	2	2	2	4.00	4.00
4)	10040480322194803250 1	0	2	2	2	4.00	2	2	2	4.00	4.00
5)	10050480421194807010 2	0	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
6)	10060480422194807030 1	0	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
7)	10070490100195006290 1	1	2	n/a	n/a	4.00	2	n/a	1	3.50	3.75
8)	10080500141195006250 1	1	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
9)	10090510100195106220 1	3	2	0	-1	2.33	2	1	n/a	3.50	2.91
10)	10100540100195404240 1	0	2	-2	n/a	2.00	2	-1	n/a	2.50	2.25
11)	10110540200195302030 1	4	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
12)	10120540400197504300 1	3	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
13)	10130560131195610300 1	4	2	2	n/a	4.00	2	1	n/a	3.50	3.75
14)	10140560132198106110 1	0	2	2	n/a	4.00	2	1	n/a	3.50	3.75
15)	10150560133198206230 1	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
16)	10160560200195607290 1	3	2	n/a	1	3.50	2	n/a	n/a	4.00	3.75
17)	10170560300195610310 2	4	1	-1	1	2.33	2	1	0	3.00	2.66
18)	10180560400196201050 1	4	1	-2	n/a	1.50	1	-2	n/a	1.50	1.50
19)	10190570100195712030 1	4	2	2	n/a	4.00	2	1	n/a	3.50	3.75
20)	10200570200195705230 1	0	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
21)	10210580100195810990 1	4	1	-2	n/a	1.50	1	-1	n/a	2.00	1.75
22)	10220600100196007010 1	4	2	n/a	-1	2.50	2	n/a	-1	2.50	2.50
23)	10230600200196007990 1	0	2	n/a	1	3.50	2	n/a	1	3.50	3.50
24)	10240600300195906110 1	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
25)	10250610100196207070 1	3	2	2	n/a	4.00	2	1	n/a	3.50	3.75
26)	10260610200196003990 1	1	2	n/a	n/a	4.00	2	n/a	0	3.00	3.50
27)	10270620100196202280 1	2	1	1	n/a	3.00	1	1	n/a	3.00	3.00
28)	10280620200196003270 1	4	2	0	-1	2.33	2	1	0	3.00	2.66
29)	10290630121196304990 1	0	2	n/a	n/a	4.00	2	n/a	1	3.50	3.75
30)	10300630122196412280 1	2	1	n/a	n/a	2.50	1	n/a	n/a	2.50	2.50
31)	10310630400196308990 1	4	1	n/a	n/a	2.50	1	n/a	n/a	2.50	2.50
32)	10320630400196309120 1	3	2	n/a	0	3.00	2	n/a	0	3.00	3.00
33)	10330630500196208110 1	4	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
34)	10340650200196506310 1	4	1	1	n/a	3.00	1	1	n/a	3.00	3.00

(continued)

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_2 Score	Second Researcher (R_2)			R_2 Overall LPA_2 Score	Regression LPA_2 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
35)	103506503001965111101	3	2	n/a	1	3.50	2	n/a	1	3.50	3.50
36)	10360670l001968050201	0	2	n/a	0	3.00	2	n/a	n/a	4.00	3.50
37)	10370680l001967100301	0	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
38)	10380680200l968100901	3	2	n/a	1	3.50	2	n/a	1	3.50	3.50
39)	10390710010l971120101	1	2	2	n/a	4.00	2	2	n/a	4.00	4.00
40)	10400720100l972080701	4	2	n/a	1	3.50	2	n/a	0	3.00	3.25
41)	10410730121l972999901	2	2	1	n/a	3.50	2	1	1	3.33	3.41
42)	104207301221973101703	2	2	1	n/a	3.50	2	1	n/a	3.50	3.50
43)	10430730200l977090801	0	2	n/a	n/a	4.00	2	n/a	0	3.00	3.50
44)	10440740100l974091901	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
45)	10450740200l974051801	1	1	2	n/a	3.50	2	2	n/a	4.00	3.75
46)	10460740300l974119901	0	1	2	n/a	3.50	2	2	n/a	4.00	3.75
47)	10470750100l975069901	4	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
48)	10480750200l972092201	3	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
49)	10490750300l977122001	4	2	1	n/a	3.50	1	1	0	3.00	3.25
50)	105007505001973100201	0	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
51)	10510760100l977022407	0	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
52)	10520760200l976019901	1	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
53)	105307701001977022406	1	1	n/a	n/a	3.00	2	n/a	n/a	4.00	3.50
54)	10540770221l977022401	2	1	n/a	n/a	3.00	2	n/a	0	3.00	3.00
55)	105507702221983111201	3	2	n/a	1	3.50	2	n/a	1	3.50	3.50
56)	10560770300l977022403	3	2	n/a	1	3.50	2	n/a	0	3.00	3.25
57)	10570770400l977010101	3	2	1	n/a	3.50	2	1	n/a	3.50	3.50
58)	105807704001977010102	3	2	0	n/a	3.00	2	0	n/a	3.00	3.00
59)	10590770500l977022402	2	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
60)	10600770600l977022405	3	2	n/a	0	3.00	2	n/a	1	3.50	3.25
61)	10610770700l977022404	0	2	n/a	0	3.00	2	n/a	n/a	4.00	3.50
62)	10620770800l977031201	1	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
63)	10630780100l977070801	3	1	n/a	n/a	3.00	2	n/a	1	3.50	3.25
64)	10640780400l978020701	3	2	2	n/a	4.00	2	2	n/a	4.00	3.50
65)	10650780500l978071801	3	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
66)	10660780600l978092401	0	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
67)	10670780700l978051201	3	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
68)	10680780800l977050801	3	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
69)	10690790100l979111201	3	2	n/a	2	4.00	2	n/a	2	4.00	4.00
70)	107007902221998051002	3	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
71)	10710790300l979060701	4	1	1	n/a	3.00	2	1	n/a	3.50	3.25
72)	10720790400l979110201	2	1	n/a	n/a	3.00	1	n/a	0	2.50	2.75

(continued)

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_2 Score	Second Researcher (R_2)			R_2 Overall LPA_2 Score	Regression LPA_2 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
73)	107308001211980010401	1	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
74)	10740800201984073101	2	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
75)	10750810001981040101	3	2	1	1	3.00	2	1	0	3.00	3.00
76)	10760810201980121202	2	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
77)	10770810321980121201	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
78)	10780810400198112990l	3	1	n/a	1	3.00	1	n/a	1	3.00	3.00
79)	10790820100198204030l	4	2	n/a	2	4.00	2	n/a	2	4.00	4.00
80)	10800830100199506140l	0	1	1	n/a	3.00	1	1	n/a	3.00	3.00
81)	10810830321198312190l	0	2	2	n/a	4.00	2	0	0	2.67	3.33
82)	10820830322198607100l	0	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
83)	10830830500198511010l	3	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
84)	10840840100198401230l	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
85)	10850840200199502080l	0	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
86)	10860860121198601090l	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
87)	10870870100198708070l	4	2	n/a	-1	2.50	2	n/a	-1	2.50	2.50
88)	10880870421198705240l	3	1	n/a	1	3.00	1	n/a	1	3.00	3.00
89)	10890870422200005190l	4	2	1	1	3.33	2	1	1	3.33	3.33
90)	10900890100198903010l	4	1	1	n/a	3.00	2	1	n/a	3.50	3.25
91)	10910890200198906060l	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
92)	10920890400199104300 4	3	2	2	n/a	4.00	2	2	n/a	4.00	4.00
93)	10930900131199008020 2	1	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
94)	10940900132199203100l	3	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
95)	10950900133199008020l	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
96)	10960900500199004090l	4	2	n/a	1	3.50	1	n/a	n/a	3.00	3.25
97)	10970900600199008130l	2	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
98)	10980910131199106250l	4	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
99)	10990910132199605230l	4	2	n/a	n/a	4.00	1	n/a	n/a	3.00	3.50
100)	11000910133199803250l	4	1	n/a	0	2.50	1	n/a	1	3.00	2.75
101)	11010910221199602210l	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
102)	11020310222200101220l	1	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
103)	11030910100199206260l	2	2	n/a	0	4.00	2	n/a	1	3.50	3.75
104)	11040910500199110010l	4	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
105)	11050910600199005010l	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
106)	11060910841199204070l	2	2	2	n/a	4.00	2	2	n/a	4.00	4.00
107)	11070910842199309270l	2	2	1	n/a	3.50	2	1	n/a	3.50	3.50
108)	11080910843199402120l	0	2	0	n/a	3.00	1	0	n/a	2.50	2.75
109)	11090910844199502030 3	0	2	2	n/a	4.00	2	2	n/a	4.00	4.00
110)	11100920100200008010 2	4	2	0	n/a	3.00	2	0	n/a	3.00	3.00

(continued)

Case Numbers and Coding		Effectiveness Score	First Researcher (R_1)			R_1 Overall LPA_2 Score	Second Researcher (R_2)			R_2 Overall LPA_2 Score	Regression LPA_2 Score
			(1) Government	(2) Opposition	(3) Others		(1) Government	(2) Opposition	(3) Others		
111)	111109202001992011201	4	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
112)	111209207001992061101	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
113)	111309209001992071701	4	1	0	n/a	2.50	1	0	n/a	2.50	2.50
114)	111409212211992053001	2	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
115)	111509212221995072501	0	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
116)	11160921300199005050l	0	2	n/a	2	4.00	2	n/a	2	4.00	4.00
117)	111709301322001020101	1	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
118)	111809301331991052001	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
119)	111909302001993052501	4	2	1	0	3.00	1	0	n/a	2.50	2.75
120)	112009502001994032101	0	2	1	n/a	3.50	2	2	n/a	4.00	3.75
121)	112109601001996080101	2	2	n/a	n/a	4.00	2	n/a	n/a	4.00	4.00
122)	112209604001995020301	4	1	n/a	n/a	3.00	1	n/a	n/a	3.00	3.00
123)	112309801001998051001	3	2	1	n/a	3.50	2	1	n/a	3.50	3.50
124)	112409803001998111701	1	1	2	n/a	3.50	1	2	2	3.67	3.58
125)	112509901001997052201	2	2	n/a	1	3.50	2	n/a	n/a	4.00	3.75

(Table D.5 starts from the next page)

Table D.5

List of International Level of Political Agreement (LPA_3) Scores

	Case Numbers and Coding	Effectiveness Score	First Researcher (R_1) LPA_3 Score	Second Researcher (R_2) LPA_3 Score	Regression LPA_3 Score
1)	100104601001991042301	1	2	2	4.00
2)	10020480100194812 2101	4	2	2	4.00
3)	10030480321194803 2502	0	0	0	2.00
4)	10040480322194803 2501	0	0	0	2.00
5)	10050480421194807 0102	0	1	2	3.50
6)	10060480422194807 0301	0	1	2	3.50
7)	10070490100195006 2901	1	2	2	4.00
8)	10080500141195006 2501	1	2	2	4.00
9)	10090510100195106 2201	3	1	1	3.00
10)	10100540100195404 2401	0	0	0	2.00
11)	10110540200195302 0301	4	0	0	2.00
12)	10120540400197504 3001	3	0	0	2.00
13)	10130560131195610 3001	4	0	0	2.00
14)	10140560132198106 1101	0	0	0	2.00
15)	10150560133198206 2301	3	2	0	3.00
16)	10160560200195607 2901	3	1	1	3.00
17)	10170560300195610 3102	4	0	0	2.00
18)	10180560400196201 0501	4	1	1	3.00
19)	10190570100195712 0301	4	0	0	2.00
20)	10200570200195705 2301	0	0	0	2.00
21)	10210580100195810 9901	4	0	0	2.00
22)	10220600100196007 0101	4	2	2	4.00
23)	10230600200196007 9901	0	0	0	2.00
24)	10240600300195906 1101	2	1	1	3.00
25)	10250610100196207 0701	3	0	0	2.00
26)	10260610200196003 9901	1	2	2	4.00
27)	10270620100196202 2801	2	0	0	2.00
28)	10280620200196003 2701	4	2	2	4.00
29)	10290630121196304 9901	0	0	0	2.00
30)	10300630122196412 2801	2	0	0	2.00
31)	10310630400196308 9901	4	2	2	4.00
32)	10320630400196309 1201	3	0	0	2.00
33)	10330630500196208 1101	4	2	2	4.00
34)	10340650200196506 3101	4	0	0	2.00
35)	10350650300196511 1101	3	2	1	3.50

(continued)

	Case Numbers and Coding	Effectiveness Score	First Researcher (R_1) LPA_3 Score	Second Researcher (R_2) LPA_3 Score	Regression LPA_3 Score
36)	103606701001968050201	0	1	1	3.00
37)	10370680l001967100301	0	0	0	2.00
38)	10380680200l968100901	3	0	0	2.00
39)	10390710010019711201O1	1	0	0	2.00
40)	104007201001972080701	4	2	2	4.00
41)	104107301211972999901	2	2	2	4.00
42)	104207301221973101703	2	2	2	4.00
43)	104307302001977090801	0	0	0	2.00
44)	104407401001974091901	3	0	0	2.00
45)	104507402001974051801	1	1	1	3.00
46)	104607403001974119901	0	1	1	3.00
47)	104707501001975069901	4	2	2	4.00
48)	104807502001972092201	3	0	0	2.00
49)	104907503001977122001	4	2	2	4.00
50)	105007505001973100201	0	0	0	2.00
51)	105107601001977022407	0	0	0	2.00
52)	105207602001976019901	1	0	0	2.00
53)	105307701001977022406	1	0	0	2.00
54)	105407702211977022401	2	0	0	2.00
55)	105507702221983111201	3	0	0	2.00
56)	105607703001977022403	3	0	0	2.00
57)	105707704001977010101	3	0	0	2.00
58)	105807704001977010102	3	0	0	2.00
59)	105907705001977022402	2	0	0	2.00
60)	106007706001977022405	3	0	0	2.00
61)	106107707001977022404	0	0	0	2.00
62)	106207708001977031201	1	0	0	2.00
63)	106307801001977070801	3	0	0	2.00
64)	106407804001978020701	3	0	0	2.00
65)	106507805001978071801	3	0	0	2.00
66)	106607806001978092401	0	1	2	3.50
67)	106707807001978051201	3	0	0	2.00
68)	106807808001977050801	3	2	1	3.50
69)	106907901001979111201	3	2	2	4.00
70)	107007902221998051002	3	2	2	4.00
71)	107107903001979060701	4	1	1	3.00
72)	107207904001979110201	2	0	0	2.00
73)	107308001211980010401	1	2	2	4.00
74)	107408002001984073101	2	0	0	2.00
75)	107508101001981040101	3	0	0	2.00

(continued)

	Case Numbers and Coding	Effectiveness Score	First Researcher (R_1) LPA_3 Score	Second Researcher (R_2) LPA_3 Score	Regression LPA_3 Score
76)	107608102001980121202	2	1	2	3.50
77)	107708103221980121201	2	1	1	3.00
78)	10780810400198112990l	3	2	2	4.00
79)	10790820100198204030l	4	2	1	3.50
80)	108008301001995061401	0	1	1	3.00
81)	108108303211983121901	0	0	0	2.00
82)	108208303221986071001	0	0	0	2.00
83)	108308305001985110101	3	0	0	2.00
84)	108408401001984012301	2	0	0	2.00
85)	108508402001995020801	0	0	0	2.00
86)	108608601211986010901	2	2	2	4.00
87)	108708701001987080701	4	0	0	2.00
88)	108808704211987052401	3	1	1	3.00
89)	108908704222000051901	4	1	1	3.00
90)	109008901001989030101	4	0	0	2.00
91)	109108902001989060601	0	2	2	4.00
92)	109208904001991043004	3	2	1	3.50
93)	109309001311990080202	1	2	2	4.00
94)	109409001321992031001	3	2	2	4.00
95)	109509001331990080201	2	2	2	4.00
96)	109609005001990040901	4	2	1	3.50
97)	109709006001990081301	2	0	0	2.00
98)	109809101311991062501	4	1	1	3.00
99)	109909101321996052301	4	1	2	3.50
100)	110009101331998032501	4	1	1	3.00
101)	110109102211996022101	0	0	0	2.00
102)	110203102222001012201	1	0	0	2.00
103)	110309101001992062601	2	0	0	2.00
104)	110409105001991100101	4	2	2	4.00
105)	110509106001990050101	2	0	0	2.00
106)	110609108411992040701	2	2	1	3.50
107)	110709108421993092701	2	0	0	2.00
108)	110809108431994021201	0	0	0	2.00
109)	110909108441995020303	0	0	0	2.00
110)	111009201002000080102	4	2	2	4.00
111)	111109202001992011201	4	1	1	3.00
112)	111209207001992061101	2	0	0	2.00
113)	111309209001992071701	4	0	0	2.00
114)	111409212211992053001	2	0	0	2.00
115)	111509212221995072501	0	0	0	2.00

(continued)

	Case Numbers and Coding	Effectiveness Score	First Researcher (R_1) LPA_3 Score	Second Researcher (R_2) LPA_3 Score	Regression LPA_3 Score
116)	11160921300199005050l	0	0	0	2.00
117)	11170930132200102010l	1	0	0	2.00
118)	11180930133199105200l	2	2	2	4.00
119)	11190930200199305250l	4	2	2	4.00
120)	11200950200199403210l	0	0	0	2.00
121)	11210960100199608010l	2	2	2	4.00
122)	11220960400199502030l	4	0	0	2.00
123)	11230980100199805100l	3	2	2	4.00
124)	11240980300199811170l	1	0	0	2.00
125)	11250990100199705220l	2	2	2	4.00

(Table D.6 starts from the next page)

Table D.6

List of Aggregated Level of Political Agreement (LPA_4) Scores

	Case Numbers and Coding	Effectiveness Score	Regression LPA_4 Score
1)	100104601001991042301	1.00	2.66
2)	10020480100194812101	4.00	3.00
3)	10030480321194803250 2	0.00	2.00
4)	10040480322194803250 1	0.00	2.00
5)	10050480421194807010 2	0.00	2.83
6)	10060480422194807030 1	0.00	2.50
7)	10070490100195006290 1	1.00	2.75
8)	10080500141195006250 1	1.00	2.66
9)	10090510100195106220 1	3.00	2.69
10)	10100540100195404240 1	0.00	2.87
11)	10110540200195302030 1	4.00	2.00
12)	10120540400197504300 1	3.00	1.66
13)	10130560131195610300 1	4.00	1.87
14)	10140560132198106110 1	0.00	1.75
15)	10150560133198206230 1	3.00	1.98
16)	10160560200195607290 1	3.00	2.21
17)	10170560300195610310 2	4.00	2.54
18)	10180560400196201050 1	4.00	3.00
19)	10190570100195712030 1	4.00	1.87
20)	10200570200195705230 1	0.00	2.50
21)	10210580100195810990 1	4.00	3.12
22)	10220600100196007010 1	4.00	3.05
23)	10230600200196007990 1	0.00	2.25
24)	10240600300195906110 1	2.00	2.22
25)	10250610100196207070 1	3.00	1.62
26)	10260610200196003990 1	1.00	2.66
27)	10270620100196202280 1	2.00	2.50
28)	10280620200196003270 1	4.00	3.11
29)	10290630121196304990 1	0.00	1.87
30)	10300630122196412280 1	2.00	2.75
31)	10310630400196308990 1	4.00	3.16
32)	10320630400196309120 1	3.00	2.25
33)	10330630500196208110 1	4.00	2.83
34)	10340650200196506310 1	4.00	2.25
35)	10350650300196511110 1	3.00	2.66
36)	10360670100196805020 1	0.00	2.33
37)	10370680100196710030 1	0.00	2.25
38)	10380680200196810090 1	3.00	2.08
39)	10390710100197112010 1	1.00	1.75

(continued)

Case Numbers and Coding		Effectiveness Score	Regression LPA_4 Score
40)	104007201001972080701	4.00	2.91
41)	10410730121197299901	2.00	2.86
42)	10420730122197310170 3	2.00	2.83
43)	10430730200197709080 1	0.00	2.25
44)	10440740100197409190 1	3.00	1.87
45)	10450740200197405180 1	1.00	2.41
46)	10460740300197411990 1	0.00	2.41
47)	10470750100197506990 1	4.00	2.83
48)	10480750200197209220 1	3.00	2.00
49)	10490750300197712200 1	4.00	2.91
50)	10500750500197310020 1	0.00	2.12
51)	10510760100197702240 7	0.00	2.16
52)	10520760200197601990 1	1.00	2.00
53)	10530770100197702240 6	1.00	2.25
54)	10540770221197702240 1	2.00	2.50
55)	10550770222198311120 1	3.00	2.25
56)	10560770300197702240 3	3.00	2.37
57)	10570770400197701010 1	3.00	2.25
58)	10580770400197701010 2	3.00	2.50
59)	10590770500197702240 2	2.00	2.50
60)	10600770600197702240 5	3.00	2.37
61)	10610770700197702240 4	0.00	1.87
62)	10620770800197703120 1	1.00	2.50
63)	10630780100197707080 1	3.00	2.12
64)	10640780400197802070 1	3.00	2.25
65)	10650780500197807180 1	3.00	2.00
66)	10660780600197809240 1	0.00	2.83
67)	10670780700197805120 1	3.00	2.50
68)	10680780800197705080 1	3.00	2.66
69)	10690790100197911120 1	3.00	2.66
70)	10700790222199805100 2	3.00	2.66
71)	10710790300197906070 1	4.00	2.58
72)	10720790400197911020 1	2.00	2.62
73)	10730800121198001040 1	1.00	2.66
74)	10740800200198407310 1	2.00	2.50
75)	10750810100198104010 1	3.00	2.37
76)	10760810200198012120 2	2.00	2.33
77)	10770810322198012120 1	2.00	2.33
78)	10780810400198112990 1	3.00	3.00
79)	10790820100198204030 1	4.00	2.49
80)	10800830100199506140 1	0.00	2.66
81)	10810830321198312190 1	0.00	2.08
82)	10820830322198607100 1	0.00	2.00

(continued)

Case Numbers and Coding		Effectiveness Score	Regression LPA_4 Score
83)	108308305001985110101	3.00	2.50
84)	10840840101984012301	2.00	2.00
85)	10850840201995020801	0.00	2.25
86)	10860860121986010901	2.00	2.66
87)	10870870101987080701	4.00	2.75
88)	10880870421987052401	3.00	2.66
89)	10890870422200051901	4.00	2.55
90)	10900890101989030101	4.00	2.37
91)	10910890201989060601	0.00	2.66
92)	10920890401991043004	3.00	2.66
93)	10930900131199080202	1.00	2.66
94)	10940900132199231001	3.00	2.66
95)	10950900133199080201	2.00	2.66
96)	10960900501990040901	4.00	2.75
97)	10970900601990081301	2.00	2.50
98)	10980910131199162501	4.00	2.66
99)	10990910132199652301	4.00	2.66
100)	11000910133199832501	4.00	2.91
101)	11010910221199622101	0.00	2.00
102)	11020310222200112201	1.00	2.00
103)	11030910100199262601	2.00	2.12
104)	11040910500199100101	4.00	3.00
105)	11050910600199050101	2.00	2.00
106)	11060910841199240701	2.00	2.33
107)	11070910842199392701	2.00	2.25
108)	11080910843199421201	0.00	2.37
109)	11090910844199520303	0.00	1.75
110)	11100920100200080102	4.00	3.00
111)	11110920200199211201	4.00	2.83
112)	11120920700199261101	2.00	2.00
113)	11130920900199271701	4.00	2.75
114)	11140921221199253001	2.00	2.50
115)	11150921222199572501	0.00	1.75
116)	11160921300199050501	0.00	1.50
117)	11170930132200120101	1.00	2.00
118)	11180930133199152001	2.00	2.66
119)	11190930200199352501	4.00	3.08
120)	11200950200199432101	0.00	1.87
121)	11210960100199680101	2.00	2.50
122)	11220960400199520301	4.00	2.50
123)	11230980100199851001	3.00	2.83
124)	11240980300199811701	1.00	2.20
125)	11250990100199752201	2.00	2.75

APPENDIX E
STATA DO-FILE

```
*************************************************************************
*                                                                       *
*       Mehmet Onder                                                    *
*       Department of Political Science                                 *
*       Wayne State University, Detroit, MI.                            *
*       mehmet.onder@wayne.edu                                          *
*                                                                       *
*************************************************************************
*                                                                       *
*       November, 2019                                                  *
*                                                                       *
*************************************************************************
*                                                                       *
*Do File Name  : Sanctions.do                                           *
*Log File Name : log_diss.log                                           *
*                                                                       *
*************************************************************************
*                                                                       *
*       Contents:                                                       *
*                                                                       *
*       Module 1.a: Combining (datasets)     *
*       Module 1.b: Fixing Data                                         *
*       Module 2: Descriptive Statistics                                *
*       Module 3: Ordinal Logistic Regressions                          *
*       Module 4: Logistic Regressions                                  *
*                                                                       *
*************************************************************************

clear all
*#delimit;
set mem 500m

*-------------------------Module 1.a (Combining data)----------------------;

*combining data from two researchers' LPA scores

clear

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\mehmetonder.dta"

merge 1:1 case_code using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\ozgursari.dta"
```

```
drop _merge

gen LPA1 = (LPA11 + LPA111) / 2
gen LPA2 = (LPA22 + LPA222) / 2
gen LPA3 = (LPA33 + LPA333) / 2
gen LPA4 = (LPA44 + LPA444) / 2

drop LPA11 LPA22 LPA33 LPA44 LPA222 LPA111 LPA333 LPA444

save "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\lpas.dta", replace

clear

*combining LPA variables with other variables and fixing data

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\lpas.dta"

merge 1:1 case_code using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\other_vars.dta"
drop _merge

save "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\lpas+other", replace

clear

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\lpas+other.dta"

merge 1:1 case_code using   "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\cinc_var.dta"
drop _merge

gen relpow = scinc/tcinc
gen lrelpow=log(relpow)

save "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\lpas+other+cinc", replace
clear

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\lpas+other+cinc"
```

```
merge 1:1 case_code using   "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\alli_var.dta"
drop _merge

*-------------------------Module 1.b (Fixing data)-------------------------;

gen relations = 1
replace relations = 0  if rivalry == 1
replace relations = 2  if alliance == 1

*making dependent variable dichotomized

gen ssuc=0
replace ssuc=1 if eff == 2
replace ssuc=1 if eff == 3
replace ssuc=1 if eff == 4
label var ssuc "Sanctions Success Probability"

order case_code effectiveness LPA1 LPA2 ///
LPA3 LPA4 scost tcost signaling collaboration ///
usinvol Inducements srtype trtype bluntness ///
tdummy lrelpow relations, first

drop scinc
drop tcinc
drop smonth
drop syear
drop emonth
drop eyear
drop psender
drop target
drop alliance
drop rivalry
drop idummy
drop relpow
drop tdummy

rename effectiveness eff
rename LPA1 _1lpa1
rename LPA2 _1lpa2
rename LPA3 _1lpa3
rename LPA4 _1lpa4
rename scost _2scost
rename tcost _2tcost
rename signaling _3sign
rename relations _4ascale
```

```
rename collaboration _4colla
rename usinvol _4usinvl
rename lrelpow _5lrelpow
rename Inducements _6indcmt
rename srtype _7stype
rename trtype _7ttype
rename bluntness _8blunt

order caseno case_code eff _1lpa1 _1lpa2 _1lpa3 ///
_1lpa4 _2scost _2tcost _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt, first

label variable eff "Effectiveness"
label variable _1lpa1 "Sender Level of Political Agreement"
label variable _1lpa2 "Target Level of Political Agreement"
label variable _1lpa3 "International Level of Political Agreement"
label variable _1lpa4 "Aggregated Level of Political Agreement"
label variable _2scost "Sender Cost"
label variable _2tcost "Target Cost"
label variable _3sign "Signaling"
label variable _4ascale "Relations Scale"
label variable _4colla "Collaboration Scale"
label variable _4usinvl "United States Involvement"
label variable _5lrelpow "Relative Power"
label variable _6indcmt "Inducements"
label variable _7stype "Sender Regime Type"
label variable _7ttype "Target Regime Type"
label variable _8blunt "Sanction Bluntness"

list case_code eff _1lpa1 _1lpa2 _1lpa3 _1lpa4 _2scost _2tcost

save "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-
Output (etc.) Data\diss_data", replace
clear

*--------------------Module 2 (Descriptive Statistics)----------------------;

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

tab eff _1lpa1
tab eff _1lpa2
tab eff _1lpa3
tab eff _1lpa4
tab eff _2scost
```

```
tab eff _2tcost
tab eff _3sign
tab eff _4ascale
tab eff _4colla
tab eff _4usinvl
tab eff _6indcmt
tab eff _7stype
tab eff _7ttype
tab eff _8blunt

sum _7stype _7ttype

desc eff _1lpa1 _1lpa2 _1lpa3 _1lpa4 _2scost ///
_2tcost _3sign _4ascale _4colla _4usinvl _5lrelpow ///
_6indcmt _7stype _7ttype _8blunt

sum eff _1lpa1 _1lpa2 _1lpa3 _1lpa4 _2scost ///
_2tcost _3sign _4ascale _4colla _4usinvl ///
_5lrelpow _6indcmt _7stype _7ttype _8blunt

sum eff, detail
sum _1lpa1, detail
sum _1lpa2, detail
sum _1lpa3, detail

scatter eff _1lpa1
scatter eff _1lpa2
scatter eff _1lpa3

pwcorr eff _1lpa1
pwcorr eff _1lpa2
pwcorr eff _1lpa1 _1lpa2 _1lpa3 _1lpa4 _2scost ///
_2tcost _3sign _4ascale _4colla _4usinvl ///
_5lrelpow _6indcmt _7stype _7ttype _8blunt

graph matrix eff _1lpa1 _1lpa2 _1lpa3 _1lpa4, half

twoway scatter eff _1lpa1 || lfit eff _1lpa1
twoway scatter eff _1lpa2 || lfit eff _1lpa2
twoway scatter eff _1lpa3 || lfit eff _1lpa3
twoway scatter eff _1lpa4 || lfit eff _1lpa4
twoway scatter eff _2scost || lfit eff _2scost
twoway scatter eff _2tcost || lfit eff _2tcost

twoway scatter _1lpa1 _2tcost || lfit _1lpa1 _2tcost
twoway scatter _1lpa2 _2tcost || lfit _1lpa2 _2tcost
```

```
twoway scatter _1lpa3 _2tcost || lfit _1lpa3 _2tcost

twoway scatter eff _3sign || lfit eff _3sign
twoway scatter eff _4ascale || lfit eff _4ascale
twoway scatter eff _4colla || lfit eff _4colla
twoway scatter eff _4usinvl || lfit eff _4usinvl
twoway scatter eff _5lrelpow || lfit eff _5lrelpow
twoway scatter eff _6indcmt || lfit eff _6indcmt
twoway scatter eff _7stype || lfit eff _7stype
twoway scatter eff _7ttype || lfit eff _7ttype
twoway scatter eff _8blunt || lfit eff _8blunt

hist eff, disc start (0) percent

hist _1lpa1, bin (6) percent
hist _1lpa2, bin (9) percent
hist _1lpa3, bin (5) percent
hist _1lpa4, bin (9) percent

hist eff
hist _1lpa1
hist _1lpa2
hist _1lpa3
hist _1lpa4

order case_code eff _1lpa1 _1lpa2 _1lpa3 _1lpa4 _2scost _2tcost _3sign _4ascale _4colla
_4usinvl _5lrelpow _6indcmt _7stype _7ttype _8blunt, first

hist _3sign
hist _4colla
hist _5lrelpow
hist _6indcmt
hist _7stype
hist _7ttype
hist _8blunt
hist _4ascale

clear all

*Lower and higher levels categorization of LPA variables

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

*num1=0 (lower LPA1 values), num1=1 (higher values)
gen num1=0 if _1lpa1 <= 3.8393290000
```

```
replace num1=1 if _1lpa1 > 3.8393290000

*num2=0 (lower LPA2 values), num2=1 (higher values)
gen num2=0 if _1lpa2 <= 3.419333
replace num2=1 if _1lpa2 > 3.419333

*num3=0 (lower LPA3 values), num3=1 (higher values)
gen num3=0 if _1lpa3 < 2.74
replace num3=1 if _1lpa3 >= 2.74

*num4=0 (lower LPA4 values), num4=1 (higher values)
gen num4=0 if _1lpa4 < 2.432587
replace num4=1 if _1lpa4 >= 2.432587

sum num1 num2 num3
tab eff num1
tab eff num2
tab eff num3
tab eff num4

save "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-
Output (etc.) Data\diss_data", replace

*Summary Classification Table

*box11=1 if num3 low, num2 low, num1 low, box11=0 all else
clear
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
gen box11=0
replace box11=1 if (num3==0 & num2==0 & num1==0)
drop if box11==0
sum eff
clear

*box12=1 if num3 low, num2 low, num1 high, box21=0 all else
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
gen box12=0
replace box12=1 if (num3==0 & num2==0 & num1==1)
drop if box12==0
sum eff
clear
*box13=1 if num3 low, num2 high, num1 low, box13=0 all else
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
```

```
gen box13=0
replace box13=1 if (num3==0 & num2==1 & num1==0)
drop if box13==0
sum eff
clear

*box14=1 if num3 low, num2 high, num1 high, box14=0 all else
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
gen box14=0
replace box14=1 if (num3==0 & num2==1 & num1==1)
drop if box14==0
sum eff
clear

*box21=1 if num3 high, num2 low, num1 low, box21=0 all else
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
gen box21=0
replace box21=1 if (num3==1 & num2==0 & num1==0)
drop if box21==0
sum eff
clear

*box22=1 if num3 high, num2 low, num1 high, box22=0 all else
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
gen box22=0
replace box22=1 if (num3==1 & num2==0 & num1==1)
drop if box22==0
sum eff
clear

*box23=1 if num3 high, num2 high, num1 low, box23=0 all else
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
gen box23=0
replace box23=1 if (num3==1 & num2==1 & num1==0)
drop if box23==0
sum eff
clear

*box24=1 if num3 high, num2 high, num1 high, box24=0 all else
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
gen box24=0
```

```
replace box24=1 if (num3==1 & num1==1 & num2==1)
drop if box24==0
sum eff
clear

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\diss_data"

drop num1 num2 num3 num4

save "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\diss_data", replace

clear

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\diss_data"

hist _1lpa1, percent
hist _1lpa2, percent
hist _1lpa3, percent
hist _1lpa4, percent

*First case (mean || median(p50) || LPA score)

hist _1lpa1, addplot(pci 0 3.83 8 3.83 || ///
pci 0 4 8 4 || pci 0 3.75 8 3.75)

hist _1lpa2, addplot(pci 0 3.41 1.5 3.41 || ///
pci 0 3.5 1.5 3.5 || pci 0 4 1.5 4)

hist _1lpa4, addplot(pci 0 2.43 1.5 2.43 || ///
pci 0 2.5 1.5 2.5 || pci 0 1.875 1.5 1.875)

*Second case

hist _1lpa1, addplot(pci 0 3.83 8 3.83 || ///
pci 0 3.995 8 3.995 || pci 0 4 8 4)

hist _1lpa2, addplot(pci 0 3.41 1.5 3.41 || ///
pci 0 3.49 1.5 3.49 || pci 0 3.5 1.5 3.5)

hist _1lpa3, addplot(pci 0 2.74 3 2.74 || ///
pci 0 2.01 3 2.01 || pci 0 4 3 4)

hist _1lpa4, addplot(pci 0 2.43 1.5 2.43 || ///
```

```
pci 0 2.5 1.5 2.5 || pci 0 2.83 1.5 2.83)

*Third case

hist _1lpa1, addplot(pci 0 3.83 8 3.83 || ///
pci 0 4 8 4 || pci 0 3.25 8 3.25)

hist _1lpa2, addplot(pci 0 3.41 1.5 3.41 || ///
pci 0 3.5 1.5 3.5 || pci 0 3.51 1.5 3.51)

hist _1lpa4, addplot(pci 0 2.43 1.5 2.43 || ///
pci 0 2.5 1.5 2.5 || pci 0 1.875 1.5 1.875)

clear all

*-----------------------module 3 (Regression Analyses)-----------------------------;

*Ordinal Logit Regressions

*MODEL 1

clear
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

*model 1.a

eststo: ologit eff _1lpa1 _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype _8blunt

ologit eff _1lpa1 _3sign _4ascale _4colla _4usinvl ///
_5lrelpow _6indcmt _7stype _7ttype _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Model_1_Results.doc", se bdec(2 5 3) varlabels replace starlevels(10 5
1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-
squared) summdec(1 2)

*model 1.b

eststo: ologit eff _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

ologit eff _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt
```

```
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_1_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

*model 1.c

eststo: ologit eff _1lpa1 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

esttab, se r2(4) label                                                    ///
title(Model 1: Level of Political Agreement within Sender State) ///
nonumbers mtitles("Model 1.a" "Model 1.b" "Model 1.c" )

ologit eff _1lpa1 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_1_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

coefplot, drop(?cons) xline(0)

*odds ration for model 1.c

ologit eff _1lpa1 _2scost _2tcost _3sign ///
 _4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
 _7stype _7ttype _8blunt, or

clear all

*MODEL 2

clear
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\diss_data"

*model 2.a

eststo: ologit eff _1lpa2 _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype _8blunt

ologit eff _1lpa2 _3sign _4ascale _4colla _4usinvl ///
_5lrelpow _6indcmt _7stype _7ttype _8blunt
```

```
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_2_Results.doc", se bdec(2 5 3) varlabels replace starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

*model 2.b

eststo: ologit eff _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt

ologit eff _2scost _2tcost _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_2_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

*model 2.c

eststo: ologit eff _1lpa2 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt

esttab, se r2(4) label                                                    ///
    title(Model 1: Level of Political Agreement within Sender State)      ///
    nonumbers mtitles("Model 2.a" "Model 2.b" "Model 2.c" )

ologit eff _1lpa2 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_2_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

coefplot, drop(?cons) xline(0)

*model 2.c odds ration

ologit eff _1lpa2 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt, or

clear all
```

```
*MODEL 3

clear
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

*model 3.a

eststo: ologit eff _1lpa3 _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype _8blunt

ologit eff _1lpa3 _3sign _4ascale _4colla _4usinvl ///
_5lrelpow _6indcmt _7stype _7ttype _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Model_3_Results.doc", se bdec(2 5 3) varlabels replace starlevels(10 5
1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-
squared) summdec(1 2)

*model 3.b

eststo: ologit eff _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt

ologit eff _2scost _2tcost _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Model_3_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5
1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-
squared) summdec(1 2)

*model 3.c

eststo: ologit eff _1lpa3 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

esttab, se r2(4) label                ///
title(Model 1: Level of Political Agreement within Sender State) ///
nonumbers mtitles("Model 3.a" "Model 3.b" "Model 3.c" )

ologit eff _1lpa3 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt
```

```
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_3_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

coefplot, drop(?cons) xline(0)

*model 3.c odds ration

ologit eff _1lpa3 _2scost _2tcost _3sign _4ascale ///
 _4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
 _8blunt, or

clear all

*MODEL 4

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\diss_data"
*model 4.a
eststo: ologit eff _1lpa4 _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype _8blunt

ologit eff _1lpa4 _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_4_Results.doc", se bdec(2 5 3) varlabels replace starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

*model 4.b
eststo: ologit eff _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

ologit eff _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output (etc.) Data\Model_4_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5 1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

*model 4.c
eststo: ologit eff _1lpa4 _2scost _2tcost _3sign ///
```

```
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

esttab, se r2(4) label                                                    ///
title(Model 1: Level of Political Agreement within Sender State)      ///
nonumbers mtitles("Model 3.a" "Model 3.b" "Model 3.c" )

ologit eff _1lpa4 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Model_4_Results.doc", se bdec(2 5 3) varlabels merge starlevels(10 5
1) sigsymbols(*,**,***) summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-
squared) summdec(1 2)

coefplot, drop(?cons) xline(0)

*Model 4.c odds ratio

ologit eff _1lpa4 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt, or

clear all
*Robustness Check

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

*Model 1.c
eststo: oprobit eff _1lpa1 _2scost _2tcost _3sign ///
 _4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
 _7stype _7ttype _8blunt

 oprobit eff _1lpa1 _2scost _2tcost _3sign ///
 _4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
 _7stype _7ttype _8blunt


outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_ordinal_m1.doc", ///
se bdec(2 5 3) varlabels replace starlevels(10 5 1) ///
sigsymbols(*,**,***) summstat(chi2\r2_p) ///
summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)
```

```
*Model 2.c
 eststo: oprobit eff _1lpa2 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt

oprobit eff _1lpa2 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_ordinal_m2.doc", ///
 se bdec(2 5 3) varlabels replace starlevels(10 5 1) ///
 sigsymbols(*,**,***) summstat(chi2\r2_p) ///
 summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

*Model 3.c
eststo: oprobit eff _1lpa3 _2scost _2tcost _3sign _4ascale ///
 _4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
 _8blunt

 oprobit eff _1lpa3 _2scost _2tcost _3sign _4ascale ///
 _4colla _4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
 _8blunt
outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_ordinal_m3.doc", ///
se bdec(2 5 3) varlabels replace starlevels(10 5 1) ///
sigsymbols(*,**,***) summstat(chi2\r2_p) ///
summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

*Model 4.c
eststo: oprobit eff _1lpa4 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

esttab, se r2(4) label          ///
title(Ordinal Probit Regression Results for Sanctions Success, A Robustness Check)  ///
nonumbers mtitles("Model 1.c" "Model 2c" "Model 3.c" "Model 4.c")

oprobit eff _1lpa4 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_ordinal_m4.doc", ///
se bdec(2 5 3) varlabels replace starlevels(10 5 1) ///
sigsymbols(*,**,***) summstat(chi2\r2_p) ///
```

```
summtitle(LR Chi-Squared statistic\Pseudo R-squared) summdec(1 2)

clear all

*------------------------module 4 (Logit)-----------------------------------;

*Logit Regressions

*logit reg. lpa1

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

logit ssuc _1lpa1 _2scost _2tcost _3sign _4ascale _4colla ///
_4usinvl _5lrelpow _6indcmt _7stype _7ttype ///
_8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Logit_lpa1_Results.doc", ///
se bdec(2 5 3) varlabels replace ///
starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) ///
summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)

*logit reg. lpa2

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

logit ssuc _1lpa2 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Logit_lpa2_Results.doc", ///
se bdec(2 5 3) varlabels replace ///
starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) ///
summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)
```

```
*logit reg lpa3

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

logit ssuc _1lpa3 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Logit_lpa3_Results.doc", ///
se bdec(2 5 3) varlabels replace ///
starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) ///
summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)

*logit lpa4

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

logit ssuc _1lpa4 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Logit_lpa4_Results.doc", ///
se bdec(2 5 3) varlabels replace ///
starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) ///
summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)

*predictive margins

*LPA1 margins plot

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
```

```
logit ssuc _1lpa1 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

margins, at( _1lpa1=(3.00, 3.08, 3.25, 3.33, 3.41, ///
 3.50, 3.66, 3.75, 3.83, 4.00))
marginsplot, xdimension(at(_1lpa1)) level(95)
marginsplot, recastci(rarea) level(99)

*LPA2 margins plot

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

logit ssuc _1lpa2 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

margins, at( _1lpa2=(1.5, 1.8, 2.3, 2.5, 2.6, 2.8, ///
2.9, 3.0, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 4.0))
marginsplot, xdimension(at(_1lpa2)) level(95)
marginsplot, recastci(rarea) level(99)

*LPA3 margins plot

clear all
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

logit ssuc _1lpa3 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

margins, at( _1lpa3=(2.00, 3.00, 3.5, 4))
marginsplot, xdimension(at(_1lpa3)) level(95)
marginsplot, recastci(rarea) level(99)

*LPA4 margins plot

clear all
use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"
```

```
logit ssuc _1lpa4 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

margins, at( _1lpa4=(1.5, 1.6, 1.7, 1.8, 1.9, 2, 2.1, ///
2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2))
marginsplot, xdimension(at(_1lpa4)) level(95)
marginsplot, recastci(rarea) level(99)

clear all

*Robustness check for standard logistic regression (probit used)

clear all

use "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA Input-Output
(etc.) Data\diss_data"

*model 1.c

eststo: probit ssuc _1lpa1 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

probit ssuc _1lpa1 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_standard_m1.doc", ///
se bdec(2 5 3) varlabels replace starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)

*model 2.c

eststo: probit ssuc _1lpa2 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt

probit ssuc _1lpa2 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_standard_m2.doc", ///
```

```
se bdec(2 5 3) varlabels replace starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)

*model 3.c

eststo: probit ssuc _1lpa3 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt

probit ssuc _1lpa3 _2scost _2tcost _3sign _4ascale ///
_4colla _4usinvl _5lrelpow _6indcmt _7stype ///
_7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_standard_m3.doc", ///
se bdec(2 5 3) varlabels replace starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)

*model 4.c

eststo: probit ssuc _1lpa4 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

esttab, se r2(4) label            ///
title(Standard Probit Regression Results for Sanctions Success, A Robustness Check) ///
nonumbers mtitles("Model 1.c" "Model 2c" "Model 3.c" "Model 4.c")

probit ssuc _1lpa4 _2scost _2tcost _3sign ///
_4ascale _4colla _4usinvl _5lrelpow _6indcmt ///
_7stype _7ttype _8blunt

outreg using "C:\Users\MEHMET\Desktop\1) Dissertation\2) Diss Data (Feb 24)\4) STATA
Input-Output (etc.) Data\Robustness_standard_m4.doc", ///
se bdec(2 5 3) varlabels replace starlevels(10 5 1) sigsymbols(*,**,***) ///
summstat(chi2\r2_p) summtitle(LR Chi-Squared statistic\Pseudo R-squared) ///
summdec(1 2)

clear all
```

REFERENCES

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ABSTRACT

INTERNATIONAL ECONOMIC SANCTIONS OUTCOME: THE INFLUENCE OF POLITICAL AGREEMENT

by

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Economic sanctions have been dubbed mainly as ineffective foreign policy tools by political scientists. Despite this, countries continue to use economic sanctions given their less intrusive and offensive nature compared to wars. Therefore, policy-makers have a high stake in learning the critical factors behind effective economic sanctions. Overall, it is understood that an effective sanctions episode compels one state to change its attitude or behavior on an issue, the target state, in line with what another state, sender state, desires. This has given rise to literature known as the determinants of economic sanctions in international political economy. This dissertation contributes to the ongoing study of economic sanctions by introducing a neglected factor, the level of political agreement. This construct refers to the extent to which relevant political actors in a state and international system supports or opposes the sanctions episode. This dissertation has identified three types of political agreements, the sender, the target and the international community. The dissertation sets forth several hypotheses testing the relationship between political agreement levels and economic sanctions outcomes. Utilizing empirical analyses, the dissertation found that higher levels of political agreement in the sender are associated with higher likelihoods for sanctions to be effective. Besides, higher levels of political

agreement on the opposition of sanctions in the target state are associated with less effective sanctions. Finally, higher levels of political agreement on the international level are associated with better chances for running an effective sanctions episode.

AUTOBIOGRAPHICAL STATEMENT

Mehmet Onder, 34, is a Ph.D. Candidate at Wayne State University working towards the completion of a Doctoral Degree in Political Science. His major area is World Politics (International Relations). His first minor field is Comparative Politics, and his second minor field is American Government and Politics. His research interests focus on international political economy, international conflict, and human security. He is currently working on his dissertation, studying the relationship between the actors' level of political agreement and international economic sanction outcomes. In 2015, he obtained a Master of Arts Degree in Political Science in the field of World Politics and a second Master of Arts Degree in Economics in the field of econometrics at Wayne State University. He also obtained a Graduate Certificate Degree in Peace and Security Studies from the Center for Conflict Studies at Wayne State University. He has a Bachelor of Science Degree in Systems Engineering at Turkish Military Academy. Prior to his graduate education at Wayne State University, he worked as a research assistant at the Security Studies Department at Defense Sciences Institute in Turkish Military Academy, Ankara, Turkey.