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International Cooperation Networks and Economic Sanction Effectiveness

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INTERNATIONAL COOPERATION NETWORKS AND ECONOMIC SANCTION EFFECTIVENESS

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Arts and Sciences
at the University of Kentucky

By
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2021

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ABSTRACT OF DISSERTATION

INTERNATIONAL COOPERATION NETWORKS AND
ECONOMIC SANCTION EFFECTIVENESS

An economic sanction issued by a group of states can impose large costs on a target state and induce a change in its behavior. However, there is considerable variation in the success of multilateral sanctions. I argue that multilateral sanctions will be more effective with higher cohesion within the sender network. This is because linked senders can use the threat of withdrawing cooperation on other issues to encourage their partners to enforce sanction laws domestically. I contend that the likelihood of sanction effectiveness increases with higher cohesion within the sender network and test this argument using social network analysis. Results show that multilateral sanctions are more likely to succeed when the sender network is cohesive due to greater military alliance and trade partnership linkages.

However, sanctions can still fail if target states avoid sanction costs by increasing trade with third-party states- through a process called sanction busting. An important unanswered question in sanctions research is: how can sanction busting be prevented from causing sanction failure? I argue that primary sanction senders can discourage busting by constraining third-party states that are likely to increase trade with the target post-sanctions. I identify these third-party states in two main ways: 1) the target's main trade partners, 2) states that trade similarly to senders, captured using above average export similarity with the primary sender. I argue that senders can constrain third-party states in two ways: 1) by threatening withdrawal of cooperation on shared issues, such as alliances and trade, and 2) offering additional benefits over these issues. This discourages sanction busting and ensures sanction success since third-party states value ties with the sender and would not want to lose associated, and potentially, additional benefits over these issues. Results show that sanctions are more likely to succeed with an increase in sender-third party ties.

If sanctions succeed with cohesive sender networks, and when third parties can be constrained, why do we not see more sanction coalitions including such states? I argue that states join sanctions for several reasons, ranging from foreign policy agreement with the primary sender, disagreement with the target, as a way to increase domestic approval, or to build their international reputation and legitimacy by sanctioning a target committing human rights abuse. Results show that the variety of reasons motivating sanction joining explain the number of suboptimal multilateral sanctions we see, and why it may not always be possible to form sanction coalitions with high cohesion or those that include potential sanction busters. This dissertation has implications for foreign policy making and discusses the necessity of and ways to utilize international cooperation to achieve important state objectives.

KEYWORDS: sanctions, cooperation, sanction busting, domestic approval, human rights

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INTERNATIONAL COOPERATION NETWORKS AND ECONOMIC SANCTION EFFECTIVENESS

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INTRODUCTION: THE IMPORTANCE OF A SANCTIONS-BASED DISSERTATION IN 2021

Economic sanctions are an increasingly important tool of foreign policy. Figure 1 shows variation in the number of economic sanctions issued from 1945-2005 (Morgan et. al, 2014). As you can see, more than half of the sanctions since 1945 were issued in the two decades after the Cold War ended in 1991. Mark Dubowitz, the executive director of the Foundation for Defense of Democracies, quoted in 2014 that "There's no doubt that sanctions have become the dominant instrument of coercive statecraft" (Lowrey, 2014). Jack Lew, former US Treasury Secretary, said in a 2016 speech that targeted economic sanctions have become a compelling form of foreign policy that are particularly useful in cases when diplomatic efforts are inadequate but military interventions are not feasible (Bhatia & Saraville, 2018; Lew, 2016). Rogoff (2015) contends that with nuclear proliferation, conventional warfare is increasingly unlikely, making economic statecraft a critical tool for states.

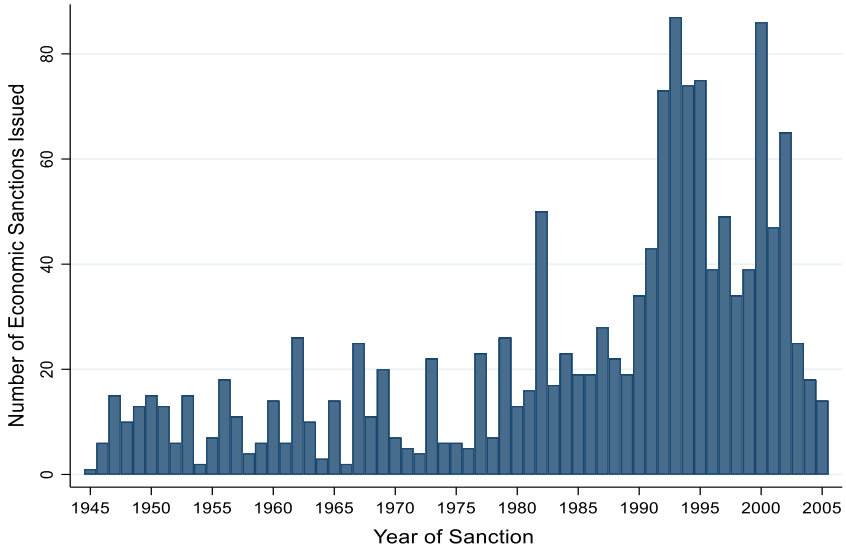


Figure 1: Number of economic sanctions issued from 1945-2005

In addition to being increasingly popular as a tool of foreign policy, sanctions are also highly impactful. Effective sanctions lead to change in target behavior and consequently, enable the sanctioning state/s to achieve their interests. After pressure from transnational advocacy networks and domestic audiences, South Africa's major trading partners imposed sanctions and arms embargoes on the regime, eventually contributing to the end of apartheid (Frieden et. al, 2015). This helped address the human rights crisis in South Africa, and also shows how states can use economic coercion to change the target state's behavior.

While sanctions are a key tool for senders to achieve policy objectives, they can also have unintended consequences for the most vulnerable populations in the target state. This was seen in Iraq in the 1990s and can be seen in Iran today. Garfield (1999) discusses how sanctions caused extreme food shortage in Iraq that led to high child mortality rates. Approximately 227,000 excess deaths from 1991-98 have been attributed to this. Far (2019) from the Human Rights Watch argues that current sanctions on Iran negatively affect humanitarian imports. This jeopardizes Iranian citizens' healthcare and access to medication. This, along with the falling value of the Rial, greatly harms Iranian citizens, especially during the ongoing Covid-19 pandemic ("Six charts that show…", 2019).

Sanctions, therefore, are an important topic of study, due to their increasing use as well as the magnitude of their impact. In my dissertation, I aim to study sanction effectiveness, so that sender states can change target behavior in a timely manner. In chapter 1, I discuss how states can work together to send effective multilateral sanctions. In chapter 2, I identify conditions under which states can avoid having their sanctions thwarted by third parties. In chapter 3, I examine the puzzle created by the first two

chapters- if working multilaterally and getting the support of third parties leads to sanction success, why are these states not a part of the sanction process? In all three chapters, I argue that the depth of cooperation among states is key to sanction effectiveness. It is crucial to understand sanction effectiveness so states can achieve their goals while avoiding long-term consequences on vulnerable target populations.

An effective economic sanction is one that is able to coerce the target into changing their behavior, while an ineffective sanction fails to do so. The Threat and Imposition of Economic Sanctions (TIES) dataset shows that from 1945-2005, sanctions were effective to some degree 56.25% of the time. If we consider full effectiveness, the percentage drops to only 26.07% (Morgan et. al, 2014). Research shows that sanctions are more likely to succeed when they are costly. Targets face sanction costs by losing out on valuable trade with the sender. High enough costs can coerce targets to cease their belligerent behavior and concede to sender demands (Drezner, 2000).

In addition to being sufficiently costly, sanctions need to be credible to be effective. A sender can issue exorbitant sanctions but if the target is not convinced of the sender's resolve, the sanction will have no effect. A credible sanction would make the target believe they would certainly lose trade benefits with the sender unless they changed their belligerent behavior. Ang and Peksen (2007) argue that sanctions appear credible when the issue of contention is highly salient to the sender/s. Another way of demonstrating credibility is the sender showing willingness to incur trade losses when sanctioning the target. Bapat and Kwon (2015) discuss that economic sanctions require senders to face both the trade withdrawal costs, as well as costs associated with monitoring and constraining domestic firms that trade with the target. Senders could also face political costs from

opposing these firms and disregarding their demands. Hence, sanctions appear credible to the target only when senders show commitment toward incurring costs of trade withdrawal as well as domestic opposition. Finally, sanctions can appear credible when they involve international institutions (Martin, 1993; Drezner, 2000). Institutions create audience costs and sometimes also have also have ex post mechanisms in place for defectors. This helps sender demands and offers appear credible to the target.

Therefore, in order to succeed in achieving state objectives, sanctions need to be costly and credible. The number of ineffective sanctions suggest that senders struggle with making them costly and credible. This becomes even more complicated when actors in addition to the primary sender and target join the sanction process. In chapter 1, I study sanctions where primary senders bring in more states to sanction the target, i.e. multilateral sanctions. These sanctions can be extremely costly for the target, since they involve trade withdrawal by multiple states. However, theses sanctions struggle with credibility, since ensuring cooperation among multiple states can be difficult. All senders need an incentive to incur not just the costs of trade withdrawal, but also the costs of constraining their domestic firms (Bapat & Kwon, 2015). In chapter 1, I identify conditions under which senders can have the incentive to incur both sanction costs and consequently issue effective sanctions. This is especially essential in cases international institutions cannot get involved. I find that when senders are heavily tied with each other over security and economic ties, they can hold each other accountable to sanction law and issue effective sanctions.

In chapter 2, I study sanctions that involve a third-party that increases trade with the target post-sanctions, making it easier for the target to evade sanction costs and continue their belligerent behavior (HSE, 1990; Early, 2009). This process is called sanction busting,

and can cause even costly and credible sanctions to become ineffective. In chapter 2, I argue that strength of ties between the primary sender and third party are key to constraining the third-party, discouraging sanction busting, and ensuring sanction success. Findings from this chapter show that as security and economic ties between the primary sender and third parties increase, the likelihood of sanction busting, as well as sanction failure, decreases. Together, chapters 1 and 2 help us understand when economic sanctions can be effective at changing target behavior.

Chapter 3 addresses the question of multilateral sanction participation. If cohesive multilateral sanctions are highly effective, and constraining potential sanction busters is necessary for sanction effectiveness, why are primary senders unable to obtain these states' participation? In this final chapter, I discuss the motivations behind states joining sanctions. I identify several reasons that can compel states to join the primary sender in issuing a multilateral sanction against the target. I find that states are more likely to join a sanction if they have similar foreign policy preferences as the primary sender, dissimilar foreign policy preferences to the target, and when the sanction is being issued over human rights concerns in the target state. This chapter fills a gap in sanction literature by studying sanction coalition formation. It also explains why we sometimes see suboptimal sanction coalitions, and why states ideal for sanction effectiveness do not join sanction processes.

In sum, this dissertation studies the following process: 1) States can use existing ties to motivate cooperation in a multilateral sanction, ensuring effectiveness due to high cost and credibility, 2) Despite this, third-party states may sanction bust to cause sanction failure. Primary senders can constrain third parties over shared ties to discourage sanction busting, 3) Consequently, it makes sense for primary senders to seek out states they have

large number of ties with to issue costly and credible multilateral sanctions with low likelihood of external trade replacement. However, potential sanction joiners have a wide range of reasons to join sanctions, and without the presence of these reasons, sanction joining is less likely. Together, these three chapters show how international cooperation motivates sanction participation *and* effectiveness. Moreover, the dissertation shows that relationships beyond the sender-target dyad are crucial to our understanding of sanction effectiveness.

CHAPTER 1: SENDER NETWORK COHESION AND MULTILATERAL SANCTION EFFECTIVENESS

1.1 Introduction

States have increasingly relied on multilateral efforts to sanction and change a target state's behavior. In fact, 42% of all multilateral sanctions since 1945 were issued in the 15 years after the end of the Cold War (Morgan et. al, 2014). Intuitively, multilateral sanctions should be highly effective at changing a target's behavior since target face sanction costs from not one but multiple senders (Miers & Morgan, 2002). The review of sanctions literature however reveals a puzzle. Research demonstrates that multilateral sanctions are not as effective as expected (Barber, 1979, Tsebelis, 1990, Miers & Morgan 2002, etc.). Multilateral sanctions are fully effective only 37.56% of the time (Morgan et. al, 2014). The aim of this project is to identify conditions under which sanctions are effective and make policy recommendations.

In this paper, I argue that multilateral sanctions issued by senders that have ties over various issues will be more effective in changing target behavior. One of the reasons why sanctions fail is that senders are unwilling to invest in preventing domestic firms from continuing trade with their target. However, more cohesive sender networks can use their ties to incentivize their partners to enforce sanction law domestically. The potential loss of linkages such as alliances and trade, in response to non-cooperation, holds senders accountable. When the target observes this accountability mechanism at play, it sees the sanction as credible and is more likely to submit to sender demands. In sum, I argue that multilateral sanctions are more likely to be effective when issued by a sender network with a high degree of cohesion.

To test this argument, I analyze the effectiveness of multilateral sanctions from 1946 to 2005. Utilizing the concept of cohesion in social network analysis, I calculate cohesion within each sender network. This is captured by looking at ties over military alliances and major trade partnerships, for all possible dyads within a sender network. I find support for my argument that as sender networks become more cohesive, they are able to implement more effective economic sanctions and compel target states to change their behavior.

The focus on sender state cohesion is valuable for not just the study of sanction effectiveness but also international cooperation and its effects on intervention outcomes. Third-party intervention and mediation are extensively studied as tools to discourage belligerent behavior by targets (Huth & Russett, 1984; Fortna, 2004; Balch-Lindsay et. al, 2008; etcetera). This project suggests that better intra-sender relations can be key to achieving these successful outcomes, and that cohesion among senders not only helps with coordination problems typical of multilateral endeavors, but also facilitates enforcement of joint decisions (Kaempfer & Lowenberg, 1999). In general, the argument draws on the concept of a long 'shadow of the future' where the desire to maintain important ties and their benefits in the future compels states to cooperate and enforce their joint cause in the present (Axelrod & Keohane, 1985).

This research proceeds as follows. In the next section, I provide a brief review of the sanctions literature and explain how this project adds to the understanding of multilateral sanction effectiveness. Following that, I describe the theoretical argument that increased sender cohesion contributes to success of multilateral sanctions. Next, I present

the research design and the empirical results. I conclude with a discussion of the implications of these results and suggestions for future research.

1.2 What we know about economic sanctions and effectiveness

Economic sanctions are a form of economic coercion, defined as threats or actions by a sender/s to disrupt economic exchange with a target unless they change their behavior (Bapat et. al, 2009). Sanctions are used in variety of scenarios, such as by the US and the European Union against Sudan in 1994 to encourage the formation of a peace agreement between the Sudanese government and the South Sudanese rebels ("EU arms embargo on Sudan", 2012). Another instance is that of the US, UK and France threatening sanctions against Burundi in response to the military coup of 1996 that led to severe human rights violations by the Tutsi government and Hutu militia (Morgan et al 2014; Weissman, 1997). More recently, states have used sanctions to deter nuclear proliferation. The European Union, US, South Korea and Japan have sanctioned North Korea in response to the renewal of its nuclear program (Chang, 2006). Similarly, Iran has faced sanctions by the European Union, Russia, China, and the US, and these sanctions were not lifted until sender demands of a peaceful nuclear program were met by Iran ("Trade sanctions on Iran", 2012).

An effective economic sanction would coerce the target into changing their behavior, while an ineffective sanction would fail to do so. For example, sanctions were used to change target behavior in Guatemala in 1991 and in Jordan in 1950, over salient issues such as regime change and territorial disputes, respectively. However, sanctions were successful only in the case of Guatemala (Morgan et. al, 2014). After sanctions were threatened in response to democratic backsliding and a coup attempt in Guatemala, then

President Jorge Serrano Elias stepped down- indicating sanction success (Golden, 1993). In the other example, Jordan faced sanction threats from Iraq, Egypt and Syria in 1950 after annexing West Bank and Old Jerusalem (Blum, 2016, p. 230; Drysdale, 1987, p. 87). These sanctions, however, failed and Jordan occupied this territory until 1967 (Morgan et. al, 2014; Blum, 2016). According to the Threat and Imposition of Economic Sanctions (TIES) dataset, a global database containing all cases of economic sanctions from 1946 to 2005, sanctions were effective, i.e., they compelled targets to concede to some or full degree, 56.25% of the time. Out of these cases, only 26.07% concluded in full success (Morgan et. al, 2014).

One of the major factors determining a sanction's effectiveness is how costly the sanction is for the target. Research shows that a target is more likely to concede to sanctions when they inflict high costs on the target. Sanctions can be costly for the target monetarily, when issued against democratic targets where leaders can be held accountable, or against personalist dictatorships that are more dependent on external sources of revenue (Drezner, 1999; Morgan & Schweback, 1997; Ang and Peksen, 2007; Nooruddin, 2002; Marinov, 2005; Allen, 2005; Lektzian & Souva, 2007; Wood, 2008; Peksen, 2009; Drury & Peksen, 2010; Drury & Peksen, 2012; Escriba-Folch & Wright, 2010). Targeted sanctions are shown to be more effective, since they directly harm the perpetrators of belligerent behavior and not uninvolved actors such as innocent civilians (Hufbauer & Oegg, 2000; Drezner, 2011). In sum, these arguments make a case about sanction costs- when sanctions are costly, they have a higher likelihood of success.

Given the importance of costs for sanction effectiveness, it is puzzling that multilateral sanctions are fully effective only 37.56% of the time. Multilateral sanctions

should be extremely costly for the target due to three reasons. First, these sanctions cause the target to face trade withdrawal from multiple states. Second, it would be difficult to replace loss of trade after losing multiple trade partners. Third, in addition to facing trade withdrawal the target would also face naming and shaming from multiple states. Despite being costly, why is there such variation in success of multilateral sanctions?

Scholars have argued that multilateral sanctions may fail due to the collective action problem (Martin, 1992; Kaempfer & Lowenberg, 1999). This problem presents in the following manner. The sanctioning process is costly for senders since they not only face trade withdrawal costs, but also costs associated with constraining domestic firms that trade with the target (Bapat & Kwon, 2015). These firms could disregard or evade sanction law and attempt to illegally continue trade. Senders could also face political costs from disregarding the firms' demands or punishing them in response to evasion. The outcome of an effective sanction is a public good- it benefits all senders regardless of who contributes the most to the sanction process or incurs most costs. This incentivizes senders to free-ride and avoid the sanctioning costs, while being able to receive the benefits of the target submitting to sanction demands. Thus, due to free riding, multilateral sanctions become ineffective.

Another proposed explanation for multilateral sanction failure is that it may be difficult for multiple senders to cooperate and agree over the sanctioning process. Cooperation becomes more challenging when more than one issue is at stake. States could dispute over which issue is more salient and how to address the issues. This failure of intra-sender bargaining could lead to the sanctioning process breaking down or using up a lot of

time and resources. Moreover, the target could benefit from this incoordination in two ways. First, they could wait for the sender coalition to fall apart due to lack of consensus and then continue their belligerent behavior. Second, since it would be difficult and time-consuming for multiple senders to come to a consensus, they may compromise heavily with the target just to come to a conclusion regarding the issue at stake (Miers & Morgan, 2002; Bapat & Morgan, 2009). Multilateral sanctions therefore, despite being costly to the target, could fail due to the collective action problem, or intra-sender bargaining failure.

Scholars have argued that international institutions can help solve these issues and increase the effectiveness of multilateral sanctions (Martin, 1993; Bapat & Morgan, 2009). First, international institutions act as mediators and facilitate cooperation among senders if disagreements and incentives to free ride exist. Second, some international institutions provide ex ante guarantees for cooperation, and these guarantees are bolstered due to repeated interactions that international institutions facilitate between involved actors (Abbott & Snidal, 1998). Third, bargaining within formal international institutions increases likelihood of audience costs if senders do not follow through with commitments (Martin, 1993). Fourth, some international institutions have mechanisms in place that can ensure ex post punishment for defectors of an agreement (Drezner, 2000). Thus, by encouraging cooperation, and discouraging defection, international institutions can help solve the collective action problem or intra-sender bargaining failure. Ex post punishments for defecting on commitments also helps sender demands and offers appear credible to the target, when sanction processes involve an international institution (Martin, 1993). This also contributes to multilateral sanction effectiveness.

This research paper, however, aims to introduce a non-institution condition as an explanation for multilateral sanction effectiveness. This is because of two reasons. First, international institutions may not always be willing to get involved. More than a quarter of multilateral sanctions between 1945-2000 did not have institutional involvement. Second, while institutions do predict sanction effectiveness, more than half of multilateral sanctions involving institutions were unable to achieve full acquiescence from the target (Morgan et. al, 2014). Thus, it is essential to determine how sanctions can succeed without institutional involvement, or increase in effectiveness when institutions are also involved. In other words, this paper presents both a non-institution and an institution-collaborative explanation of sanction effectiveness.

1.3 Sender Network Cohesion and Effective Multilateral Sanctions

States use coercion to compel change in a target's behavior. The logic of coercion dictates that the target state faces a cost or a threat of cost from sender states unless it changes its belligerent behavior. In this paper, I study the effectiveness of economic sanctions as a method of coercion. As aforementioned, economic coercion is defined as a threat or action by a sender/s to disrupt economic exchange with a target unless they change their behavior (Bapat et. al, 2009). The idea is that the target will face costs of trade disruption with senders as long as it continues its belligerent behavior. For the target, the costs of trade withdrawal and backlash from citizens in response to sanctions can compel submission to sender demands.

The logic behind the use of sanctions generates optimism about their effectiveness. In a highly globalized world, trade disruption can lead to huge costs that targets would aim

to avoid. Effectiveness of sanctions is a result of two factors: cost and credibility (Drezner, 2000; Ang & Peksen, 2007). For a sanction to be effective, it would need to be costly. If a sanction threat is not substantial, the target may be willing to bear the costs of being sanctioned and continue their belligerent behavior. Thus, when senders issue sanctions, they need to ensure that the target faces costs that are large enough to prompt change in behavior. Multilateral sanctions, due to being implemented by multiple states, should be extremely costly for the target. However, as discussed before, multilateral sanctions are often ineffective.

This ineffectiveness can be attributed to the other requirement of sanction effectiveness- credibility. Multilateral sanctions fail due to collective action and cooperation problems within a sender network (Martin, 1992; Kaempfer & Lowenberg, 1999; Miers & Morgan, 2002). If senders free ride by not spending additional resources on domestic enforcement of sanctions, credibility of the sanction decreases. In such a scenario, even if a costly sanction is threatened, the target would not believe that it would face the costs of trade withdrawal since the senders' domestic firms are unlikely to be constrained (Bapat & Kwon, 2015). The credibility of a sanction can also diminish if the target observes low levels of cooperation among senders of a multilateral sanction. This is especially likely if the sanction aims to address more than one issue since senders may disagree over how to prioritize and manage the issues (Miers & Morgan, 2002). In sum, when the target observes the inability of senders to enforce sanction law domestically, or cooperate while issuing sanctions, sanction credibility decreases- increasing likelihood of sanction failure. How can multilateral sanctions become more credible?

Multilateral sanctions appear credible to the target when senders show resolve toward incurring costs of trade withdrawal as well as domestic enforcement (Bapat & Kwon, 2015). Moreover, sender networks must display high levels of cooperation and agreement during the sanctioning process. In other words, senders need an incentive to incur all sanction costs as well as cooperate with each other while forming sanction law. I argue that pre-existing relationships or ties between senders can act as this incentive. An example of a tie is the bilateral trade agreement between the US and Australia ("Free Trade Agreements Australia", n.d.). Another example is the RIO pact, a military alliance that ties several states together in the Americas, such as, Brazil and Argentina ("The Rio Pact at a glance", 1982).

I use the concept of cohesion in social network analysis to illustrate ties between senders in a sender network. Cohesion refers to the connectedness of a network (Borgatti et. al, 2018). In other words, cohesion gives information on the number of connections between components of a network. In the context of multilateral sanctions, we can think of cohesion as the number of ties among senders that are jointly implementing a multilateral sanction. States form such ties, especially those that serve state interests such as military and trade ties, because they are advantageous. Formation of these ties indicates that states are willing to constrain their autonomy and spend time and resources to build friendly relations and achieve their interests. More ties indicate higher degree of sender network cohesion, and such a cohesive network provides multiple shared benefits.

States find these ties valuable and would not want to threaten the stability of these relationships and risk losing the associated benefits. This is how sender network cohesion helps address the first impediment to sanction credibility- collective action problem.

Senders could threaten to retract shared benefits if another sender is not enforcing sanction law (Stein, 1980; Martin, 1992). This opportunity exists as long as ties exist among senders- even if we cannot observe the punishment at play. Put differently, sender network cohesion holds states accountable to domestic enforcement of sanction law[1] even without an explicit display of withdrawal of cooperation. The mere threat of losing important ties keeps states committed to their joint cause. This makes the sanction credible to the target, allowing for sanction effectiveness.

The second obstacle to sanction credibility is cooperation problems during the sanctioning process. Senders may disagree while designing sanction law, and this becomes more challenging if the target is being sanctioned over more than one issue (Miers & Morgan, 2002). In addition to providing a punishment mechanism to hold senders accountable to sanction law, sender network cohesion can offer issue linkage benefits that facilitate cooperation during the sanctioning process. Issue linkage enables cooperation by introducing another issue to the bargaining table and offering benefits over this external issue (Poast, 2013). When senders are tied over issues such as military alliances and trade partnerships, they can offer benefits on these external issues to encourage cooperation during the sanctioning process. Issue linkage can also motivate senders to maintain "collective bargaining strength" (Haas, 1980, p. 372). This prompts senders to seek a cooperative solution and maintain the stability of their coalition even if disagreements exist. In sum, increase in sender network cohesion provides senders with an incentive to

[1] I assume that all states in a sender network can observe firm-level violation of sanction law, and constrain their domestic firms equally. This assumption also allows for state-level analysis, opposed to firm-level analysis. This assumption simplifies the analysis, but also works against my findings, since it will be more challenging for cohesion to compel states when they lack state capacity to monitor and constrain firms. As a result, if I still observe cohesion increasing sanction effectiveness, the assumption of all senders being able to constrain firms equally provides more confidence in my results.

cooperate over joint activities, such as sanction enforcement. To continue receiving benefits of ties within their network, senders would be motivated to cooperate during the sanctioning process, as well as spend additional resources on constraining their domestic firms. This solves both cooperation and collective action problems from diminishing sanction credibility and consequently, increases the likelihood of sanction effectiveness.

The target can also observe these interactions within the sender network. When senders are held accountable by other senders in the network to enforce sanctions domestically, the credibility of the sanction increases. Thus, targets have reason to believe that they will face high sanctions costs unless they acquiesce to sender demands. The target can also see how the experience of repeated interactions over other ties facilitates cooperation among senders, even if incentives to free-ride or disagreement over multiple issues exist (Kaempfer & Lowenberg, 1999, Miers & Morgan, 2002). Furthermore, sanction credibility is heightened since the target can observe strength of ties among senders and the resulting joint capabilities of a cohesive sender network. Thus, observing a sender network with high degree of cohesion and the resulting credibility of sanctions can encourage the target to change their behavior- whether in the form of a negotiated settlement, or partial or full acquiescence to sender demands. The main hypothesis in this paper is:

Cohesion Hypothesis: Increase in sender network cohesion increases the probability of multilateral sanction effectiveness.

1.4 Research Design

In this project, I utilize the Threat and Imposition of Economic Sanctions (TIES) dataset ranging from 1946-2000 (Morgan et. al, 2014). This dataset contains 1,412 cases of economic sanctions, and provides information about the senders and target of each sanction, the reason for sanctions, outcome of the sanction, etc. As aforementioned, an economic sanction is defined as a form of economic coercion, which is a threat or action by a sender(s) to disrupt economic exchange with a target state unless they change their behavior (Bapat et. al, 2009).

To test my theory, I use 196 cases of multilateral economic sanctions. Multilateral sanctions are those sanctions that are implemented by more than one state. I arrive at this sample size by omitting sanction cases that involved only one sender or were implemented solely by an international institution. This is because the theory pertains to interactions among states only. I do include some cases that were issued by the European Union, since senders in these cases were both the EU and other states.

Additionally, I omit cases that did not have data on the outcome of sanctions, i.e. if they were effective or not. This was necessary since sanction effectiveness is the dependent variable. Finally, I do not include cases that were not economic in nature, i.e. diplomatic sanctions and travel bans. The unit of analysis is a case of multilateral sanction.

1.4.1 Dependent variable: Multilateral Sanction Effectiveness

The dependent variable in this project is multilateral sanction effectiveness. This variable is an ordinal variable. If the sanction fails, or in other words, the target concedes to none of the sender demands, the variable is coded as 0. If the target agrees to a negotiated

settlement, i.e. there is some change in behavior in exchange for an action from the sender, the variable is coded as 1 (Morgan et. al, 2014). The variable is also coded as 1 if sanctions are partially effective, i.e. there is only some change in target behavior post sanctions. Finally, if the sanction is fully effective, i.e. when the target concedes to all sender demands, the variable is coded as 2. I disaggregate the outcome variable this way to clearly understand the effect of sender network cohesion (and other predictors in the model) on the variety of ways targets can respond to a multilateral sanction. The distribution of the dependent variable is in Figure 1.

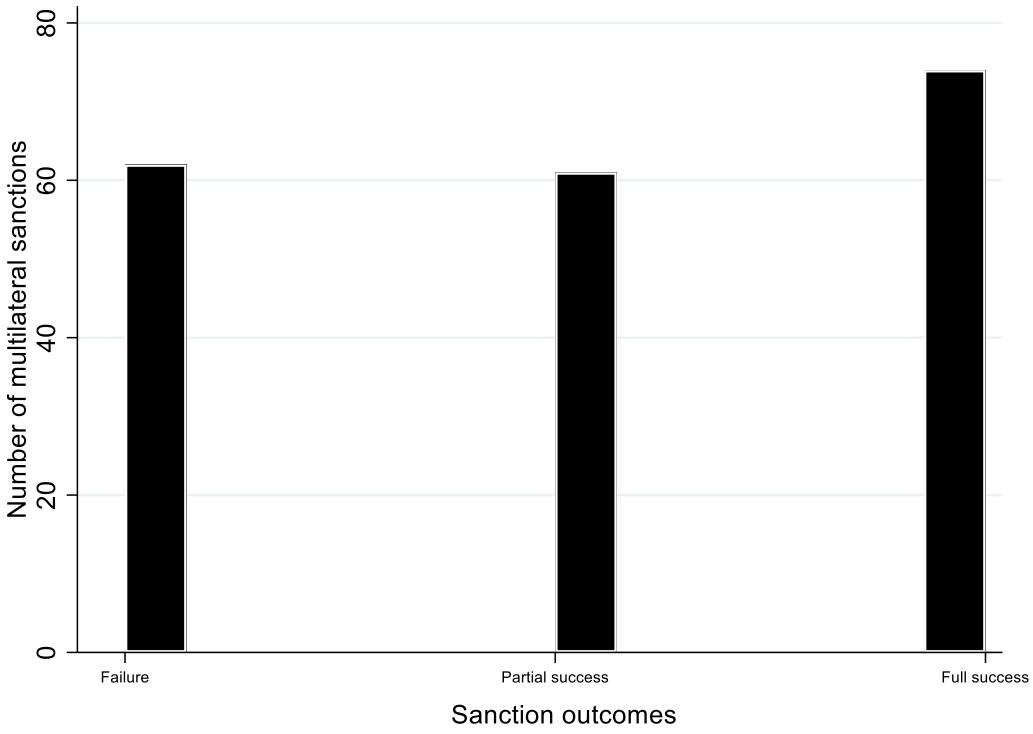


Figure 2: Distribution of Sanction Outcomes (DV)

1.4.2 Independent variable: Sender Network Cohesion

The main independent variable in this project is sender network cohesion. One way to measure cohesion of a network is by looking at density, which is the proportion of pairs

that are tied over an issue (Borgatti et. al, 2018). In this project, I consider alliances and major trade partnerships to be important ties between senders. By calculating network density based on these two factors, we can obtain an overall cohesion score for each sender network. I use these two issues to capture sender network cohesion because of the following reasons.

First, alliances are formal commitments between states that provide security benefits and indicate similarities in policy preferences and shared security interests (Bueno de Mesquita, 1975). Second, trade- especially between major trade partners- provides economic benefits and acts as an alternative platform to communicate issues (Oneal & Russett, 1997; Russett et. al, 1998). Both these ties provide an arena to senders for cooperative, repeated interactions, and also suggest norm and policy convergence between senders (Keohane, 1984; Axelrod & Keohane, 1985).

Deciding to form these ties indicates the states' willingness to constrain their autonomy to have friendly relations and achieve their interests. By considering alliances and major trade partnerships, I can capture security and economic ties, as well as broader cooperation and agreement over norms, between states in a sender network. I consider both ties together instead of separately since cohesion happens across multiple dimensions, and states care about both their security and economic benefits. Thus, to account for cohesion happening across both security and economic dimensions, and assuming equality between security and economic ties since they can both be equally important, I form an additive index with increasing values indicating more security or economic ties within a sender network. The more number and variety of issues senders tie over, the higher cohesion exists

within the sender network. Consequently, according to the theory, senders would domestically enforce sanction law to maintain the existing benefits of this cohesion.

Information on alliance ties comes from the Alliance Treaty Obligations and Provisions (ATOP) dataset (Leeds et. al, 2002). I look at every possible dyad within a sender network and give the dyad a score of 1 if there is any military alliance present. Next, I divide the number of alliance ties within the sender network over the total number of alliance pairs possible in the network. This gives me the density of the sender network based on alliances, and this value ranges from 0 to 1.

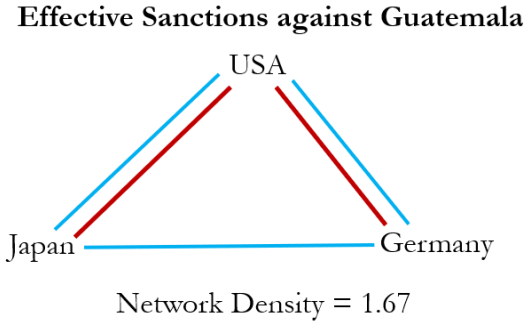
The trade linkage data comes from the Correlates of War Trade Dataset and the Expanded Trade and GDP data (Barbieri et. al, 2009; Gleditsch, 2002). Major trade partnership for each pair in a sender network is calculated in the following manner: if the shared trade between each pair (sum of imports sent from one country to another, and vice-versa) as a proportion of their GDP is higher than the average trade over GDP ratio for the whole dataset, then the tie gets a score of 1 (and otherwise zero). The total number of major trade partnerships are divided by the number of possible dyads in the sender network, to get network density based on trade linkage. This value also ranges from 0 to 1.

The final cohesion value for a sender network is the sum of its alliance and major trade partnership densities, and ranges from 0 to 2. The equation is below:

$$Cohesion = \frac{Total\ \#\ of\ alliance\ and\ trade\ ties\ in\ sender\ network}{\#\ of\ possible\ state\ pairs\ in\ sender\ network}$$

$$\#\ of\ possible\ state\ pairs\ = \frac{(Total\ \#\ of\ senders)\ x\ (Total\ \#\ of\ senders - 1)}{2}$$

The distribution of sender network cohesion values for each sanction case in the dataset is shown in Figure 2. To clarify this measure, let us consider the examples used earlier to illustrate sanction effectiveness. US, Japan and Germany threatened sanctions against Guatemala in 1991. Iraq, Egypt and Syria threatened sanctions against Jordan in 1950 (Morgan et. al, 2014). Figure 2 shows ties within each of these sender networks. In the first case, each pair of senders is tied over all issues except for Japan and Germany not having a military alliance. Thus, the cohesion value for this network is the number of ties over number of possible pairs within the network i.e. 5/3 which is approximately 1.67. This is quite a high score out of 2, and this sanction was effective at changing target behavior. In the second case, all three states (Iraq, Egypt and Syria) share a military alliance, but have no major trade partnerships (i.e. trade volume over the global average). Thus, there are three ties within the network and three possible pairs, which leads to the cohesion value being 3/3 = 1. This sanction case ended up being ineffective in changing the Jordanian government's behavior.



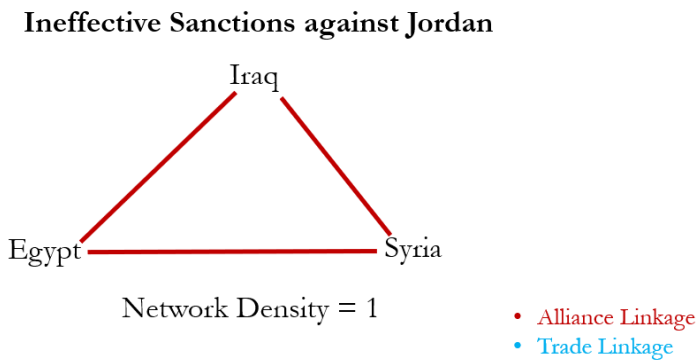


Figure 3: Sender networks in sanctions against Guatemala and Jordan

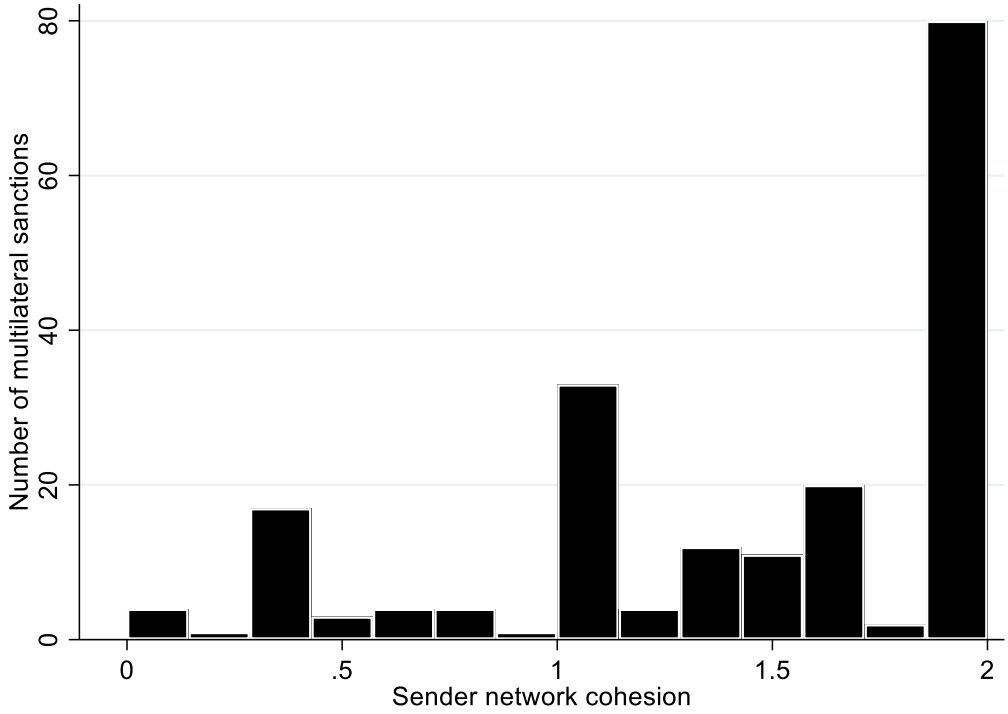


Figure 4: Distribution of sender network cohesion

Based on my method of calculating network cohesion, a potential question can arise. A network of say, two heavily tied states, has a higher cohesion score compared to a larger network of say, three states where two states are heavily tied and there is a third, mostly unlinked state. Do these networks act the same way, and is cohesion making us think the networks are somehow different? I argue that cohesion gives us valuable

information. Even if most senders in a network are highly tied with each other, an unlinked sender free riding can decrease the credibility and effectiveness of the entire network. States are less likely to cooperate with sanction law if any sanction sender is free riding, avoiding sanction costs, and still reaping benefits of a sanction.

Moreover, if primary senders constrain some senders while not others, it decreases the overall credibility of the sanction, and discourages all senders, cohesive or not, from following sanction law. In sum, cohesion not only tell us how senders can hold each other accountable, it also informs us of the sender network's ability to present as credible. In other words, sender networks issue effective sanctions when the whole network is cooperative, and not just a few pair of states with multiple ties.

1.4.3 Control variables and method

In this project, I first control for the presence of an international institution. I expect to see that international institution involvement makes sanction success more likely. This is because international institutions create audience costs for sender threats, and also allow for ex ante cooperation among senders and ex post punishment if any sender defects (Martin, 1992; Drezner, 2000). Next, I control for if the sanction case was over multiple issues, and I expect this variable to have a negative relationship with sanction effectiveness. This control accounts for the spatial argument, according to which the likelihood of non-cooperation among senders, and consequently sanction failure increases with an increase in the number of issues senders aim to address through sanctions (Miers & Morgan, 2002). I get data on institution involvement and number of issues from the TIES dataset (Morgan et. al, 2014).

Controlling for the target state's GDP helps account for the idea that higher state capacity and stability may make targets more resistant to sanction effects (Gleditsch, 2002; Morgan & Bapat, 2009). I also use the Polity IV dataset to control for the target state's democracy levels (ranging from -10 to +10, with a higher number indicating a more democratic state) (Marshall et. al, 2016). I use this control as sanctions could be more effective if the target state is democratic (Brooks, 2002). This is because state leaders can be more easily compelled by the people through threat of removal from office if the target is a democracy.

I include a control variable capturing similarity in state preferences. It is possible that senders cooperate effectively during the sanction process since they have similar foreign policy preferences. Therefore, I use Affinity of Nations agreement scores to capture similarity in UN voting behavior (Gartzke, 2006). If states have a comparable voting record, they are likely to care about the same issues as other senders in the multilateral sanction. This would motivate cooperation among senders, and consequently, increase likelihood of sanction effectiveness.

I also control for strength of ties between the primary sender of the multilateral sanction and the target state. McLean and Whang (2010) show that sanctions are more successful when issued by a major trade partner. Following the logic in my main argument, it is possible that just as senders can constrain each other over existing ties, it may be easier for senders to constrain a target if they share linkages. Thus, this control variable indicates how strong the primary sender-target relationship is, based on whether they have ties over alliances and major trade partnerships (calculated in the same manner as the dependent variable as discussed above).

I include a control variable that captures how salient the issue is over which sanctions are being issued. This is because targets may be less likely to concede to sanction demands if the contended issue is of high security importance. I consider the issue as salient if the sender's goal is to contain the target's political influence or military behavior, destabilize their regime, resolve a territorial dispute the target is involved in, deny strategic materials to the target, punish their alliance or alignment choice, prevent weapons proliferation by the target, or discourage their support for non-state actors (Morgan & Bapat, 2009). I include a control variable for sanction size, to account for varying difficulty in constraining and holding accountable a big network versus a smaller one. Finally, I control for the Cold War to account for the differing power hierarchy in the international system.

Since the dependent variable is an ordinal variable with three possible (ordered) outcomes (sanction failure, negotiated settlement or partial effectiveness, full effectiveness), I use ordinal logistic regression to examine the effect of sender network cohesion on multilateral sanction effectiveness[2]. Model 1 looks at the bilateral relationship and excludes control variables. In Model 2, I include the control variables discussed above.

1.5 Results

Table 1: Main results

Effect of sender network cohesion on multilateral sanction effectiveness		
	(1)	(2)
	Model 1: w/o controls	Model 2: w/ controls
Sender network cohesion	0.56**	1.08**
	(0.23)	(0.36)

[2] The Brant test in STATA demonstrates that the proportional odds assumption has been met.

Table 1 (continued)

Institution involvement		0.89*
		(0.39)
Multiple issues		-0.08
		(0.41)
Target GDP		-5.90**
		(2.55)
Target democracy		0.06
		(0.03)
Sender agreement score		-1.34
		(1.08)
Sender-target relations		0.07
		(0.23)
Issue salience		-0.10
		(0.40)
Sender network size		0.23
		(0.14)
Cold War		0.34
		(0.36)
/cut1	0.02	1.01
	(0.35)	(1.22)
/cut2	1.35	2.67
	(0.37)	(1.24)
Observations	196	146

Standard errors in parentheses
**p ≤0.01 *p ≤0.05

Results across both models indicate that increase in sender network cohesion increases probability of sanction effectiveness. Figures 5, 6, and 7 shows predicted probabilities for each sanction outcome based on variation in sender network cohesion

(based on Model 2). Figure 5 depicts that as sender cohesion goes from 0 to 1, likelihood of sanction failure decreases by 36.67%. However, if cohesion values go from 0 to 2 (maximum value), likelihood of sanction failure decreases to 69.60%. The effect of cohesion on partial success or negotiated settlement post-sanctions can be seen in Figure 6. There is a 63.35% increased likelihood of a sanction being partially effective or ending in a negotiated settlement when cohesion values go from 0 to 1. If cohesion increases all the way to 2, this likelihood increases to 68.38%%. Finally, Figure 7 shows how cohesion affects likelihood of full sanction effectiveness. When cohesion values increase from 0 to 1, chances of full sanction success increase by 157.92%. When cohesion within the sender network attains its maximum value, i.e., 2, the likelihood of full sanction effectiveness increases dramatically to 453.95%.

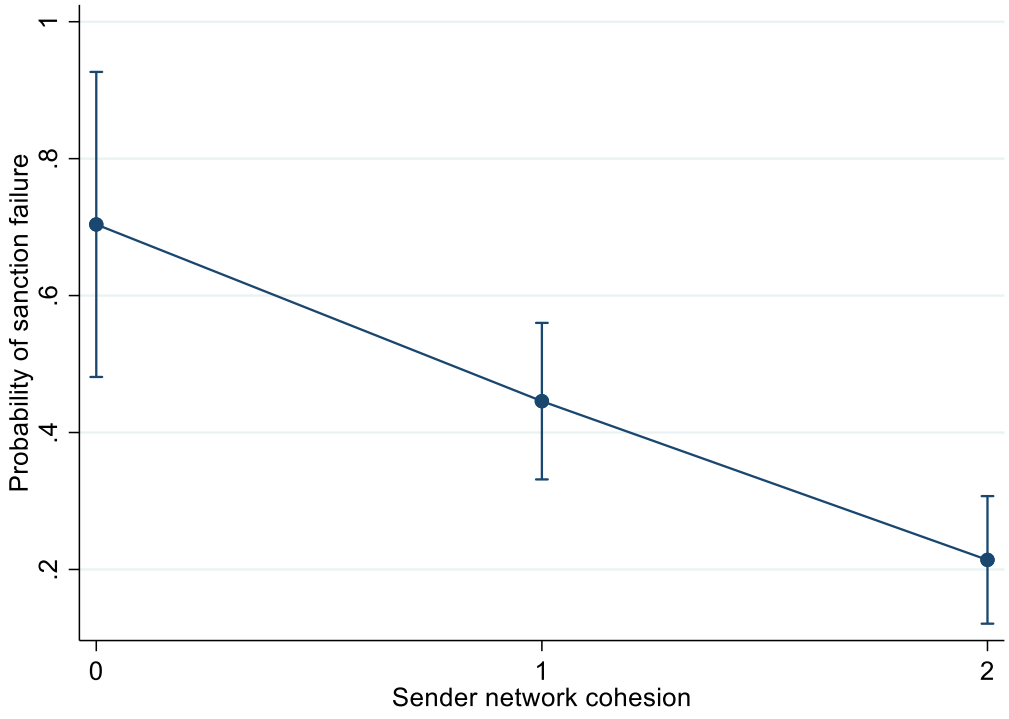


Figure 5: Probability of sanction failure with increase in sender network cohesion

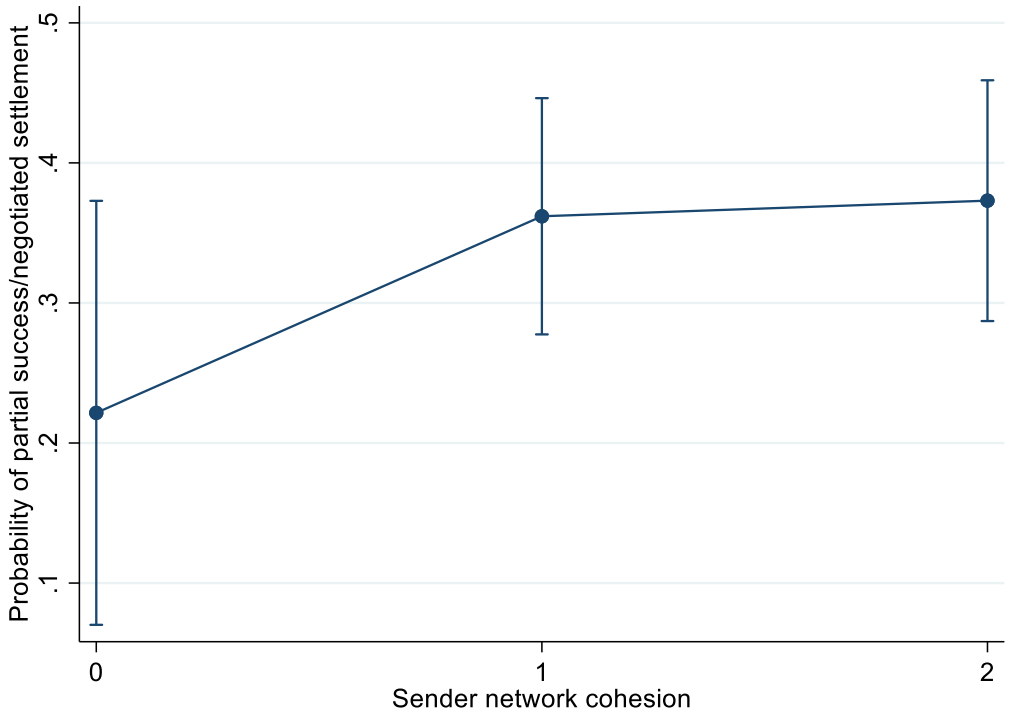


Figure 6: Probability of partial sanction success and negotiated settlements with increase in sender network cohesion

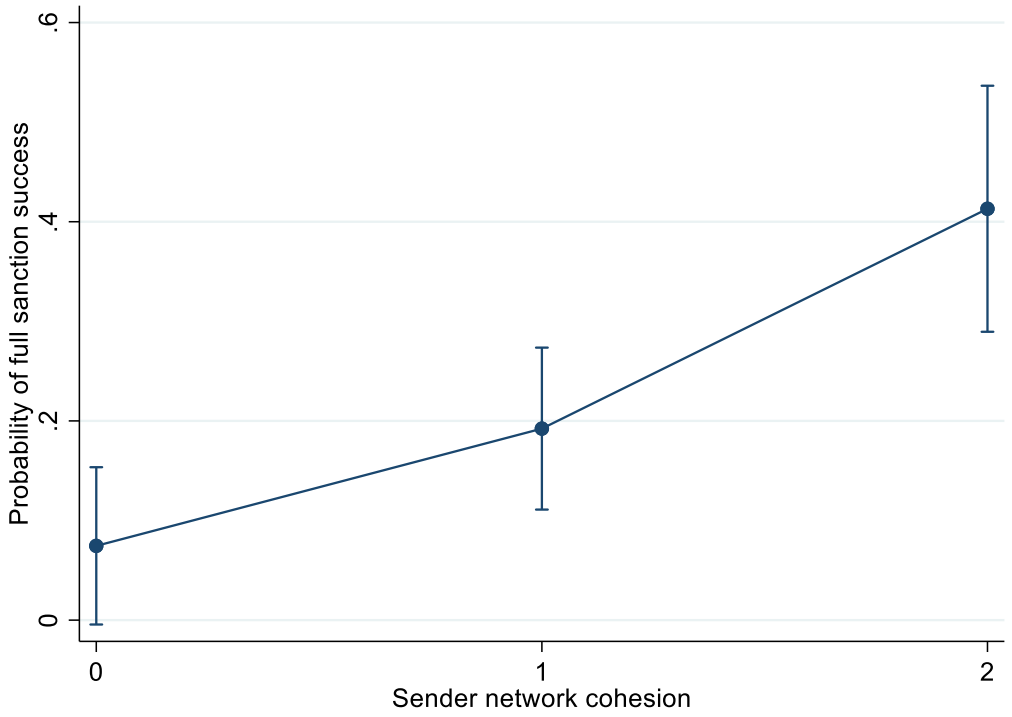


Figure 7: Probability of full sanction success with increase in sender network cohesion

International institutions and target GDP have expected effects in Model 2, with institutional involvement increasing likelihood of sanction effectiveness and increase in target GDP decreasing likelihood of sanction effectiveness. These results are in accordance with existing findings, as discussed before. Institutions provide senders space for cooperation, allow for repeated interactions, and may in some cases have provisions to punish defection. Thus, they can contribute to multilateral sanction success. It also makes sense why target GDP is negatively associated with sanction effectiveness. If a target has high GDP, sanctions are less likely to hurt their economy and compel them to change their behavior. The model controls for sender-target relations, which accounts for shared trade between the sender and target. Controlling for this provides additional confidence that increase in target GDP reduces likelihood of sanction effectiveness. Remaining control variables have no effect on sanction success, indicating we cannot make conclusions about whether presence of multiple issues, the target's democracy levels, similarity in sender preferences, sender-target relations, issue salience, sender network size, or the different power hierarchy during the Cold War, have an impact on the likelihood of multilateral sanction effectiveness.

I also include four robustness checks here. First, it is possible that cohesive sanction networks only emerge when they are highly likely to succeed. In other words, states may be selecting into sanction coalitions when it is an easy sanction case. In Table 2, Model 3, I address this concern and show that cohesion is not a consequence of easy sanctions and therefore does indeed help with sanction effectiveness. Here, sanction network cohesion is the dependent variable, and the independent variables are conditions that would make a sanction difficult to succeed. These conditions are the target's GDP and democracy since

an economically strong target is harder to coerce with sanctions while a democratic target is easier to coerce (Morgan & Bapat, 2009; Allen, 2005; Gleditsch, 2002; Marshall et. al, 2016). There is overwhelming evidence that suggests international institutions lead to sanction effectiveness, so I include a variable indicating institutional involvement (Martin, 1993; Drezner, 2000; Bapat & Morgan, 2009; Morgan et. al, 2014). I also include a variable that indicates if the multilateral sanction is addressing multiple issues, since research shows that multiple issues make sanction success less likely (Miers & Morgan, 2002; Morgan et. al, 2014).

Table 2: Test for if senders select into cohesive networks when sanctions are easy cases

	Model 3
Variables that make sanction effectiveness less likely	DV: Sanction cohesion
Target GDP	1.29*
	(0.65)
Target democracy	-0.03**
	(0.01)
Institution involvement	-0.20*
	(0.10)
Multiple issues	-0.09
	(0.11)
Constant	1.51**
	(0.01)
Observations	152

Standard errors in parentheses
**p<0.01 *p<0.05

Results from the multivariate regression show that conditions that make a sanction easy do not predict sender network cohesion. Increase in target GDP and decrease in target democracy leads to higher likelihood of a cohesive sender network. This means that it is

actually a harder sanction (against an economically powerful and/or non-democratic target) that attracts a cohesive sender network. Number of issues do not influence the cohesion within a sender network, but when institutions do not get involved, cohesive networks are more likely. As aforementioned, cohesion can be an alternative solution to concerns that multilateral sanctions face especially when international institutions cannot get involved. Results here indicate that senders form cohesive networks when they do not receive institutional assistance. The absence of institutions also makes these sanction cases difficult to succeed, showing that senders are not selecting into cohesive networks because the sanction cases are easy.

The second robustness check examines the accuracy of my argued theoretical mechanism, i.e., trade between senders and the target should decrease after sanctions are imposed by a cohesive sender network. In other words, if cohesive networks cause senders to follow sanction law, constrain domestic firms, and cease trade with the target, we should see a decrease in trade between senders and the target post-imposition of sanctions. I create a variable named trade change which is:

$$\frac{Trade\ between\ senders\ and\ target\ in\ year\ of\ sanction}{Target's\ GDPPC\ in\ year\ of\ sanction} - \frac{Trade\ between\ senders\ and\ target\ in\ 1\ year\ after\ sanction}{Target's\ GDPPC\ in\ 1\ year\ after\ sanction}$$

The graph below (Figure 8), as well as the correlation of 0.14 suggests that trade change is positively correlated with sender network cohesion. In other words, trade between senders and target *decreases* one year after the sanction is imposed by a cohesive sender network.

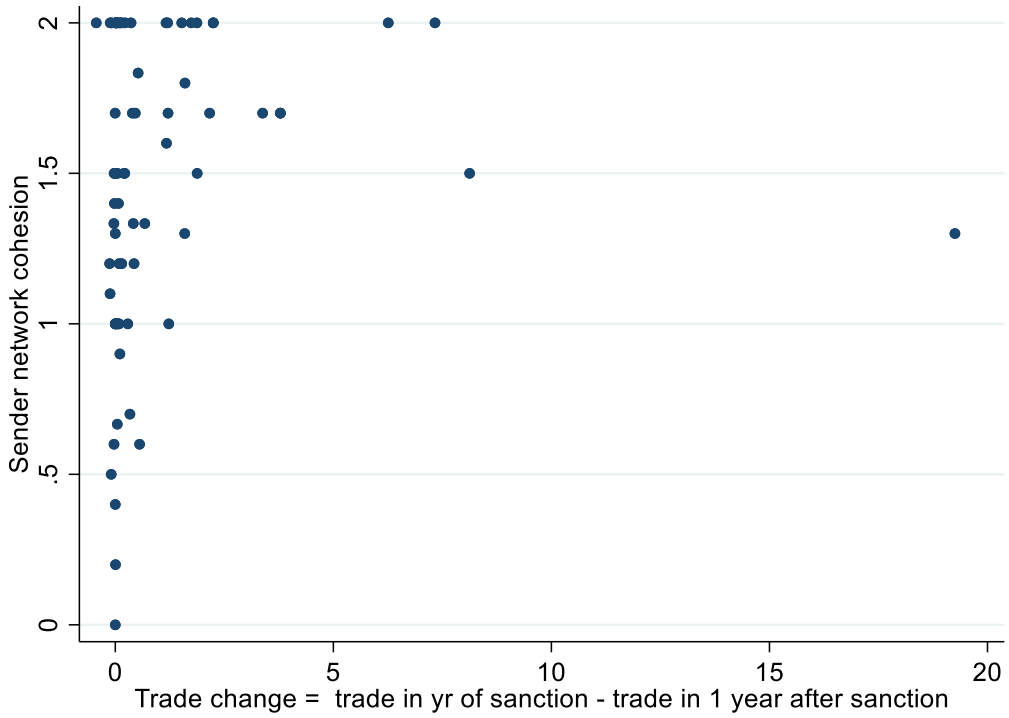


Figure 8: Correlation between sender network cohesion and one-year trade change b/w senders and target post-sanction imposition

As a third robustness check, I include Model 4 in Table 3 that excludes the 30 EU multilateral sanctions in the sample. The Common Foreign and Security Policy (CFSP) pillar of the EU is used to implement EU sanctions, and requires consensus from all member states, and an intergovernmental, community approach is utilized for "unified implementation of financial sanctions" (Hufabuer and Oegg, 2003, p. 555). This unanimity and commitment to the sanction cause by EU member states could be driving sanction effectiveness. In fact, in my sample, EU cases have above average cohesion. Thus, the EU may be issuing more effective sanctions due to its supranational infrastructure and not due to high levels of cohesion within its sender networks.

France is used as a proxy for the EU so sender network cohesion could be calculated

in cases where the EU was one of the senders. France was most well-connected to other senders in these cases compared to when other major EU states were used as proxies. If this may be driving results, in addition to the potentially higher cooperation levels within the EU in general, owing to its supranational structure, Model 4 provides additional confidence in the main results. Even without EU cases in the sample, sender network cohesion explains sanction success.

Finally, I include Model 5 in Table 3, that has an additional control for sanction costs to the target. It is not included in the main model due to a high number of missing cases. (Morgan et. al, 2014). Main results still hold- sender network cohesion continues to have a significant and positive effect on sanction effectiveness.

Table 3: Ch. 1 additional robustness checks

Effect of sender network cohesion on multilateral sanction effectiveness		
	Model 4: excluding EU	Model 5: Sanction costs control
Sender network cohesion	1.02**	1.12**
	(0.38)	(0.42)
Sanction costs		1.22**
		(0.31)
Institution involvement	0.81*	0.58
	(0.40)	(0.44)
Multiple issues	0.17	-0.13
	(0.43)	(0.45)
Target GDP	-5.56	-4.21
	(2.65)	(3.09)
Target democracy	0.06	0.06
	(0.04)	(0.04)

Table 3 (continued)

Sender agreement score	-1.25	-1.59
	(1.10)	(1.21)
Sender-target relations	0.22	0.18
	(0.24)	(0.26)
Issue salience	-0.11	-0.24
	(0.42)	(0.46)
Size of sender network	0.30*	0.20
	(0.15)	(0.16)
Cold War	0.43	0.39
	(0.40)	(0.40)
/cut1	1.54	2.61
	(1.29)	(1.46)
/cut2	3.27	4.53
	(1.32)	(1.50)
Observations	133	126

Standard errors in parentheses
**p<0.01 *p<0.05

1.6 Conclusion

This project shows that as a network of sender states becomes more cohesive, or dense over issue-based ties, multilateral sanctions issued by such a network are more likely to succeed. In other words, senders can utilize ties such as alliances and major trade flows between each other as an accountability mechanism for all senders to follow sanction law. This entails not only agreeing to issue sanctions, but also enforcing them domestically by monitoring and punishing firms. When sanction law is followed, sanctions are more likely to succeed. In addition, this accountability mechanism among senders makes multilateral sanctions appear more credible to the target, making them more likely to concede, leading to sanction effectiveness. I test this theoretical argument and find that sender network

cohesion leads to sanction effectiveness even after accounting for the institutional and spatial explanations of multilateral sanction effectiveness.

CHAPTER 2. CONSTRAINING THE SANCTION BUSTER AND ENSURING SANCTION EFFECTIVENESS

2.1 Introduction

Russia has been the target of US sanctions since 2014 after annexing and occupying Crimea (Sanger & Kramer, 2021). More than 700 Russian entities have been targeted by these sanctions that also prevent U.S. trade or investment in occupied Crimea ("U.S. Sanctions on Russia…", 2021). Despite being heavily imposed and creating high costs for Russia, these sanctions have failed to achieve policy goals. Why is this the case? In this chapter, I argue that sanction success also depends on actors outside the sanction process. Since October 2018, India has been coordinating with Russia to purchase the $5.2 billion S-400 missile system (Mandhana, 2018). This is in line with India's long-term dependence on the Russian weapons industry to address its regional security concerns. Consequently, the US has threatened India with sanctions in accordance with the Countering American Adversaries Through Sanctions Act (CAATSA). India's reasoning to continue the missile deal with Russia and risk US retaliation was that Russia has been their long-standing, main weapons supplier. As Russian envoy Roman Babushki quoted, "(our) relations are time tested" (Macias, 2019). This example illustrates how a third-party state, in this case the target's major trade partner, can help the target evade sanction costs and hinder the sender's policy objectives.

Third-party states can also interfere with sanction effectiveness by providing the target with an alternative import market. After being sanctioned by the US in 2019, Russian firms have substituted the United States' pre-sanctions role as exporter of crude oil diluents to Venezuela (Brown, 2020; Foy, 2020). American oilfield service companies such as

Chevron have also constrained trade in Venezuela post-sanctions. (Brown, 2020). It appears that to ensure sanction effectiveness, sanctioning states, or senders from hereon, need to constrain third-party states that help targets avoid sanction costs. This process of third parties helping targets is called sanction busting (HSE, 1990; Early, 2009). The United States is the sender in both examples above, and has attempted to constrain both kinds of sanction busters. In the first example, India, as Russia's major trade partner, has been at risk of sanctions from the US since April 2019 unless they discontinue the arms deal with Russia (TRTWorld, 2019). In the second example, the US has sanctioned Russian firms that have provided a similar market as the US to Venezuela (Foy, 2020). However, both India as well as Russian firms in Venezuela continue to sanction bust today.

Sanction busting can therefore, be a major impediment to sanction effectiveness. Targets can either increase trade with their existing major trade partners, or seek markets similar to the sender to evade costs of trade loss with the sender. To ensure sanction success, it is imperative that senders identify these potential sanction busters, and determine how to discourage them from sanction busting. In this project the research question is: **how can sanction busters be prevented from causing sanction failure?** I argue that ties between senders and third parties are the solution. When senders and third parties are connected on multiple, crucial issues, senders can threaten loss of cooperation, or offer additional benefits over these issues, to dissuade sanction busting. When the target faces sanction costs, along with low possibility of trade replacement from third parties, they are more likely to concede to sanction demands.

This question is an important avenue for research so senders can preemptively constrain sanction busting and ensure foreign policy success. Furthermore, sanction

busting can allow continuation of a target's belligerent behavior, leading to severe consequences such as repression and political violence in both the target and third-party states. For instance, some UN sanctions against North Korea were evaded using third-party actors such as Libya, Sudan, and Iran-backed Houthis in Yemen, allowing North Korea to export nuclear weapon supplies (Luce & Mitchell, 2019). Sanction busting in this case not only maintains the totalitarian regime in North Korea- it also perpetuates violence in these third-party states since they import small arms from North Korea. Sanction busting can cause well-developed sanction policies to fail, as well as propagate violence elsewhere. Therefore, it is crucial to study how senders can prevent sanction busting and ensure sanction effectiveness.

This research proceeds as follows. In the next section, I provide a review of sanctions research to explain how this project adds to the understanding of sanction effectiveness. Following that, I describe the argument that sanctions are more likely to be effective when sender-third party ties are utilized by the sender to discourage sanction busting. Next, I present the research design and the empirical results. I conclude with a discussion of the implications of these results and suggestions for future research.

2.2 When are sanctions effective?

Economic coercion is defined as a threat or action by a sender(s) to disrupt economic exchange with a target unless they change their behavior (Bapat et. al, 2009). An effective economic sanction is one that is able to coerce the target into changing its behavior. An ineffective sanction, despite being threatened, would not change the target's behavior. According to the Threat and Imposition of Economic Sanctions (TIES) dataset,

a global database containing all cases of economic sanctions from 1946 to 2005, sanctions were effective, i.e., they compelled targets to concede to some or full degree, 56.25% of the time. Out of these cases, only 26.07% concluded in full success (Morgan et. al, 2014).

How can sanctions be more effective? As we learned in chapter 1, sanctions need to be costly *and* credible to be effective. Targets are more likely to be deterred by sanctions when these sanctions impose high costs on them. In other words, sanctions can coerce targets better when the costs of not conceding are high (Drezner, 1999). Sanctions are also costly for sender states. In addition to incurring costs of trade loss with the target, senders need to spend resources monitoring and constraining domestic firms to prevent them from evading sanction law (Bapat & Kwon, 2015). When a sender is committed to incurring these costs, sanctions appear more credible to the target and are therefore more likely to be effective (Morgan & Schweback, 1997).

In short, sanctions succeed when they are both costly and credible. Referring to the sanctions against Russia and Venezuela again- both cases are examples of credible foreign policy. These sanctions have been continually and heavily imposed in response to lack of change in target behavior and have cost senders like the US significant losses especially with regards to oil trade. These sanctions have also been extremely costly for the targets. Cuts to foreign direct investment may have cost Russia about $50 billion per year (Aslund & Snegovaya, 2021). In the case of Venezuela, US sanctions have cost Venezuela revenue loss between $17 billion to $31 billion. In addition, reports show that the "average monthly public imports to Venezuela dropped by 46 percent (to $500 million) in 2019 and another 50 percent (to $250 million) in 2020" (Oliveros, 2020, para. 5). A disastrous consequence of these high costs is scarcity of food, water, medicines and vaccines in Venezuela

(Pozzebon & Hu, 2021). Despite being credible *and* costly, why are these sanctions unable to change target behavior? It appears that for sanctions to be effective, it is not enough that they are credible and costly. In this paper, I focus on an issue that can impair the most well-designed sanctions: sanction busting.

2.3 The effect of trade replacement on sanction success

One of the main ways targets can avoid sanction costs and continue their behavior is by substituting loss of trade with the sender with trade benefits from a third-party state. This process is called sanction busting (HSE, 1990; Early, 2009). Sanction busting has been shown to decrease the likelihood of sanction effectiveness since targets can avoid sanction costs through trade substitution (Early 2009, 2012; McLean & Whang, 2010). For third-party states, sanctions open up viable opportunities with the target, encouraging sanction busting which then leads to sanction failure (Lektzian et. al, 2007).

It is perhaps surprising that scholars have identified sanction busting as a major cause of sanction failure without discussing how to prevent it. Sanction effectiveness is dependent on harming the target's economy sufficiently so as to deter them from continuing their problematic behavior. Furthermore, sanctions, like any policy, are costly for senders as well. Senders lose profits due to disruption of trade with the target. In addition, as Bapat and Kwon (2015) discuss, senders need to spend additional resources restricting domestic firms from trading the target while sanctions are in place. Therefore, sanction busting is a serious obstacle to the success of costly sanction policies, and research needs to consider ways to prevent it.

To theorize a way to prevent sanctions busting, it is essential to look beyond the sender-target strategic interaction that has governed the study of sanctions. Research has considered involvement of non-sender and non-target states in sanction processes, but these states are not treated as strategic unitary actors. In McLean and Whang's 2010 study, for example, the behavior of third-party states is considered part of the costs faced by the target. In other words, the target faces less costly sanctions if a third-party is supportive, and more costly sanctions if the third-party chooses to support the sender/s instead. However, if we wish to avoid sanction busting, it is essential to think of third parties as independent actors, and identify them as potential sanction busters before the sanction is implemented so they can be constrained and prevented from causing sanction failure.

2.3.1 Identifying sanction busters

Who are these sanction busting third parties? Early (2009) discusses several characteristics of third-party states that engage in sanction busting. For instance, third parties are more likely to sanction bust when they are economically strong (hence being able to support the target to overcome sanction costs), have a more open economy, and are heavily trade-dependent on the target. He finds that economic factors are substantively more important predictors of sanction busting (compared to security factors such as shared alliances). He writes, "…the situations in which firms have strong economic interests in sanctions-busting are roughly 19 times more likely to sanctions-bust than in the scenarios in which those interests are absent… when state interests are opposed but firm economic interests are present, the predicted probability of a state sanctions-busting is still very high." (p. 65). In other words, Early's work shows that sanction busting is usually driven by

commercial needs, and consequently, this paper also focuses on economic characteristics of sanction busters.

I identify these potential sanction busting, third parties in two ways: 1) the target's main trade partners (Early, 2011; McLean & Whang, 2010): these states already have trade ties with the target and can increase trade that helps targets evade sanctions costs, and 2) states that trade similarly to senders: these states can be actors that may not have previous ties with the target, but observe a trading opportunity with the target as they can provide a good alternative to the sender's markets. These markets can be highly profitable for sanction busters since they can inflate prices as the target has limited or no exporters for the products after being sanctioned (Kaempfer & Lowenberg, 1999; Early, 2012). Thus, this is an especially important and novel way of identifying sanction busters, because while major trade partners can help targets avoid large economic losses in general, sanction busters in the form of states that trade similarly to the sender allow the target to access the *specific* goods that senders are not exporting anymore due to sanctions.

Going back to the examples that motivated this paper to further exemplify the two identifiers- India is a good example of the first type of sanction buster. India is Russia's major trade partner and by signing a substantial arms deal, they are helping Russia with costs threatening the success of US sanctions against Russia. Major trade partners are therefore likely to be sanction busters because they have a history of substantial trade with the target, which motivates them to engage in trade despite sanctions being in place against the target. In addition, third parties may be motivated to help an important trade partner, i.e., the target. In the second example, China and India are good examples of the second kind of sanction buster. Since they had the same trade needs as the US (Venezuela's crude

oil), they are a good alternative market to the sender's market. Moreover, Russia (through their company Rosneft) also acted as a sanction buster as they provided an alternative export market of petroleum products to Venezuela, after US stopped these exports post-sanctions. Thus, sanction busters can also be in the form of states that export similarly to the sender[3].

2.3.2 Constraining sanction busters

Constraining such third parties is critical to prevent sanction busting and ensure sanction effectiveness. Similar to the mechanism discussed in chapter 1, I argue that senders can constrain a third-party over shared issues such as alliance and trade ties. However, in this chapter, the constraining mechanism from chapter 1 gets pushed even further. In chapter 1, all senders in a multilateral sanction shared policy objectives and a desire to punish the target, which they expressed in a formal declaration of a sanction. The reason why these sanctions could fail is because senders faced coordination issues or had incentives to free ride. In chapter 2, the third-party does not share similar policy goals as the sender and is not bound by any formally declared sanction. They have no incentive to cooperate with sanction law, and can in fact make profit off of sanction busting. Thus, constraining a third-party is more complex and implicit compared to constraining other senders in a multilateral sanction coalition. Third parties have to engage in a strategic

[3] In this paper, I will focus on export similarity between senders and third parties since exports should be easier to replace compared to target imports. This is because of two reasons: first, we do not know if targets can easily modify demand to accommodate a different importer. Second, research shows that immediately post-sanctions, targets actually struggle to find alternative markets for their goods. It is only over time, after targets recover from the initial depressing impact of sanctions, that they are able to access different markets and substitute trade through imports (Yang et. al, 2009). On the other hand, it is likely that third parties can step in and offer their goods as an alternative exporter, as soon as a market becomes available with the target.

calculation to determine if they should make profits through sanction busting or care about disrupting the sender's sanction policy.

This is when sender-third party ties become important. Senders can constrain third parties that have an opportunity to profit through sanction busting, only when they are tied over important issues. This constraining mechanism can exhibit as either sticks or carrots. First, senders can constrain third parties using sticks- by threatening withdrawal of cooperation over shared ties. For instance, alliance and trade ties provide security and economic benefits, and third parties would not wish to risk losing these benefits. Second, senders can offer carrots to third parties in the form of issue linkage. Issue linkage enables cooperation by introducing another issue to the bargaining table and offering benefits over this external issue (Poast, 2013). Using the example of alliance and trade ties again, senders can offer benefits such as expanded trade with the third-party in exchange for discontinued trade with the target.

In sum, senders can prevent sanction busting and maximize probability of sanction effectiveness when they constrain third parties with high likelihood of being sanction busters. These third parties are either the target's major trade partners, or states with similar export portfolios to the sender. By giving sticks or carrots to these third parties, senders can minimize the likelihood of sanction busting by these third parties. This leads to following two hypotheses:

Hypothesis 1(a): As ties between the sender and the target’s major trade partners increase, the likelihood of sanction busting decreases.

Hypothesis 1(b): As ties between the sender and states with high export similarity to the sender increase, the likelihood of sanction busting decreases.

Hypothesis 2(a): As ties between the sender and the target's major trade partners increase, the likelihood of sanction effectiveness increases.

Hypothesis 2(b): As ties between the sender and states with high export similarity to the sender increase, the likelihood of sanction effectiveness increases.

2.4 Research Design

In this project, I utilize the Threat and Imposition of Economic Sanctions (TIES) dataset ranging from 1950-2005 (Morgan et. al, 2014). An economic sanction is a form of economic coercion, which is defined as a threat or action by a sender(s) to disrupt economic exchange with a target state unless they change their behavior (Bapat et. al, 2009). The unit of analysis is sanction-year. I expect to see that sanctions are effective in changing target behavior when the sender can constrain third parties that are the target's major trade partners or have high export similarity to the sender.

To test the theory, I use 960 cases of economic sanctions. I omitted sanction cases that involved no sender-state or were implemented solely by an international institution. This is because the theory pertains to interactions among nation-states only. I also omit cases that did not have data on the outcome of sanctions, i.e. if they were effective or not. This was necessary since sanction effectiveness is the dependent variable. Similarly, I drop cases that did not have data on target GDP per capita and shared trade with a third party, since this affects identification of major trade partners. Finally, I do not include cases that

were not economic in nature, i.e. diplomatic sanctions and travel bans. The unit of analysis is sanction-buster-year, and I discuss the number of observations depending on the independent variable below.

2.4.1 IV: Sender-third party ties

In the TIES dataset, most sanction cases, whether unilateral or multilateral, have a primary sender. In the few cases without primary senders, I assume the first sanction sender to be the primary sender. To calculate the IV of sender-third party ties, I observe alliance and major trade partnerships between the primary sender and a third party (which is a potential sanction buster). Information on alliance ties comes from the Alliance Treaty Obligations and Provisions (ATOP) dataset (Leeds et. al, 2002). I give a sender-third party dyad a score of 1 if there is an alliance present.

The trade linkage data comes from the Correlates of War Trade Dataset and the Expanded Trade and GDP data (Barbieri et. al, 2009; Gleditsch, 2002). Major trade partnership for each pair in a sender network is calculated in the following manner: if the shared trade between each pair (sum of imports sent from one country to another, and vice-versa) as a proportion of their GDP is higher than the average trade over GDP ratio for the whole dataset, then the tie gets a score of 1 (and otherwise zero). The overall value for ties between the sender and third party is the sum of alliance and major trade partnership. This value is the independent variable, and it ranges from 0 to 2.

IV1: Sender-third party ties when third parties are target's major trade partners

The first independent variable is strength of ties between the sender and third parties when they are the target's major trade partners. I determine these trade partners by ranking the

shared trade over GDP per capita ratio for the target with every state in the world in that year. States with above the global average bilateral trade with the target are determined as third parties for this project. The sender-third party ties for IV1 are then calculated using data on alliances and major trade partnerships as described above (Leeds et. al, 2002; Barbieri et. al, 2009; Gleditsch, 2002). The distribution of IV1 is shown in Figure 9.

IV2: Sender-third party ties when third parties have high export similarity to sender

The second independent variable is strength of ties between the sender and third parties when they have high export similarity with the primary sender. I use replication data from Chatagnier and Kavakli (2017). For all possible dyads in the world with the primary sender, I kept states that had above average export similarity with the primary sender. The sender-third party ties for IV2 are then calculated using data on alliances and major trade partnerships as described above (Leeds et. al, 2002; Barbieri et. al, 2009; Gleditsch, 2002). The distribution of IV2 is shown in Figure 10.

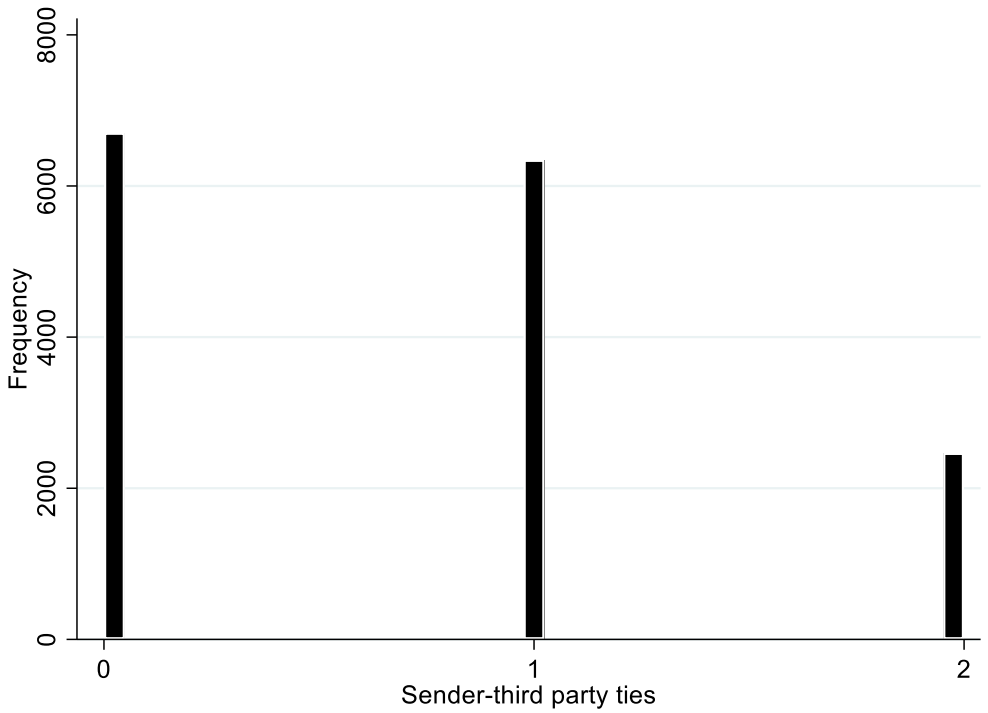


Figure 9: Distribution of IV1

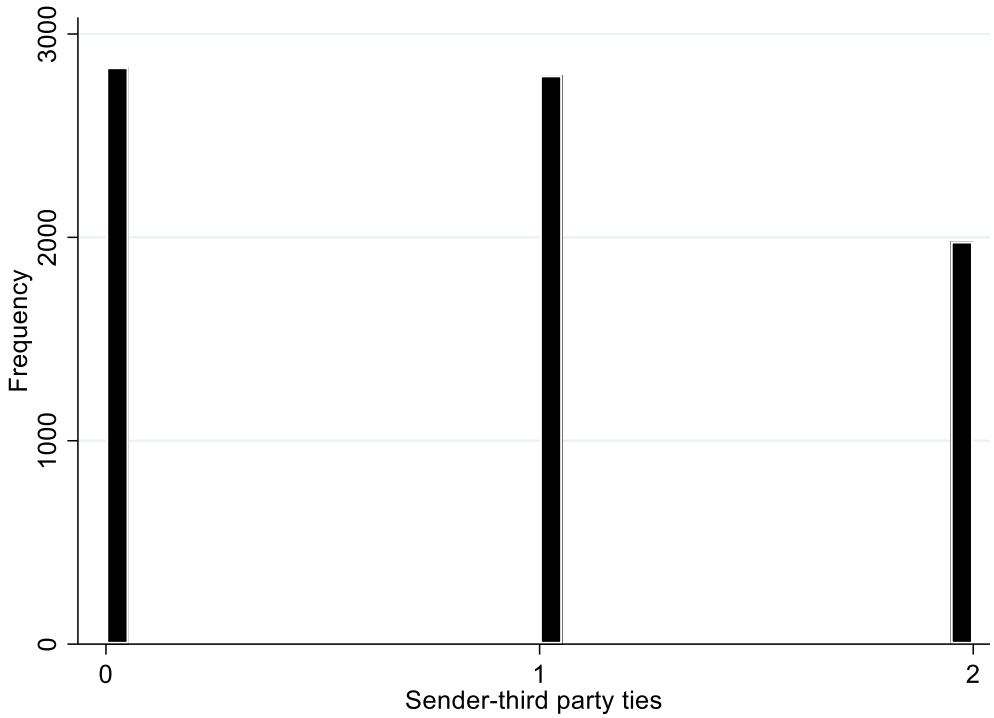


Figure 10: Distribution of IV2

DV1: Sanction Busting

The first dependent variable in this project is sanction busting. This is a dummy variable where a score of 1 indicates that the third-party state engaged in sanction busting, and a score of 0 indicates that no sanction busting occurred. I determine this variable's value by observing if there is a 5% or more increase in trade flows between the third-party and target, from the year before the sanction to the year after the sanction (5% increase is a sanction busting determinant used by Early (2009) but he observed variation over different time ranges). Data on trade flows comes from the Expanded Trade and GDP data (Gleditsch, 2002). I calculate percent change in trade flows between the third party and target using the following equation:

$$\%\ change\ in\ trade = \frac{Trade\ in\ yr\ after\ sanction - Trade\ in\ yr\ before\ sanction}{Trade\ in\ yr\ before\ sanction}\ x\ 100$$

DV1 gets a score of 1 if the percent change in trade is more than 5%, and a score of 0 otherwise. The distribution of DV1 in the sample with IV1 is in Figure 11. The distribution of DV1 in the sample with IV2 is in Figure 12.

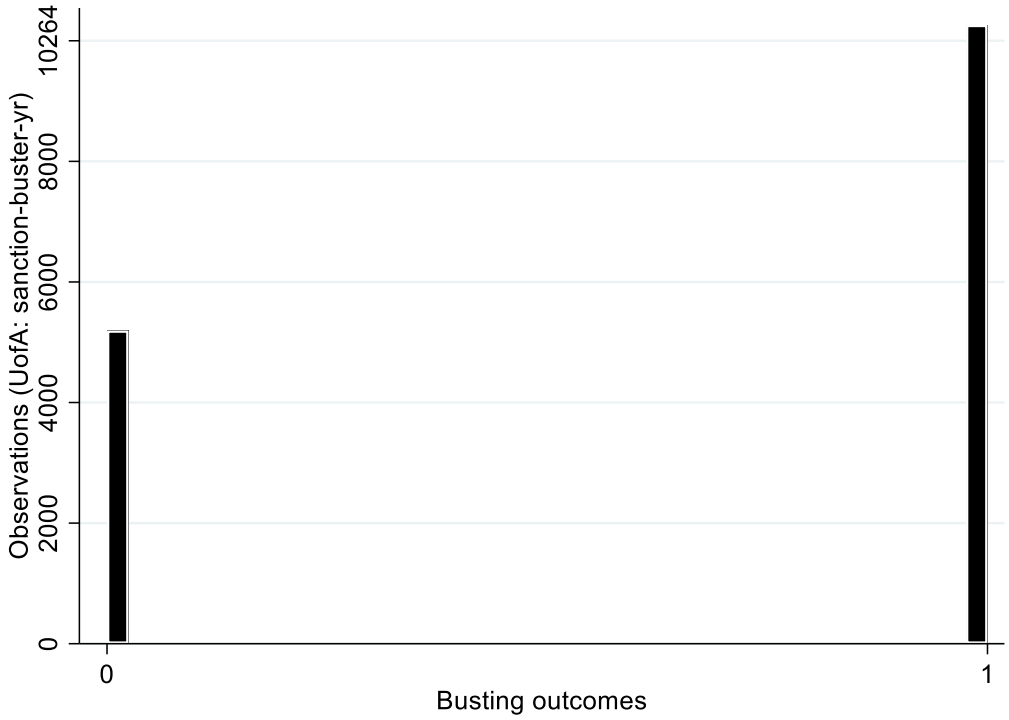


Figure 11: Distribution of busting outcomes (DV1) in sample with IV1

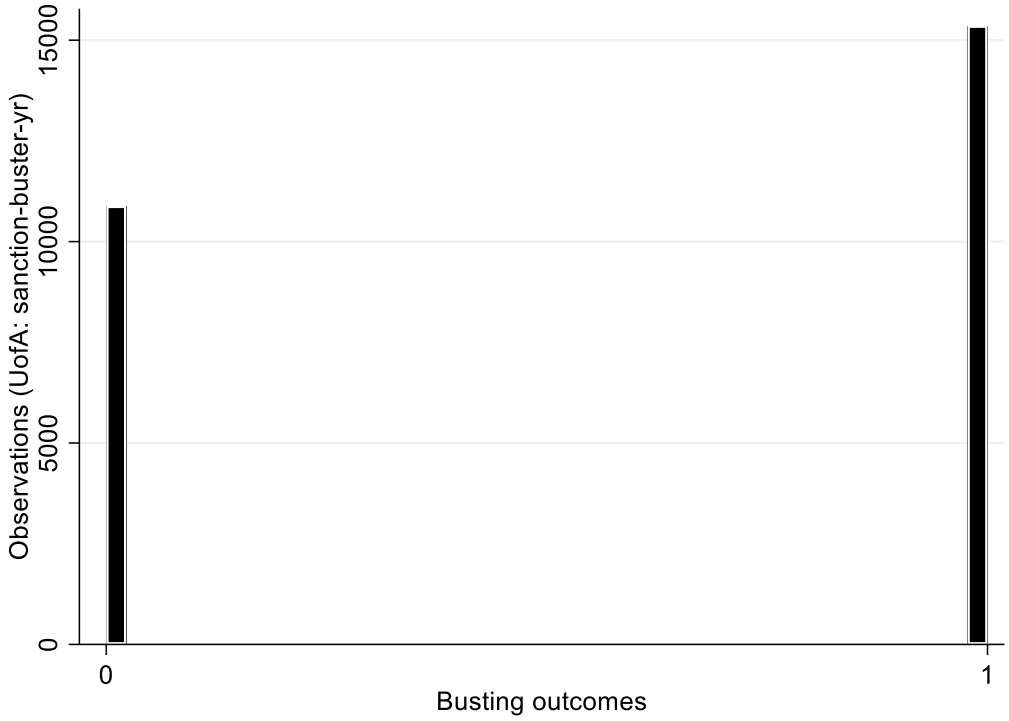


Figure 12: Distribution of busting outcomes (DV1) in sample with IV2

DV2: Sanction Effectiveness

The second dependent variable in this project is multilateral sanction effectiveness. I modify the outcome variable in the TIES dataset to create an ordinal variable. If the sanction fails, or in other words, the target concedes to none of the sender demands, the variable is coded as 0. If the target agrees to a negotiated settlement, i.e. there is some change in behavior in exchange for an action from the sender, the variable is coded as 1. The variable is also coded as 1 if sanctions are partially effective, i.e. there is only some change in target behavior post sanctions. Finally, if the sanction is fully effective, i.e. when the target concedes to all sender demands, the variable is coded as 2. I disaggregate the outcome variable this way to clearly understand the effect of the IVs (and other predictors in the model) on the variety of ways targets can respond to a sanction. The distribution of DV2 in the sample with IV1 is in Figure 13. The distribution of DV2 in the sample with IV2 is in Figure 14.

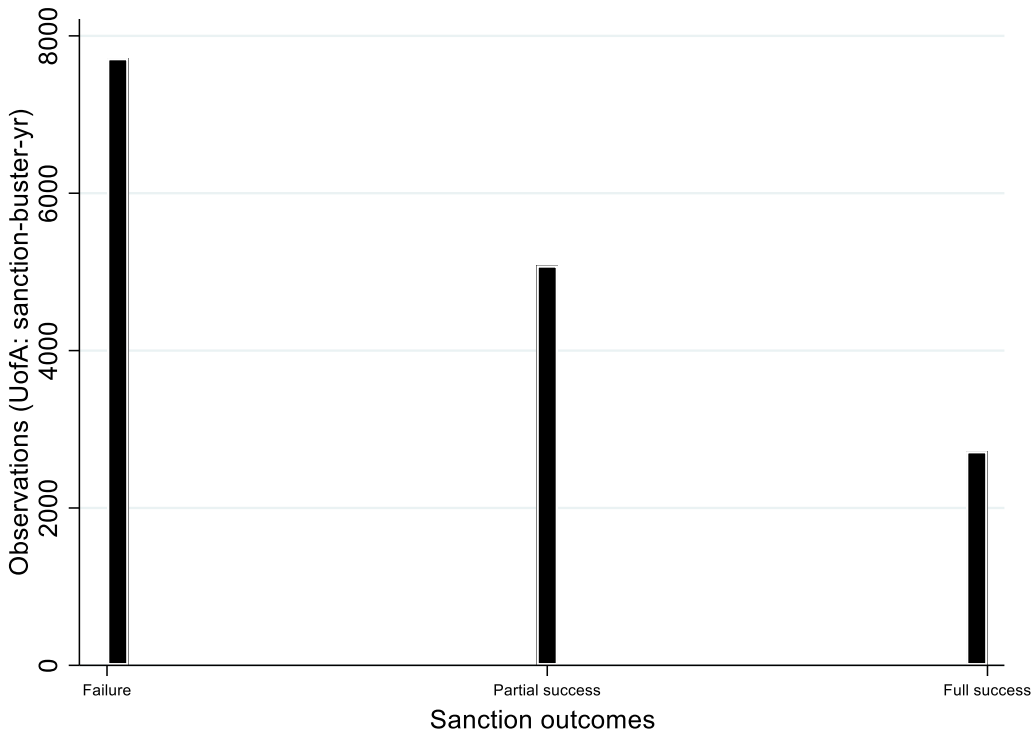


Figure 13: Distribution of sanction effectiveness (DV2) in sample with IV1

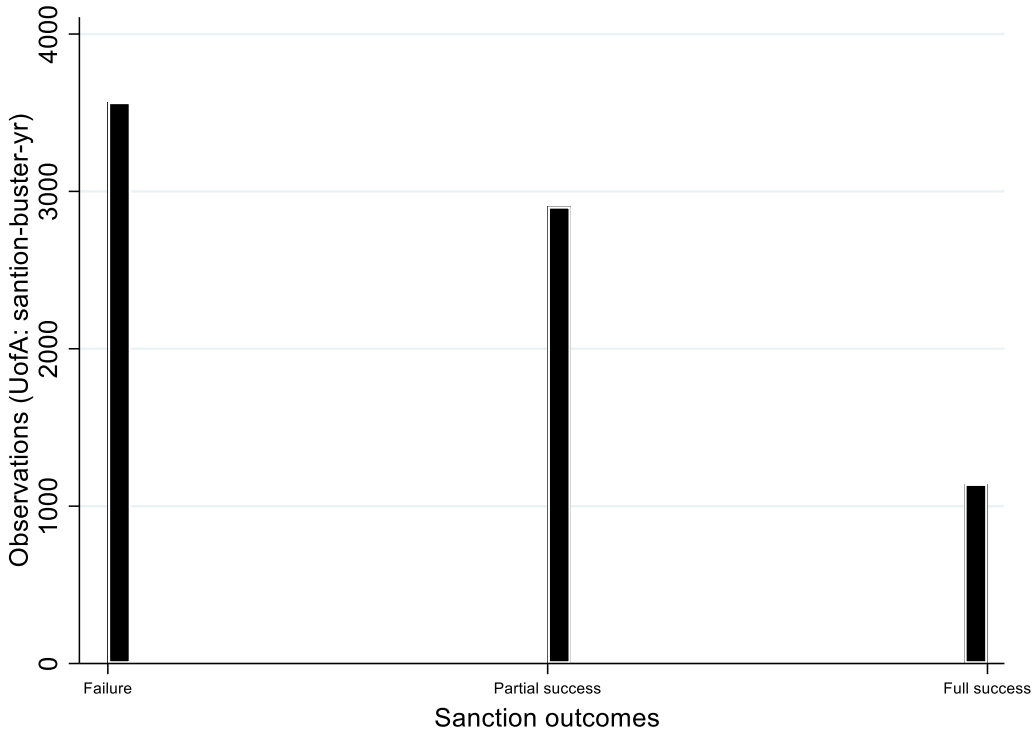


Figure 14: Distribution of sanction effectiveness (DV2) in sample with IV2

2.4.2 Control Variables and Methodological approach

Since sanction effectiveness is not completely determined by sender-third party ties, controls are introduced for factors that are shown to influence either effectiveness or likelihood of ties between the primary sender and third-party. I control for whether the target and third-party are a democracy or not, since sanctions should be more effective against a democratic target (Marshall et. al, 2016; Brooks, 2002). This is because state leaders can be more easily compelled by citizens through threat of removal from office. To capture the target's resilience against sanctions and a third-party's resilience against constraints from the sender, I also control for the target and third-party's GDP per capita (Gleditsch, 2002; Graham & Tucker, 2018; Morgan & Bapat, 2009).

I include a control for the primary sender's GDP per capita since an increase in these values would indicate increased ability to constrain and influence the third parties as well as targets (Gleditsch, 2002). I control for issue salience since targets may be less likely to concede to sanction demands if the contended issue is of high security importance. I consider the issue as salient if the sender's goal is to contain the target's political influence or military behavior, destabilize their regime, resolve a territorial dispute the target is involved in, deny strategic materials to the target, punish their alliance or alignment choice, prevent weapons proliferation by the target, or discourage their support for non-state actors (Morgan & Bapat, 2009). Finally, I control for the US being a primary sender. This is because more than half of all sanctions in the sample (56%) are issued with the US as the primary sender. Moreover, with the current US dominance, they may have greater ability to constrain third parties.

Since DV1 is a dummy variable, I use logistic regression to see how sender-third party ties influence likelihood of sanction busting. Since DV2 is an ordinal variable with three possible (ordered) outcomes (sanction failure, negotiated settlement or partial effectiveness, full effectiveness), I use ordinal logistic regression to examine the effect of sender-third party ties on sanction effectiveness. Tables 4 and 5 look at how DV1 and DV2 are affected by IV1, respectively. Tables 6 and 7 look at how DV1 and DV2 are affected by IV2, respectively.

2.5 Results

Table 4: Effect of sender-third party ties on sanction busting, when the third party is one of target's main trade partners

Effect of sender-third party ties on sanction busting Third party = target's main trade partner		
	w/o controls	w/ controls
Sender-third party ties	-0.28** (0.03)	-0.14** (0.05)
Target GDP		0.02* (0.01)
Target democracy		-0.07** (0.02)
Third party GDP		0.03 (0.01)
Third party democracy		0.05* (0.02)
Sender GDP		0.01 (0.01)
Issue salience		-0.14** (0.05)

Table 4 (continued)

US		-0.36**
		(0.10)
/cut1	-0.87**	-1.00**
	(0.03)	(0.06)
Observations	15,459	9,618

Standard errors in parentheses
**p<0.01 *p<0.05

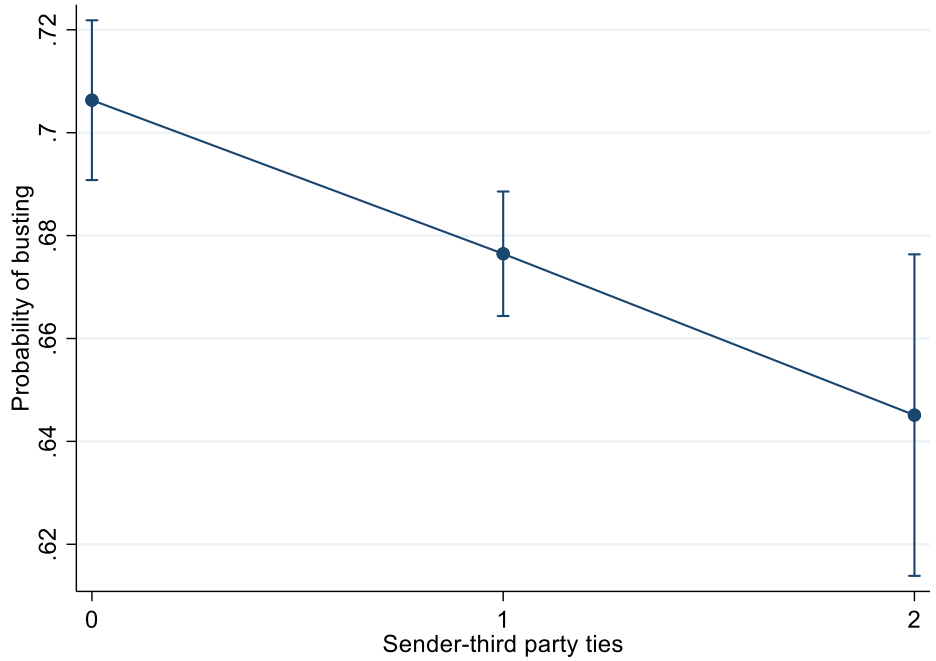


Figure 15: Probability of sanction busting with increase in sender-third party ties, when the third party is one of target's main trade partners

Table 5: Effect of sender-third party ties on sanction busting, when the third party is a state with above average export similarity with the primary sender

Effect of sender-third party ties on sanction busting Third party = states similar to sender		
	w/o controls	w/ controls
Table 5 (continued)		
Sender-third party ties	-0.21** (0.02)	-0.16** (0.04)
Target GDP		-0.03 (0.06)
Target democracy		-0.05** (0.01)
Third party GDP		-0.01 (0.02)
Third party democracy		0.01 (0.01)
Primary sender GDP		-0.07** (0.01)
Issue salience		-0.04 (0.04)
US		0.60** (0.08)
/cut1	-0.47** (0.02)	-0.42** (0.04)
Observations	26,252	17,285

Standard errors in parentheses
**p<0.01 *p<0.05

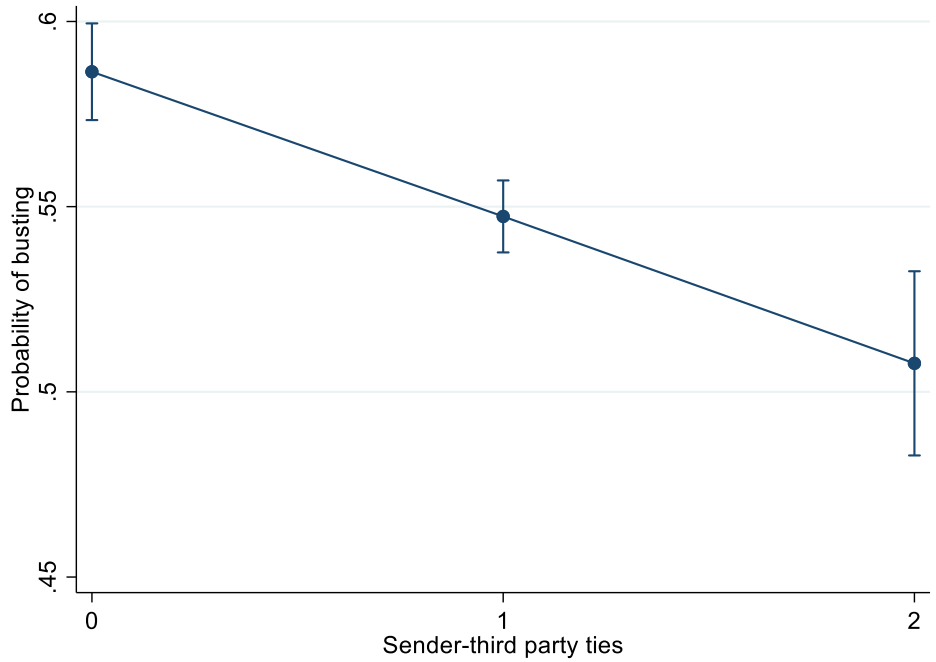


Figure 16: Probability of sanction busting with increase in sender-third party ties, when the third party is a state with above average export similarity with the primary sender

Results show that with an increase in ties between senders and third parties, the likelihood of sanction busting decreases, while controlling for other variables of importance. Let us first consider when third parties are the target's major trade partners (IV1). Table 4 shows that increase in ties between these third parties and the primary sanction sender makes sanction busting less likely. As sender-third party ties go from 0 to the maximum value of 2, sanction busting is 8.67% less likely. Table 5 shows the same trend for when third parties are identified as states that are similar to the primary sender based on their export portfolios. As sender-third party ties go from 0 to the maximum value of 2, sanction busting is 13.42% less likely. This relationship is also graphed in figures 15 and 16, respectively.

Table 6: Effect of sender-third party ties on sanction effectiveness, when the third party is one of target's main trade partners

Effect of sender-third party ties on sanction effectiveness Third party = target's trade partners		
	w/o controls	w/ controls
Sender-third party ties	0.29**	0.18**
	(0.03)	(0.04)
Target GDP		0.42**
		(0.08)
Target democracy		-0.01**
		(0.00)
Third party GDP		-0.02
		(0.01)
Third party democracy		-0.01**
		(0.00)
Primary sender GDP		0.06**
		(0.01)
Issue salience		-0.15**
		(0.05)
US		-0.31**
		(0.09)
/cut1	0.09**	0.16**
	(0.02)	(0.05)
/cut2	1.59**	1.89**
	(0.03)	(0.06)
Observations	15,459	9,618

Standard errors in parentheses
**p<0.01 *p<0.05

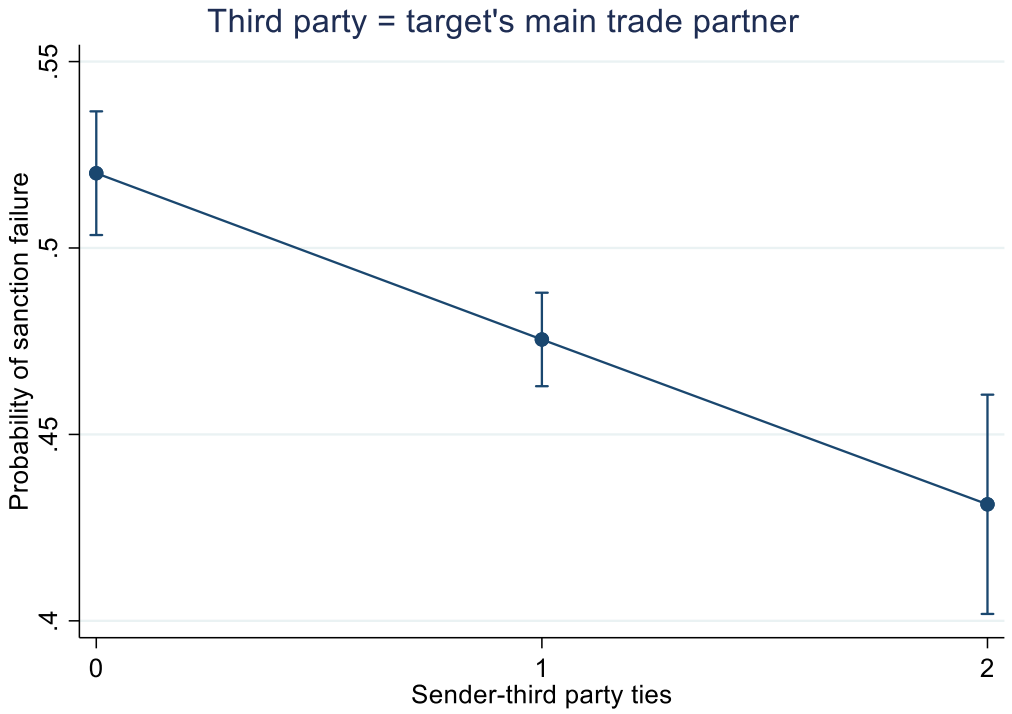


Figure 17: Probability of sanction failure with increase in sender-third party ties

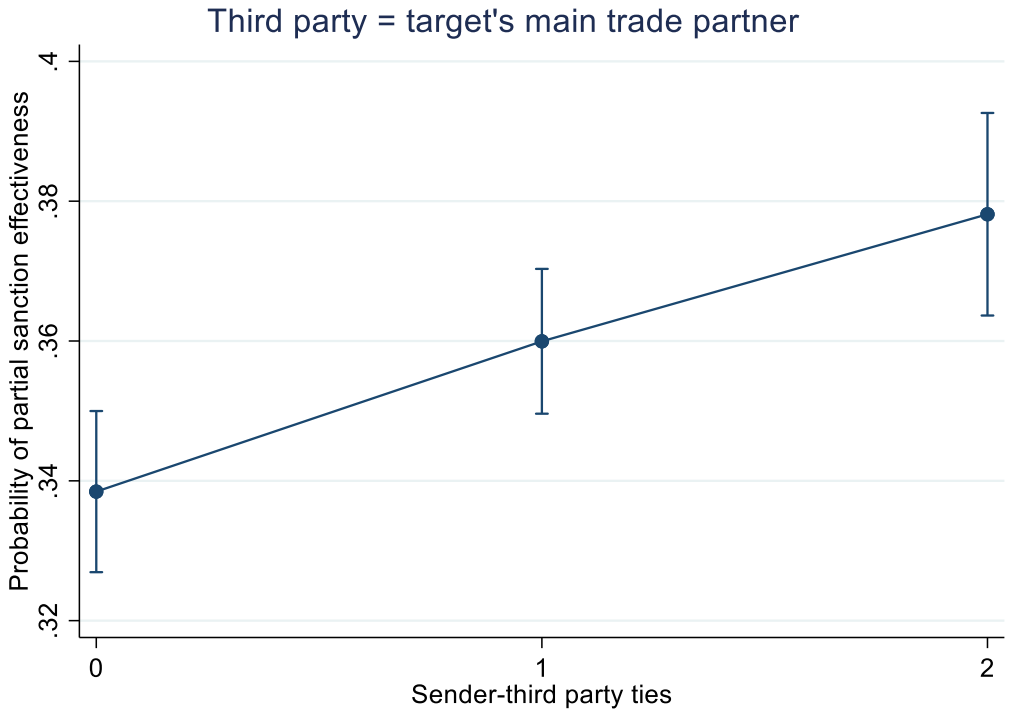


Figure 18: Probability of partial sanction success and negotiated settlements with increase in sender-third party ties

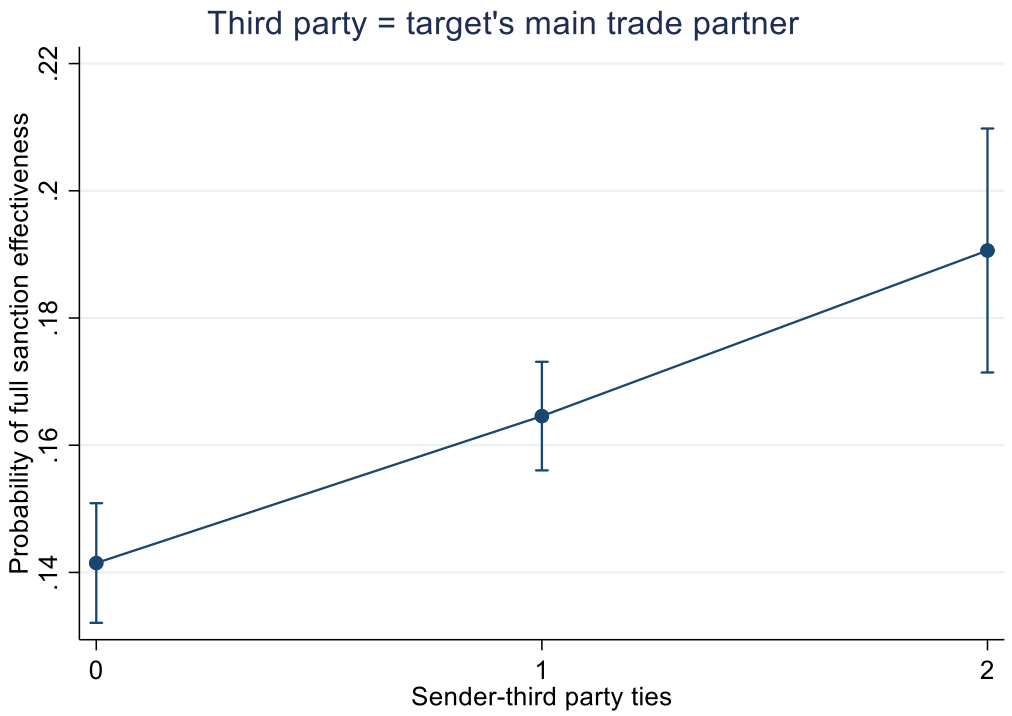


Figure 19: Probability of full sanction effectiveness with increase in sender-third party ties

Table 7: Effect of sender-third party ties on sanction effectiveness, when the third party is a state with above average export similarity with the primary sender

Effect of sender-third party ties on sanction effectiveness		
Third party = states similar to sender		
	w/o controls	w/ controls
Sender-third party ties	0.12**	0.15**
	(0.02)	(0.03)
Target GDP		0.02**
		(0.01)
Target democracy		-0.11**
		(0.01)
Third party GDP		0.01
		(0.01)

Table 7 (continued)

Third party democracy		0.01 (0.01)
Primary sender GDP		0.06** (0.01)
Issue salience		-0.17** (0.04)
US		-0.23** (0.08)
/cut1	0.02 (0.02)	0.36** (0.04)
/cut2	1.43** (0.02)	2.03** (0.04)
Observations	26,252	17,285

Standard errors in parentheses
**p<0.01 *p<0.05

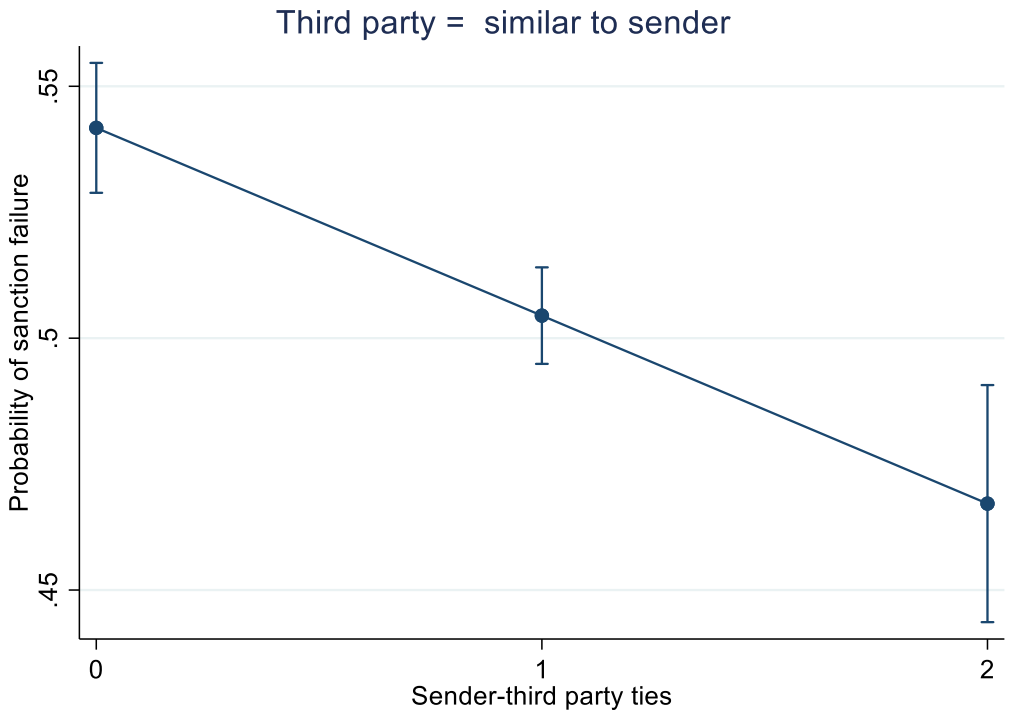


Figure 20: Probability of sanction failure with increase in sender-third party ties

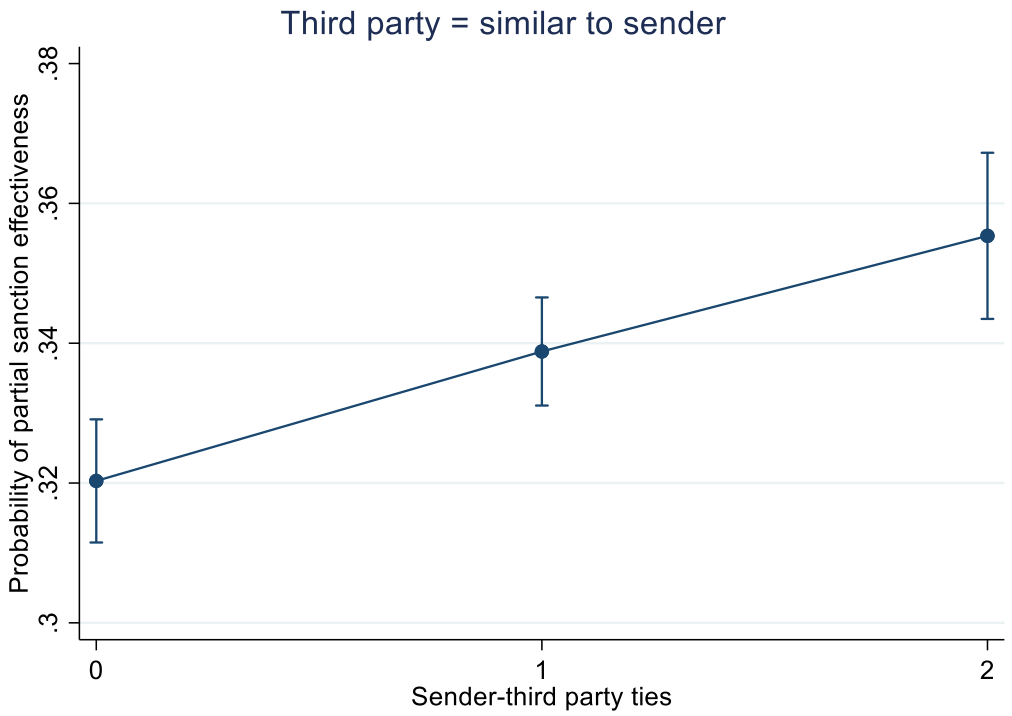


Figure 21: Probability of partial sanction success and negotiated settlements with increase in sender-third party ties

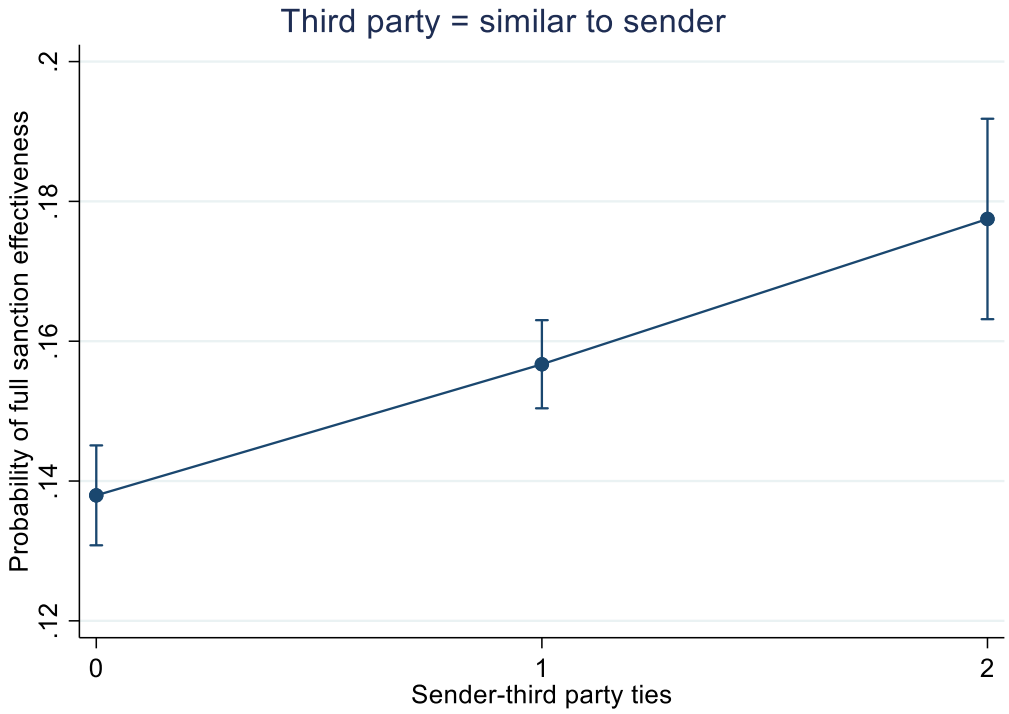


Figure 22: Probability of full sanction effectiveness with increase in sender-third party ties

Results also show that with an increase in ties between senders and third parties, the likelihood of sanction effectiveness increases, while controlling for other variables of importance. This relationship is also shown in figures 17-19, and figures 20-22. Let us first consider when third parties are the target's major trade partners (IV1). Table 6 shows that increase in ties between these third parties and the primary sanction sender makes sanction failure less likely, while partial and full sanction effectiveness more likely. Table 7 shows the same trend for when third parties are identified as states that are similar to the primary sender based on their export portfolios.

Table 8: % change in probability of outcome for IV1 (when third party = target's main trade partner)

Outcome	% Likelihood from no ties to maximum ties
Sanction failure	6.75% less likely
Partial effectiveness	4.80% more likely
Full effectiveness	12.38% more likely

Table 9: % change in probability of outcome for IV2 (when third party = states w/ above average export similarity w/ primary sender)

Outcome	% Likelihood from no ties to maximum ties
Sanction failure	8.03% less likely
Partial effectiveness	8.22% more likely
Full effectiveness	17.67% more likely

In sum, the results show support for the main hypotheses. Increase in sender-third party ties, regardless of how the third-party is identified, leads to decreased probability of sanction busting and increased probability of sanction effectiveness. When senders are able to constrain these third parties that are likely to be sanction busters, over shared issues such as military alliances and trade partnerships, they are able to discourage sanction busting. Consequently, this allows for sanction success. With regards to other variables in the model, findings are in the expected direction.

In Table 4, we see that target GDP makes sanction busting more likely. This could be because a target with a high GDP may have multiple third-party states it can sanction bust with. A more democratic target is less likely to sanction bust, and this may be due to

democracies being less likely to seek out underground and illegal trade networks to evade sanctions (Simmons, 1998; Andreas, 2005). Interestingly, a third-party, when it is the target's main trade partner, is more likely to engage in sanction busting. This could be because third parties that are democracies are more inclined, with domestic pressures, to continue trading with, and help out a major trade partner. Increase in issue salience predicts lower likelihood of sanction busting. It is possible that a third-party is less likely to sanction bust when they know that the primary sender is heavily invested in the sanction cause.

In table 6, we see that sanction busting with states similar to primary sender is less likely when the target is a democracy. This could be because again, democracies are less likely to seek out underground trade substitution (Andreas, 2005). Increase in primary sender GDP also decreases likelihood of sanction busting in this case. This may indicate that there are fewer third parties that can substitute trade from an economically strong primary sender. When the US is a primary sender, sanction busting with states similar to the US is less likely. This could indicate less likelihood of third-party states being similar to the US, and other states being deterred from substituting US exports.

Table 6 shows that sanction effectiveness is more likely when the target has a high GDP. Typically, we would expect an economically strong target to be more resilient against sanctions. One explanation for this counterintuitive finding could be that when controlling for ties between the primary sender and target's main trade partners, the target is not left with many options to fuel its trade needs (assuming it is positively correlated with its GDP). Thus, in this table, we may observe this unexpected finding. As expected, a democratic target is more likely to concede to sanction demands. Similarly, a democratic third-party is less likely to sanction bust and violate sanction law. When the primary sender is

economically powerful, it is more likely to issue effective sanctions. When the issue is salient, sanctions are, as expected, more likely to fail.

In Table 7, we see that a wealthier target leads to sanction effectiveness. A democratic target decreases likelihood of sanction effectiveness. These are both counterintuitive findings. For the first finding, one explanation could be similar to as discussed before- when controlling for ties between the primary sender and other states similar to the primary sender, the target is not left with many options to fuel its large export needs (assuming it is positively correlated with its GDP). For the second finding, a democratic target may be less likely to concede to sender demands when it has no support from the primary sender or states similar to the sender (export-wise). This may indicate that the sender took into account the costs of their belligerent action, with the cost being loss of access to exports that the primary sender was providing pre-sanctions. This matches up with the finding in the table that a salient issue makes sanction success less likely. With regards to the remaining variables, a wealthier primary sender issues more effective sanctions. Interestingly, sanctions are also less effective when issued by the US, in both tables 6 and 7. An explanation for this result could be that US leaders use sanctions in a symbolic manner to gain domestic benefits, as well as respond to an international issue without incurring the high costs of a military response (Whang, 2011). Moreover, sanctions may be used as a signal that a state "did something", which may be a bigger expectation from the US as a global hegemon (Lindsay, 1986, p. 170).

2.6 Conclusion

This project aims to explain why sanctions can fail despite creating huge costs for the target. Sanctions end up ineffective if a target does not incur sanction costs. Sanction busting can be used by targets to evade sanction costs, and involves increased trade with third-party states. One way to identify these third parties is by looking at the target's major trading partners. Another way is to consider states with similar export portfolios as the primary sender. Profits from trading with these third parties would help a target evade large sanction costs.

Therefore, senders need to constrain these potential sanction busting third parties to ensure that the targets faces sanction costs, which is critical to ensuring sanction effectiveness. Therefore, the answer to the research question "how can sanction busting be prevented from causing sanction failure?" is that senders need to constrain third parties, so they support the sender over the target. This decreases the likelihood of sanction busting, and compels targets to submit to sender demands- leading to sanction effectiveness.

In this chapter, I argue that third parties can be constrained by senders if they are tied over alliances and major trade partnerships. I calculate ties between the primary sender and the target's major trade partners, as well as ties between the primary sender and third parties with high export similarity to sender, and find that an increase in these ties predicts increased likelihood of sanction effectiveness, controlling for other potential explanatory variables. It may be interesting to further explore some findings with regards to the control variables. Wealthier targets being more susceptible to sanction demands, and the ineffectiveness of US sanctions, are two compelling avenues for future research.

CHAPTER 3. WHO JOINS MULTILATERAL SANCTIONS? FOREIGN POLICY SIMILARITY AND DOMESTIC EXPLANATIONS

3.1 Introduction

Based on findings from the previous chapters, we know that states issue effective and costly sanctions with a highly connected multilateral sanction. Sanctions are also more likely to succeed when third party states are discouraged from sanction busting. In other words, sanction can succeed when primary senders can get the support of other states, whether to issue comprehensive multilateral sanctions, or have potential sanction busters on their side. Consequently, two puzzles arise. First, why do some sanctions manage to get multiple senders, while others don't? Second, why don't primary senders seek out the ideal states to form a multilateral sanction with? In other words, why don't senders only issue multilateral sanctions with states they have ties with, or with states that are likely to sanction bust?

These puzzles lead to the research question I aim to address in this chapter: how do states decide to join a multilateral sanction? Sanction literature has had an overwhelming focus on sanction outcomes, ranging from effectiveness to fallout effects such as humanitarian crises. This project is novel as in how it focuses on pre-sanction interactions and helps determine how sanction coalitions come together in the first place. Findings from this chapter also have implications for the previous two chapters. I argue that four conditions facilitate a state joining a sanction (referred to as joiner from hereon)- foreign policy similarity with sender, foreign policy dissimilarity with target, domestic approval ratings of joiner, and joiner's desire to gain international legitimacy and improve their reputation. These conditions show that the process of sanction joining has its own

determinants that are independent from states wanting to form a cohesive sanction (chapter 1) or states wishing to constrain and get support from potential sanction busters (chapter 2). As a result, sanctions may end up being issued by suboptimal sender coalitions. In this chapter, I identify some conditions under which states decide to join sanctions, and discuss implications for effective sanction sending.

3.2 What motivates states to join sanctions?

It is puzzling why some senders impose sanctions unilaterally, while others form a sanction coalition to send a multilateral sanction. These sanctions can be more costly and comprehensive, making trade replacement with the target less likely (Martin, 1992). Figures 23 and 24 below show the variation in sanction coalition sizes, ranging from sender of one issuing unilateral sanctions to 5+ states per sanction coalition (Morgan et. al, 2014). What explains this variation? Why do states join the primary sender to issue sanctions?

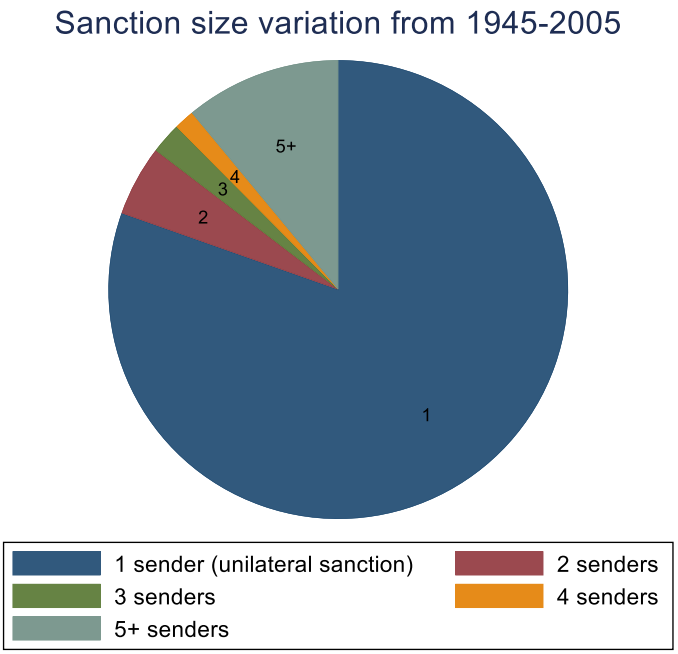


Figure 23: Size of economic sanctions issued from 1945-2005

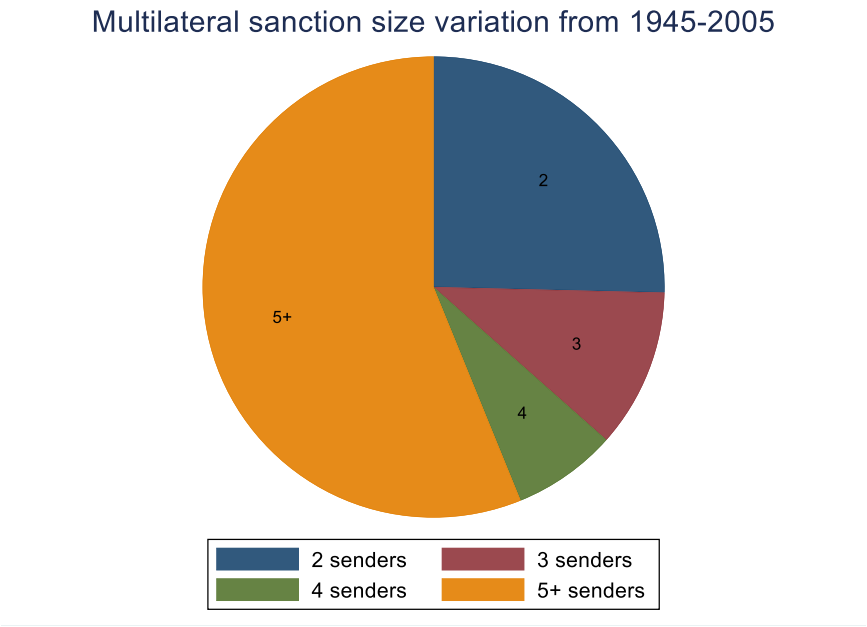


Figure 24: Size of multilateral economic sanctions issued from 1945-2005

To determine why some states join sanction coalitions and others do not, it may be helpful to consider research on sanction usage. Why are sanctions used? Sanctions are an increasingly popular way of achieving foreign policy objectives. What policy goals were behind these sanctions? The TIES dataset identifies 15 issues over which sanctions have been issued between 1945 and 2005. These issues are: contain political influence, contain military behavior, destabilize regime, release citizens, property or materials, solve territorial disputes, deny strategic materials, retaliate for alliance or alignment choice, improve human rights, end weapons/materials proliferation, terminate support of non-state actors, deter or punish drug trafficking practices, improve environmental policies, change trade practice, implement economic reform, or a category termed "other" for anything that does not fit the categories above (Morgan et. al, 2014, codebook: p.3).

It is likely that multiple states come together to implement a multilateral sanction, when they all care about the same issue. In other words, states are likely to sanction the target, either unilaterally or as a coalition with other states that also care about the same issue. From this discussion, we can assume that states that share similar foreign policy preferences are more likely to form a sanction coalition. Acting based on similarity in foreign policy alignment can also indicate expectation of cooperation. A good example is a long history of the US issuing sanctions with the European Union. Several recent sanctions against Iran, North Korea and Myanmar have been issued multilaterally by the US and allies (Albert, 2019; "EU and U.S. sanctions…", 2021). Therefore, I argue-

Hypothesis 1: States are more likely to join a sanction coalition if they have similar foreign policy preferences with the primary sender.

Just as states are more likely to join a sanction coalition because of shared foreign policy preferences, they may also be likely to join the coalition if they have opposing preferences to the target. Martin (1992) discusses how multiple states in the UN were in favor of sanctioning Iraq post-invasion of Kuwait in 1990. In this case, states were in full disagreement with Iraq's actions, and this motivated sanctions. Instead of sender preference alignment, it was divergence from the target's preferences that motivated the sanction.

Sanctions in response to human rights violations are usually of this nature as well. For instance, the US, the EU and the African Union jointly sanction Burundi in 2015, in response to the leader, Pierre Nkurunziza, disregarding term limits, the consequent risk of civil conflict, and the widespread use of repression ("Burundi OFAC Sanctions", n.d.; Gettleman, 2015). Therefore, states may decide to join multilateral sanction efforts because they all disagree with target behavior. In other words, all involved states have opposing

foreign policy preferences, and this shared disagreement with the target motivates sanction coalition formation. I argue-

Hypothesis 2: States are more likely to join a sanction coalition if they have dissimilar foreign policy preferences with the target.

Finally, supporting a sanction may involve domestic benefits. Whang (2011) and McLean and Whang (2010) show that states may issue sanctions- symbolic or otherwise- to improve the leader's domestic approval and show competency. Research in military coalition formation literature, as well as literature on leader behavior suggests that states get involved in international efforts and disputes to get domestic benefits (Wolford & Ritter, 2016; Henke, 2017; Levy, 1998; Stoll, 1984; Ostrom & Job, 1986; Morgan & Bickers, 1992).

A sanction-based example is that of South Korea sanctioning North Korea along with the US and other allies. McLean and Whang (2010) argue that in addition to gaining domestic approval, leaders also care about appeasing special interest groups. South Korea is a great example of this. They participate in sanction efforts to denounce North Korean leadership and show commitment to the US-South Korea defensive alliance. But at the same time, South Korea sends humanitarian aid to North Korea to pacify special interest groups (Albert, 2019). In short, domestic needs can motivate states to join multilateral sanction coalitions, even when effectiveness is not a serious goal. This leads to the next hypothesis-

Hypothesis 3: States are more likely to join a sanction coalition when they need to increase domestic approval ratings or demonstrate competency domestically.

Finally, I argue that states can also join multilateral sanctions when they need to increase their international reputation and legitimacy. States could use sanctions as a way to demonstrate commitment to multilateral goals and international norms. This effect has been studied in human rights literature, where scholars find states engage in multilateral endeavors such as signing international human rights treaties to signal commitment to democratization as well as get economic benefits such as increased foreign direct investment (Hafner-Burton, 2012; Hafner-Burton et al., 2011, Garriga, 2016). I contend that joining sanction regimes can have a similar impact and can also benefit the primary sender-joiner relationship. By supporting the primary sender and following sanction law, states can show that they are reliable allies and also committed to similar goals as other states in the sanction. Joiners can also gain reputational, political and economic benefits (Nielson & Simmons, 2015; Lewis, 2014). Consequently, I argue-

Hypothesis 4: States in general are more likely to join a sanction coalition when the sanction goal is human rights improvement.

3.3 Research design

The sample in this project is all cases of economic sanctions from 1945-2005 (Morgan et. al, 2014). An economic sanction is defined as a form of economic coercion, which is a threat or action by a sender(s) to disrupt economic exchange with a target state unless they change their behavior (Bapat et. al, 2009). The unit of analysis is sanction joining opportunity. This opportunity is available to any potential joiner in the international state system in the year of sanction.

Dependent variable: Multilateral sanction joining

Whether the potential joiner joins the sanction coalition or not determines the value of my dependent variable. It is coded as 1 if a potential joiner ends up becoming a sender. In all other cases, it is coded as 0.

IV 1: Primary sender-potential joiner similarity in foreign policy preferences

IV2: Target-potential joiner similarity in foreign policy preferences

I captured similarity in foreign policy preferences for both primary sender-joiner and the target-joiner dyads using the measure of ideal point distance from Bailey et. al (2017). Based on how states vote on UN resolutions, the ideal point score for each state shows how close or far a state's foreign policy preferences are from a US-led liberal world order. Consequently, ideal distance between any two states in a dyad shows the closeness or distance between their individual ideal point scores. In other words, a greater ideal point distance indicates less similarity in foreign policy preferences, and vice versa. For IV1, I use ideal point distance between any two potential senders. For IV2, I use ideal point distance between a potential sanction target and sender. Distribution of IV1 and IV2 are in Figures 25 and 26 respectively.

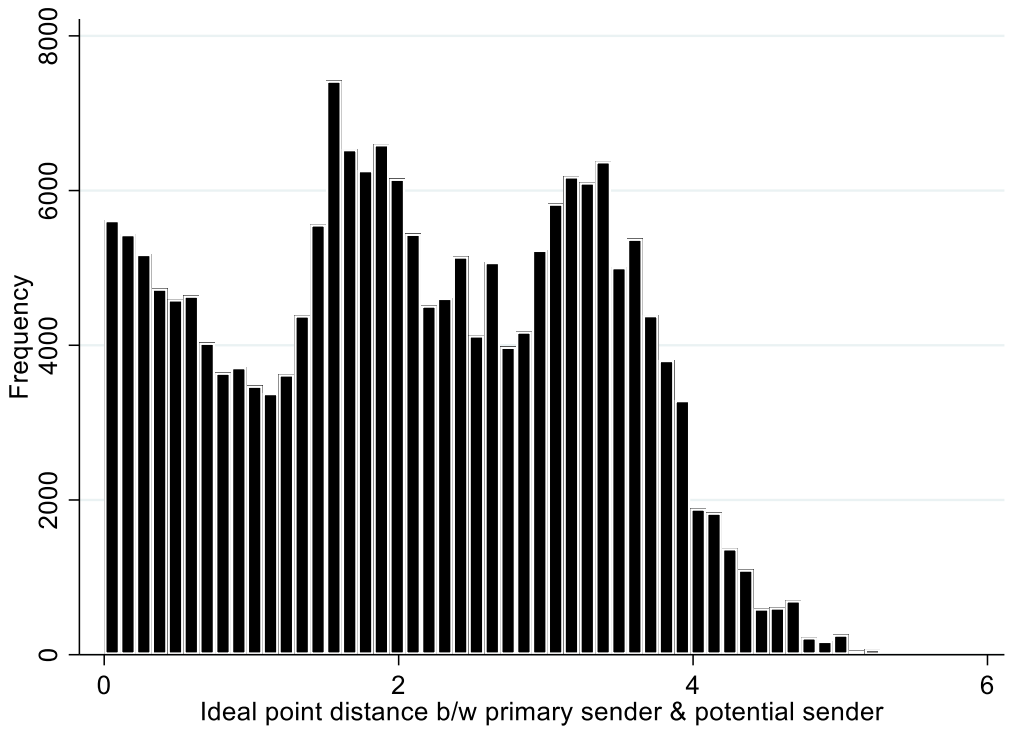


Figure 25: Distribution of IV1 (primary sender-potential joiner similarity in foreign policy preferences)

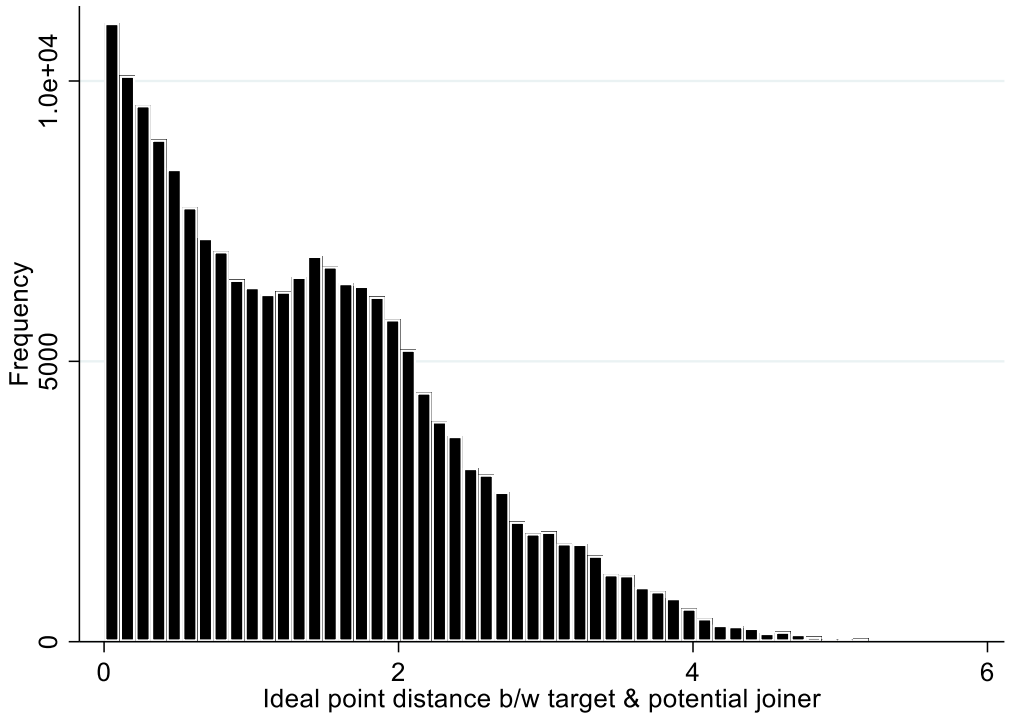


Figure 26: Distribution of IV2 (target-potential joiner similarity in foreign policy preferences)

IV 3: Domestic approval ratings of leader in potential joiner state

I capture this variable using average annual data on citizen confidence in the government (Inglehart et. al, 2014). The World Values Survey (WVS) includes a survey question that asks citizens from 104 countries "how much confidence do you have in the …" and the category of interest is the government. This variable ranges from 1-4, with increasing values indicating higher levels of confidence. I hope to see higher likelihood of the state participating in a sanction coalition when public confidence is government is low. Distribution of IV3 is in Figure 27.

Due to unavailability of WVS data until 1981, and continued unavailability into today depending on the state, there is a substantial drop in observations in Table 12. 98

states have data for the question above, and there is also variation in when during the time range a state had data for the question. So while the WVS data is not available for every state and year, due to a general lack of cross-national, consistent data on leader approval ratings, this is the best proxy for IV3 for the current stage of this project. Hetherington (1998) discusses how trust in government actually explains satisfaction with the incumbent leader. Thus, trust can be a good indicator of domestic approval, and I hope to see it explain state involvement in multilateral sanction efforts.

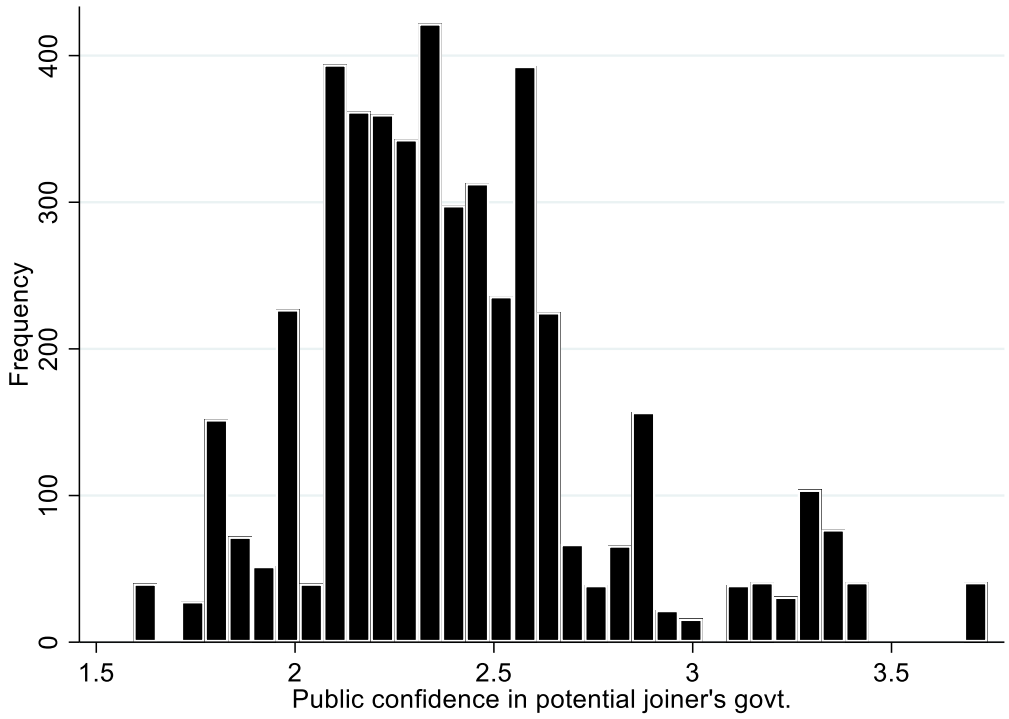


Figure 27: Distribution of IV3 (Domestic approval ratings of leader in potential joiner state)

IV 4: Sanction objective being human rights improvement

This is a dummy variable capturing whether the sanction was issued over a human rights concern in the target state or not (coded as 1 or 0, respectively). This data comes

from the TIES dataset (Morgan et. al, 2014). The distribution of this variable is in Figure 28.

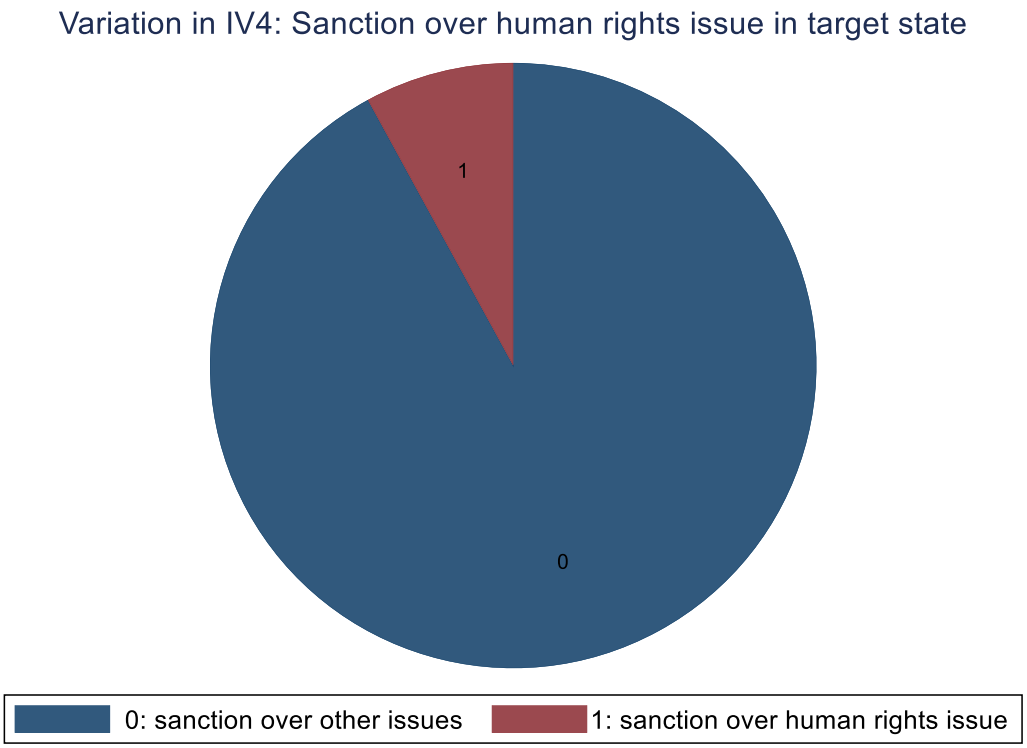


Figure 28: Distribution of IV4

3.4 Control variables and method

All models are tested using logistic regression since the DV is a dummy variable. Control variables used in all models are: primary sender, target and joiner GDP, since a wealthy primary sender could receive more support for the sanction, as well as issue a more costly sanction, a wealthy target could be more resilient, and a wealthy joiner may have better ability to join a sanction coalition (joiner GDP dropped in Table 11 due to missing data and low variation concerns) (World Bank, 2015; Graham & Tucker, 2017). This is similar to the argument and findings from Wolford and Ritter (2016) and Henke (2017),

who show that states are more likely to join multilateral efforts such as military coalitions when they are strong (whether due to a high GDP or a high CINC score).

I also control for the primary sender, target and joiner's democracy levels (Marshall et. al, 2015; Graham & Tucker, 2017). This is because a non-democratic target may attract more multilateral sanctions, especially from democratic senders, who then have an incentive to join and issue a sanction together. Finally, I control for US as a primary sender and international institution involvement (Morgan et. al, 2014). This is because US is a dominant sender of both unilateral and multilateral sanctions- 56% of all sanctions involve the US as a primary sender (Morgan et. al, 2014). US as a primary sender may therefore explain sanction joining. I control for institutions because research has shown that institutions help multilateral sanctions work and facilitate cooperation among senders (Martin, 1993; Bapat & Morgan, 2009; Abbott & Snidal, 1998).

3.5 Results

In Table 10, with or without controls, decreasing ideal point distance, or higher foreign policy preference similarity between the primary sender and potential joiner in a dyad, increases the likelihood that the latter joins the sanction effort. This relationship is also shown in Figure 29. As ideal point distance goes from 0 to its highest possible value in the sample, there is a 99.98% decrease in likelihood of the third-party state joining the sanction. As expected, control variables of joiner GDP and democracy make it more likely for them to join the sanction. This may be due to the joiner's greater ability to implement sanctions when they are wealthy. It also indicates that democratic joiners are more likely

to join multilateral sanction efforts. Also as expected- a salient issue, US as primary sender, and institutional involvement, all motivate states to join multilateral sanctions.

Table 10: Effect of primary sender-potential joiner preference similarity on joiner's likelihood of joining sanction

Effect of primary sender- joiner preference similarity on joiner's likelihood of joining the multilateral sanction

	(1) w/o controls	(2) w/ controls
Ideal point distance b/w PS and J	-1.29**	-1.59**
	(0.06)	(0.09)
Primary sender democracy		0.14
		(0.59)
Target democracy		-0.28
		(0.27)
Joiner democracy		0.02**
		(0.01)
Joiner GDP		0.41**
		(0.02)
Issue salience		0.40**
		(0.12)
US		1.40**
		(0.14)
Institution involvement		3.10**
		(0.15)
Constant	-4.14**	-6.30**
	(0.06)	(0.15)
Observations	192,680	131,888

Standard errors in parentheses
**p<0.01 *p<0.05

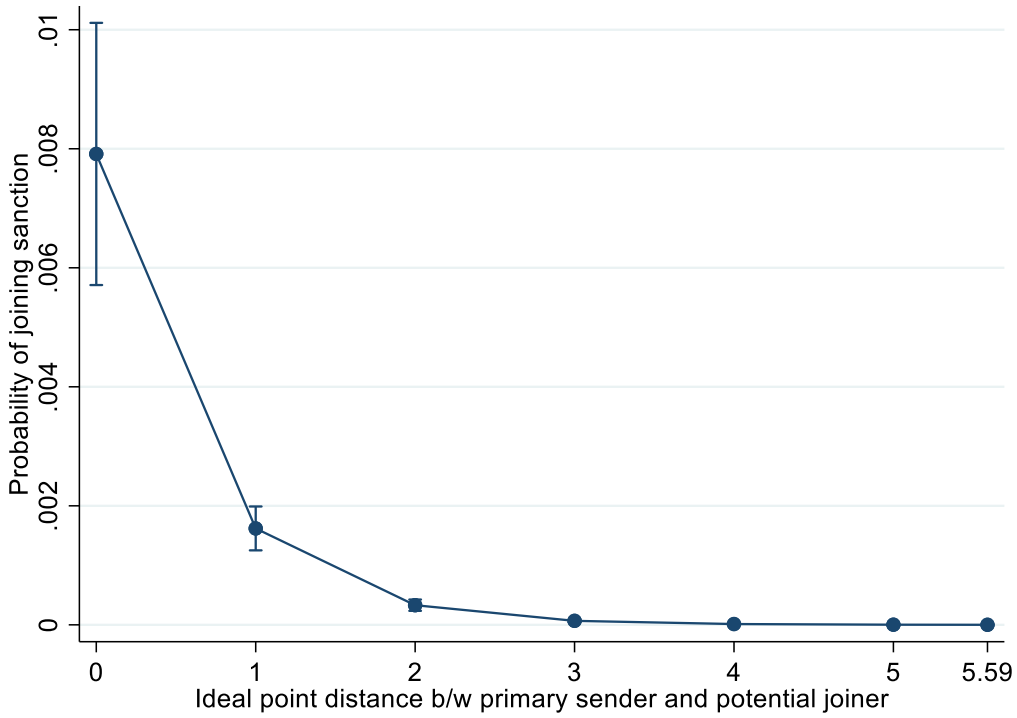


Figure 29: Probability of third-party state joining the sanction w/ increase in ideal point distance b/w primary sender and potential joiner

Similarly, in Table 11, increasing ideal point distance, or lower foreign policy preference similarity between the target and potential joiners increases likelihood of the latter joining the sanction. This relationship is shown in Figure 30. When ideal point distance increases to the maximum value of 5.59, the potential joiner is 1333.33% more likely to join the sanction. The joiner is also more likely to join the multilateral sanction when the target is a non-democracy, and the joiner is wealthy as well as a democracy. Issue salience matters here again, i.e. salient issues drive potential joiners to engage in sanctions. Institutions explain sanction joining in this model as well.

Table 11: Effect of target-potential joiner preference similarity on joiner's likelihood of joining sanction

Effect of potential target-joiner preference similarity on joiner's likelihood of joining the multilateral sanction		
	(1) w/o controls	(2) w/ controls
Ideal point distance b/w T and J	0.51** (0.04)	0.46** (0.05)
Primary sender democracy		-0.09 (0.05)
Target democracy		-0.07** (0.02)
Joiner democracy		0.61** (0.09)
Joiner GDP		0.31** (0.02)
Issue salience		0.51** (0.12)
US		0.09 (0.13)
Institution involvement		3.01** (0.15)
Constant	-6.73** (0.09)	-8.60** (0.18)
Observations	184,721	126,599

Standard errors in parentheses
**p<0.01 *p<0.05

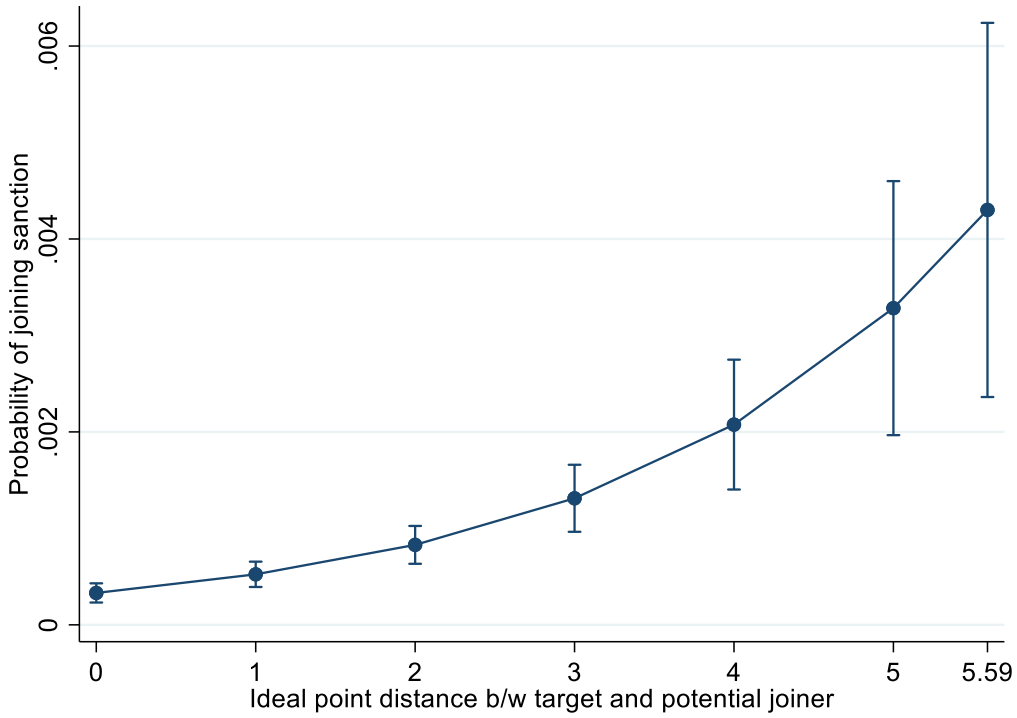


Figure 30: Probability of third-party state joining the sanction w/ increase in ideal point distance b/w target state and potential joiner

In Table 12, domestic approval, or public confidence in government has no effect on likelihood of a state joining a sanction. This may be due to three reasons. First, I discussed data issues with WVS earlier. The small sample with inconsistent temporal variation could be the reason for no findings. Second, as aforementioned, confidence in government is a proxy for domestic approval ratings of the leader in power. Lack of appropriate data led me to use this variable as a proxy, and I expect to see more promising results with a better measure of domestic approval. Third, it is entirely possible that this finding is valuable, and tells us that the public's opinion has no influence on sanction joining. This may be a finding unique to the US as Whang (2011) showed, and other states

(in at least this sample of 98 states) may not have a public that views joining sanctions as a proof of leader competency.

Table 12: Effect of domestic approval on joiner's likelihood of joining sanction

Effect of domestic approval on joiner's likelihood of joining the multilateral sanction		
	(1) w/o controls	(2) w/ controls
Public confidence in joiner govt.	-0.70 (0.64)	0.06 (0.96)
Primary sender democracy		0.23 (0.17)
Target democracy		0.01 (0.02)
Joiner democracy		0.21 (0.12)
Joiner GDP		0.25** (0.08)
Issue salience		1.85** (0.52)
US		-0.25 (0.51)
Institution involvement		1.80** (0.55)
Constant	-3.71* (1.49)	-10.88** (3.18)
Observations	4,698	3,950

Standard errors in parentheses
**p<0.01 *p<0.05

Finally, Table 13 shows results for H4. States are more likely to join sanctions when the sanction issue is human rights concern in the target state. This finding is also shown in Figure 31. Sanction joining is 36.68% more likely when sanctions are issued over human

rights concerns. This finding has two main implications: first, primary senders are more likely to get support from other states when they are sanctioning the target over a human rights issue. And second, it would be interesting to see if other issues have similar findings or if human rights as the issue of contention leads to unique state behavior.

With regards to control variables, we see a repeat of joiner democracy, issue salience, and institution involvement increasing likelihood of potential joiners engaging in multilateral sanctions. However, it is interesting that primary sender democracy, and the US as a primary sender, make states joining the sanction less likely in this table. One explanation could be that primary senders, like the US, may prefer to issue human rights sanctions unilaterally and not need third-party support. These sanctions may also be less costly to issue as they usually target people or groups and not firms- further decreasing the need for a multilateral sanction ("Global Magnitsky Sanctions", 2020).

Table 13: Effect of human rights being the sanction issue on joiner's likelihood of joining sanction

Effect of human rights as sanction issue on state's likelihood of joining sanction		
	(1) w/o controls	(2) w/ controls
Human rights as sanction issue	0.99** (0.11)	0.31** (0.12)
Primary sender democracy		-0.10** (0.04)
Target democracy		-0.04 (0.02)
Joiner democracy		0.61** (0.06)

Table 13 (continued)

Issue salience		0.83**
		(0.10)
US		-0.47**
		(0.11)
Institution involvement		2.36**
		(0.11)
Constant	-6.02**	-7.13**
	(0.05)	(0.11)
Observations	212,178	168,852

Standard errors in parentheses
**p<0.01 *p<0.05

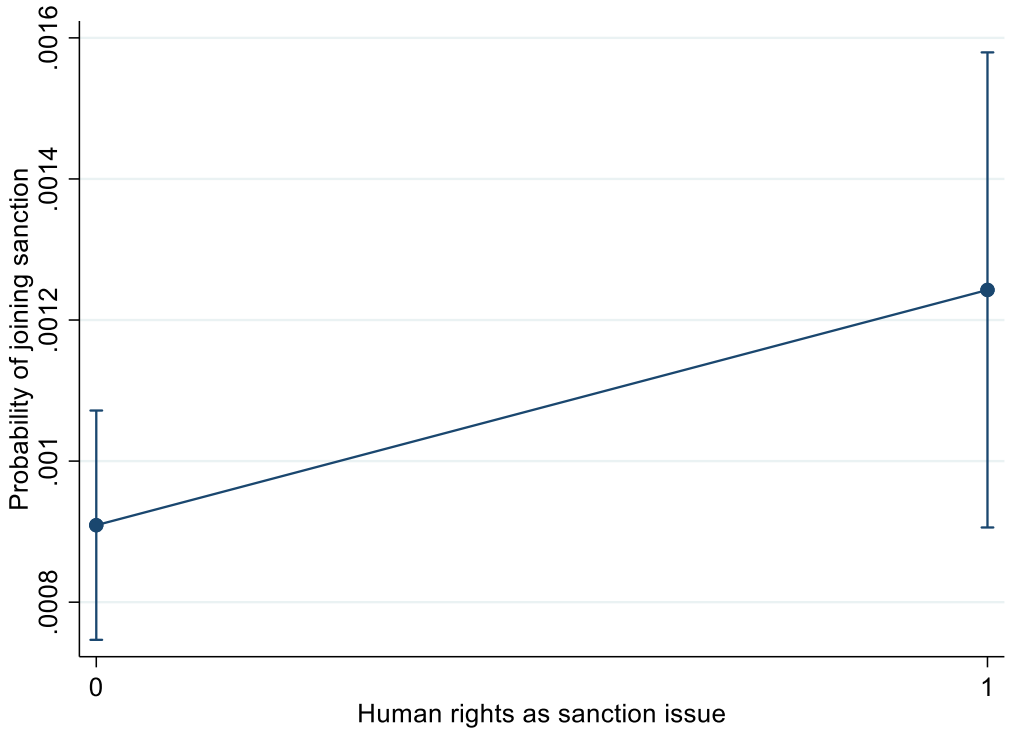


Figure 31: Probability of third-party state joining the sanction when the sanction issue is human rights concerns in the target state

3.6 Conclusion

This project fills a gap in sanction literature by explaining how sanction coalitions form in the first place. I test several hypotheses to determine how states decide to join a multilateral sanction. I find that states join/form sanction coalitions when they share foreign policy preferences with the primary sender, when they disagree with the target, and when the sanction is issued over human rights concerns. This research has implications for foreign policy making since it shows how senders can motivate other states to join their sanction process, and also maximizes the primary sender's ability to form a sanction coalition that is more likely to issue effective sanctions.

Finally, this chapter provides an explanation for sanction failure even in the case of well-designed, credible, and costly sanctions. If the conditions discussed in this chapter do not hold, senders may not have a way to compel other states to join the sanction coalition. Without the involvement of such critical states, senders will need to consider other ways to prevent them from causing sanction failure. Chapter 2 provides one solution for constraining potential sanction-busting states.

CONCLUSION: FUTURE OF SANCTIONS RESEARCH AND POLICY IMPLICATIONS

What do findings from these three chapters entail for the future of sanctions research and ongoing sanction efforts? In chapter 1, we see that strength of ties among senders in a multilateral sanction can increase sanction effectiveness. Future research can look at other types of ties, such as presence of foreign aid flows, number of free trade agreements, joint participation in international organization activities, etc. The current measure encapsulates security and economic interests, and these additional ties could increase the depth of the measure as well as potentially show other interesting findings.

Furthermore, the use of social network analysis in this chapter generates potential to use this method to examine other multilateral interactions such as those within military coalitions or regional organizations. Using social network analysis to analyze state networks can be valuable in the study of international cooperation. Understanding how ties among states can influence and constrain state behavior has implications for the success of multilateral endeavors. With regards to policy implications, chapter 1 shows that senders should form sender networks with states they have strong ties with, in order to increase likelihood of sanction effectiveness. This finding is useful for policymaking because it can help states identify who to send sanctions with, especially as they might not always be able to involve an institution or reduce the number of issues.

Simply issuing a multilateral sanction, anticipating that more senders will lead to more costs for the target, is not adequate since sanctions could still fail due to the collective action problem and coordination issues among senders. By preemptively choosing states that are more likely hold each other accountable during the sanction process, senders can

maximize multilateral sanction success. An example of this cohesion process playing out can be seen in the Joint Comprehensive Plan of Action (JCPOA) designed by the US, the UN security council, the European Union, and the target, Iran. In 2015, Iran agreed to reform its nuclear program such that it cannot produce weapons-grade uranium and plutonium, in exchange for easing of multilateral sanctions from the US and its allies (Broad & Pecanha, 2015; Robinson, 2021). When the US withdrew from the JCPOA in 2018, the decreased cohesion among senders led to the least wanted outcome- with Iran attempting to re-expand its nuclear program. Since April 2021, however, the US is having talks with Iran again to renew the nuclear deal (Erlanger, 2021).

With regards to chapter 2, future research can consider other ways to identify potential sanction busters. So far, I have considered third-party states that are the target's major trade partners, or states that export similarly to the primary sender. Future studies can consider other states that import similarly to the target, to observe sanction busting when targets avoid sanction costs by importing to other states. An example of this is how after being sanctioned by the US in 2019, Venezuela began importing crude oil to China and India with the help of a Russian oil firm. The same firm has also pursued trade with China, the Philippines, and Vietnam (now suspended), as well as sold minority ownership positions to Chinese and Indian companies to evade sanctions against Russia (Trickett, 2020; Brown, 2020).

Chapter 2 also has substantial policy implications. The findings suggest that the most well-designed sanctions (or as discussed before, costly *and* credible sanctions) can fail if targets substitute sanction costs with increased trade with a potential sanction busting third-party. Policymakers need to look beyond the sender-target interaction, and take note

of potential sanction busters so they can be constrained, or potentially included in the sanction process as a fellow sender.

This leads to implications of the third chapter. Chapters 1 and 2 suggest that sanctions succeed with the cooperation of senders in a multilateral sanction, and the cooperation of potential sanction busters. Chapter 3 raises the question- why don't primary senders compel these states to join the sanction? Findings from this chapter show that states join sanctions for a lot of reasons, such as foreign policy alignment to simply bettering their international reputation by joining a human rights-based sanction. If states with multiple ties with the primary sender, and potential sanction-busting states do not have these motivations, it may be difficult to form an effective multilateral sanction.

Future research can consider other ways to motivate states to join sanction efforts so they are less likely to create impediments to foreign policy objectives. Both chapters 1 and 2 discuss how senders can offer carrots to gain cooperation from other states. Some of these carrots can be increased trade, foreign aid, increased diplomacy, security assistance, etc. Policymakers should consider these additional costs associated with gaining third-party support to ensure sanction effectiveness.

In sum, this dissertation aims to understand how economic sanctions can be effective, and encourages looking beyond the sender-target dyad and considering how actors outside this dyad can influence sanction outcomes. The dissertation also has implications for how international cooperation plays out, and whether it succeeds in achieving objectives. This project encourages future research to consider a network perspective while studying cooperation, in order to maximize successful cooperation and incorporate support of actors that have the ability to thwart effectiveness. Finally, with

regards to policymaking, the dissertation shows that policies can be effective when all involved actors gain from being a part of the policy process. Benefits can take the form of continued cooperation over external issues (such as alliances and trade), increased benefits over these issues, or creation of new benefits to drive cooperation, and ultimately, policy success.

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Awards, Fellowships and Scholarships

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