

# Opening New Doors: Coerciveness, Third-Party States Sanction Imposition

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## Abstract

What role do strategic third-party states play in the sanction-sending state's decision to implement and enforce economic sanctions? The effects of sanction-busters on the success or failure of economic sanctions have been well-studied. However, this paper argues that the impact of sanction-busting on economic sanctions begins earlier, at the stage where the sanction-sending state decides whether to initiate economic sanctions. Strategic third-party states, regardless of their motivations, could influence the sanctioner's decision to move ahead with sanctions through potential sanction-busting activities. These third parties are also in turn incentivized by the willingness of the sanctioning state to enforce economic sanctions and punish sanction-busting activities. Using a game-theoretic model, I demonstrate the sanction-sender's need to balance between the cost it would incur from electing to enforce economic sanctions under the presence of a strategic third-party state and benefits that it would gain from achieving its sanction goals. This paper then loosens the assumption of the state as the unitary actor in the sanction dynamic by considering the role that state-owned enterprises (SOEs) play in sanction-busting. The implications of the model will be tested empirically.

## Introduction

The United States declined to sanction Saudi Arabia for the killing of journalist and regime critic Jamal Khashoggi in 2018. The then-administration of Donald Trump was concerned about alienating the largest American ally in the Middle East, and in pushing Saudi Arabia towards Russia (which has the ability to provide alternative arms) and, more recently China, which has its eyes set on becoming a more important player in the region. Despite the Saudi Crown Prince's alleged involvement, the White House vetoed a bill to suspend arms sales to Saudi Arabia for the extra-judicial killing (and for atrocities committed in Yemen). The vetoed bill also included suspension of arms sales to the United Arab Emirates, a clause intended to punish the country for its actions in Yemen. Both Saudi Arabia and the UAE are important U.S. allies in the region, supporting the U.S. withdrawal from the Joint Comprehensive Plan of Action (JCPOA) and are linchpins to the U.S. counter-terror strategy in the region. Even though the Biden administration temporarily suspended arms sales to Saudi Arabia and the UAE as it carried out a re-evaluation of arms sales to the two countries after coming to power in January 2021, the suspension did not last. Washington resumed arms sales to UAE as early as April of this year. In September, the State Department even approved an agreement up to \$500 million on military-support services for Saudi Arabia.

The Saudi Arabia case highlighted above is not the only instance where states hesitated to enact sanctions against geo-strategically important states or allies. Member states in the European Union, for example, have continued arms sales to Turkey despite tensions amidst Turkey's "illegal" gas drilling in Cypriot waters. In spite of imposed financial sanctions against Ankara for the act and the Union's own "common rules on arms exports," as well as growing concerns over human rights abuses since the failed coup against President Tayyip Erdogan, member states such as Germany, Spain, France, and the U.K. have sold arms and equipment to the E.U.'s NATO ally.

The examples above are by no means exhaustive of the list of potential sanctions that did not occur. The common concern for the potential sanction-sending states in all these scenarios are the presence of third-party states that may fill the gap left by severing the target's supply of arms. This highlights the significance of considering a factor that has thus far not been thoroughly

explored in the sanctions literature – that of third-party states. This paper argues that, given the importance of the sanction-buster's actions on the ability and willingness of the sender state to coerce the target, whether and when third-party states sanction-bust should be examined more closely. Although most work on the topic have found sanction-busters to be motivated by economic concerns (Early, 2012), I propose that a selection process had already occurred prior to the sanction-busting taking place. The sender state chooses to impose sanctions only when it knows with certain degrees of certainty that it would not be penalized for its actions, and that the imposition of economic sanctions is worthwhile. Third-party states who intend to sanction-bust for security and geopolitically motivated reasons may not have the chance to do so because the sender state would not go through with sanctions. Through a game-theoretic model, I illustrate the decision-making calculus of the sender state when it accounts for the presence of third-party states that seek to profit politically from sanctions.

Moreover, this paper seeks to expand on the current literature by examining sanction-busting undertaken, not necessarily by state actors, but by state-adjacent actors. The stages of economic sanctions studied in current literature tend to focus on the actions of state actors. However, the success and failure of economic sanctions are also dependent on the actions of non-state actors, such as companies, state-owned enterprises and even individuals. Yet, non-state entities have not been well-incorporated into the study of economic sanctions. I extend the baseline model and demonstrate the impact that state-owned enterprises, when they act as sanction-busters, may have on the initial stages of the sanctioning process.

In sum, this paper aims to achieve three things. First, it highlights the importance of accounting for strategic third-party states in the international realm. Current sanctions literature has provided a great foundation to understand when and how states sanction-bust, and when and how enforcements of sanction violations occur. However, the costs and benefits that drive third-party states' decision-making calculus is not as well-understood. It may not always be worthwhile for third-party states to sanction-bust given the potential enforcement of the sanctioning state.

## **Theory**

In a world where great powers increasingly wield economic power to coerce and cajole to achieve their foreign policy goals, it is important to consider not just when states would use their economic power, but also when they would refrain from doing so. This is particularly the case since economic sanctions often lead to negative consequences on the ground (for example, see Drury & Peksen, 2014; Gutmann et al., 2021, etc.).

The potential sanction sender has three choices at the outset of trying to resolve any issue. It could choose not to impose sanctions, to impose but not enforce sanctions, or to impose and enforce sanctions. To understand the logic that leads to one or the other of these outcomes, a more in-depth examination of the decision-making process of the sender state must be conducted. Given that the sanction-sender's initial choice establishes whether and how the path of sanctions occurs, it is important to determine what factors go into the sender state's decision to implement sanctions. The variation in selective enforcement and the lack of implementation of economic sanctions, this paper argues, could be driven in part by the presence and actions of a non-economically motivated third-party state.

### *The Third-Party Factor*

Before delving into how third-party states could impact the decisions of the sanction sender, it is important to first consider the types of third parties and their impact on any sanction that the sender state imposes.

In accordance with current literature on sanction-busting, there are two types of third-party states: those who spoil sanctions for economic reasons, and those who are motivated by what they see as a strategic opening to gain benefits in non-economic realms of international relations. Sanctions often provide lucrative opportunities for well-positioned third-party states to reap economic benefits. For example, third-party states who have existing ties to the target (and a record of sanction-busting) are more likely to see an increase in foreign direct investment from companies in the sanction-sending state (Barry & Kleinberg, 2015). Furthermore, Early (2012) found that third-party states that may benefit economically from becoming sanction-busters would do so despite prior alliance with the sanction sender. This demonstrates that some third-party states'

calculus includes costs and benefits beyond those that are directly associated with the sanctions themselves.

Third-party states motivated by non-economic reasons for busting sanctions are different. For such countries, the main concerns are influence, security, projection of power, etc. Of course, economic cost is also important, especially since these types of third-party states more often than not offer economic incentives to the target in order to achieve their goals. However, the benefits that drive the strategic sanction-busters are not economic in the sense that states that fall into this sub-category are not attempting to recoup their costs financially. Instead, they rely on the strategic gains that spoiling the sender's sanctions may bring down the road to balance out the potential up-front economic cost of forming or deepening ties with the target.

Both types of third-party states stand to gain from the severance of economic ties between the sender and the target in the context of sanctions. More importantly, both have significant bearings on the sender state's decision to implement sanctions. The third-party state, should it decide to sanction-bust regardless of motive, could influence the sender's calculus through two mechanisms: (i) changing the anticipated coerciveness of the sanctions and (ii) changing the anticipated pain that the sender of the sanction might have to endure if it goes ahead with its threat.

First, the existence of a third party invariably decreases the anticipated coerciveness of the sender state's sanctions, that is the pain that the target experiences from the sanctions. Coerciveness (pain-imposition) is at the core of understanding the success and failure of economic foreign policies, particularly economic sanctions. Yet, anticipated coerciveness is not well-explored despite its importance to the sender's initial decision of whether or not it should impose sanctions.

Currently, there are a few different ways that potential sanction coerciveness is measured. The Threat and Imposition of Economic Sanctions database utilized narratives or estimates from various sources to code for ex ante and ex post cost (Bapat & Morgan, 2009). Although this method provides a general idea of what the cost of each sanction episode is for the target, cost information is not always available, which may be challenging for empirical analysis. More generally, therefore,

sanctions scholars draw on the broader economic interdependence literature to approximate the costs of breaking ties. Barbieri (1996) operationalized this cost as trade share, while Oneal and Russett (1999) conceptualized interdependence as trade dependence.

The measures discussed above capture the different aspects of interdependence, and the associated costs of severing economic ties. However, it is challenging to understand the coerciveness of economic sanctions without accounting for the strategic nature of the target state. The relationship between the sender and the target is not a static one. When the sender state imposes sanctions, the target would naturally seek to minimize the cost it would bear.

The ability of target states to shift trade to other countries and find alternative economic partners has been previously discussed within the framework of exit costs (Crescenzi, 2003). Crescenzi's work on the topic provides the theoretical foundations for the arguments laid out in this paper. He argued that to fully account for the costs of severing economic ties, the comparison must be made between the best alternative (status quo, given the assumption that the current market is balanced and efficient) and the second-best alternative. Crescenzi focused on trade interdependence specifically and posited that exit cost is dependent on asset specificity and market structure, which corresponds to the target's ability (or lack thereof) to adapt and to find alternative trade partners.

Bringing the concept of opportunity costs into the examination of economic interdependence is important for understanding the coercive power of negative sanctions. However, exit cost alone does not paint a full picture of the target's choices because third parties are strategic actors as well, with their own agendas, and they can change the equation. Third party states, sometimes with strategic goals that compete with the sender's, may be interested in establishing or deepening ties with the target to achieve their foreign policy goals. Each sanction episode forces the targeted nation to seek alternative economic partners. In disrupting the status quo economic relations, negative sanctions open the door for interested third parties to step in and exploit the target's vulnerability.

Third-party states always decrease the anticipated coerciveness of sanctions. However, third-party states may also impose an additional cost on the sender state that is separate from inducing a decrease in sanction coerciveness. This cost is a direct cost that the actions of a strategic third-party state causes the sender to incur, as opposed to the indirect cost of negatively influencing sanction coerciveness. As previously discussed, there are two types of third parties. The first, driven purely by desire for economic gains, influences the coerciveness, and therefore the probability of success, of the sanction sender. More problematic for the sanction sender is the third-party state driven by political or security interests. These types of third-party states tend to have broader foreign policy goals that conflict with the sender state's (for example the Soviet Union during the Cold War and China today for the United States). Through sanction-busting, the security-motivated third-party states could benefit themselves and further their foreign policy goals. The opportunity for a third party to enrich itself through harming the foreign policy interests of the sender state is a direct cost that the sender will have to consider.

There is already empirical evidence that security concerns related to competing alternate trade partners are particularly salient for the sender state when they debate whether or not to sanction a particular target. Kohno et al. (2021) conducted a survey of the Japanese public and found that there is less support for halting aid when a third-party state with competing security interests is waiting in the wings. The research demonstrates, at least among the public, that concerns about sanctions go beyond worries of job loss and economic costs, which have been previously tested (Heinrich et al., 2017) and extend to considerations that sanctions may allow a third party to profit to the detriment of the sender state.

The foregoing makes it clear that rational strategic actors who are considering imposing sanctions must assess not only the likely behavior of targets but also the likely behavior of other relevant actors in the international system (what I am calling third-party states). Not accounting for the incentives of the target or the presence of strategic third-party states is problematic in two ways. Firstly, it overestimates the coerciveness of economic sanctions. States targeted with economic sanctions, particularly those whose leaders are unwilling to acquiesce due to political costs, tend to try to find alternative partners. Whichever method the target state chooses, it invariably decreases the economic pressure that sanction-sending states are applying. However,

current measures do not completely take this into account, potentially leading to an overestimation of the costs of severing economic ties.

Furthermore, disregarding strategically motivated third parties also ignores a key component of the sender state's decision calculus. If the sanction-sending government considers only the reaction of the target, it would need to balance between the cost of sanctions to itself and the potential success of its sanction. The latter is dependent on the target's ability to find suitable alternatives. In this case, the sender state's best alternative is to optimize between the self-inflicted costs of sanctions and the benefits it would gain should the target state capitulate and alter its behavior. On the other hand, if the sanction-sending must account for the presence of a third-party state that may use sanctions as an opportunity to make strategic inroads with the target, the decision-making process would look different. Although cutting off economic ties to the target state could induce the target to alter its behavior, the sender state also provides an opportunity for an alternate trade partner to step in and fill the void. This will harm the sender state through decreasing the potential for sanction success and by benefiting a third-party state that may have opposing interests. In this case, the sanction-sending government's utility is determined not just by the likelihood that its sanction would succeed (and the costs of implementing sanctions), but also by the added cost of ceding foreign policy grounds to a possible competitor.

### *Third-Party States and the Sanction Sender*

How do the existence and actions of third-party states impact the sender's initial decisions? To answer the question, the costs and benefits that the sender and the third-party states must balance have to be considered. For the sanction-sending state, the benefit of implementing sanctions stems from the gains of successfully changing the target behavior. On the other hand, the costs that the sender state has to incur, aside from the direct costs associated with breaking off economic ties with the target, include the costs that a sanction-busting third-party state may inflict.

For the third-party state, sanction-busting's benefits must be weighed against the costs. Sanction-busting behavior comes with two downsides. The first is the non-tangible costs associated with sanction-busting. This type of costs limits the baseline willingness of the third-

party state to sanction-bust and exists regardless of the sender-state's actions. Factors that fall into this category include reputational cost and domestic constraints. The second is possible punishment imposed by the sanctioning state. This cost is, of course, dependent on the actions of the sender state. For the third-party state, sanction-busting may be risky because of enforcement from the sanction-sender. Should the sanction-sender enforce sanctions or punish the third party for sanction-busting, the third party would incur a cost. This cost could be economic, political, or both.

However, the willingness of the sanctioner to punish the third-party state or to stringently enforce sanctions is also conditional. After all, monitoring and enforcement take effort. In order to ensure that the sanction it implemented is enforced, the sanctioning state must first monitor and determine whether sanction-busting activities are taking place. This is difficult, as sanction busters tend to not carry out their activities publicly and would involve the sanction-sender devoting some resources. Carrying through with enforcement is also costly. There are also costs associated with punishment.

Given the costs, for the sanctioning state, some sanctions are more worth enforcing than others. This paper argues that part of the variation in terms of willingness to enforce rests on how much the sanction issue matters for the sanctioning state's interests. This is different from how much the sender state gains in changing the behavior of the target state. Rather, it hinges on how salient the issue is for the government of the sender state. For example, while the sanction-sender could potentially benefit equally from shifting the target state's actions on human rights issues and security issues, the latter is more immediately important for the interests of the sender state. Intuitively, the more important the sanction issue is to the sender state, the more likely the sanction-sending state is to both impose and enforce economic sanctions.

This paper makes a few contributions. First, it focuses on the roles that third-party states, play as strategic actors instead of as passive recipients of redirected trade and finance or as willing new partners in all cases, open to establishing or deepening economic ties with the target in order to help alleviate its economic burden. Yet, third-party states do not extend help in all cases. Depending on the benefits that it would gain and the costs that it may incur, the third-party state

may instead choose to forego the opportunity to sanction-bust. This is something that has not been well-explored yet.

Moreover, this paper recognizes that the scope of third-party states, particularly those with strategic concerns in mind, encompasses a far wider set of countries than simply those that have pre-existing ties to the target state. Conditional on what motivates the third-party's actions, this paper delineates between the different types of third-party states and show why strategically motivated third-party states would in certain circumstances elicit different responses from the sender compared with economically motivated ones.

Broadly, however, this paper hopes to highlight the limits of coerciveness measured as interdependence in economic sanctions. Although interdependence could capture the reduction in the sender state's sanction coerciveness, it does not take into account the non-economically motivated third parties and how their presence may influence the decisions of the sender state and thereby in essence reduce the sender's ability to coerce targets.

There are a few scope conditions to this framework. First, this paper does not examine how the sender's initial decisions affect the outcome of sanctions. The efficacy of economic sanctions is influenced by a multitude of factors, some of which may come into play further in the sanctioning process. I make no claim as to whether the sanction state's actions at the outset of sanctions, for example the sender state's decision to implement and enforce economic sanctions despite the presence of a security- and influence-motivated third-party state, would determine the outcome of the sanctions down the road.

Second, my framework does not include sanctions that are carried out and enforced through international institutions. Although economic sanctions that are imposed through international organizations oftentimes have a main driver, the imposition and enforcement stages of such sanctions are not completely within the control of individual states. While large multilateral coalitions do create enforcement problems stemming from incentives that favor sanction-busting by individual members (Drezner, 2000; Miers & Morgan, 2002), the decision to

implement and enforce sanctions or not does not stem from domestic and strategic considerations of each country involved.

## **Model and Implications**

The model aims to illustrate the impact that the actions of the third-party state would have on the decision-making process of the sender state. In line with the theory outlined in the previous section, the model focuses on the initial stages of sanction imposition and enforcement. This game is in particular focused on non-economically motivated sanction-busting behavior.

This model is intended to capture only the cost-benefit calculus of the sender and the third-party state. As such, it does not overtly include or consider the response of the country targeted by the sanction. The game assumes that the target state would always attempt to alleviate the economic pressure it is facing from the sanctions and try find alternate trading partners to make up for the shortfall caused by the sender state's severance of economic ties.<sup>1</sup> Hence, the probability of sanction success in the model is solely determined by the interdependence and coerciveness, which varies depending on the actions of the third-party, between the target and the sender.

A model is essential to answering the research question outlined in this paper for two reasons. Firstly, some of the costs that the sender state bears are difficult to observe. For example, it is challenging to determine how much the sender state may "lose out" when a third-party state motivated by security and strategic reasons sanction-busts. A game-theoretic approach enables

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<sup>1</sup> Tie establishment is costly, and just as the third-party state may find sanction-busting not worthwhile, so the target may find the cost of creating new or deepening existing relations with a would-be third-party state too high relative to the benefits it would gain. This is also an important piece to the interdependence and coerciveness puzzle, and I plan to further explore the dynamic in another paper. However, for the purposes of this paper the target state is assumed to always be willing to reach out to the third-party state. Regardless of the bargaining that takes place between the third-party state and the target, the impact of the former's behavior on the sender should not be affected.

the parsing out of the effects that the presence and the type of the third-party state, and the impact that salience has on enforcement.

### Model Setup

There are two actors in the game of sequential and complete information. The sender, denoted by  $S$ , and the third-party state,  $D$ . To reflect the different paths that sanctions could take, this model includes three stages. First,  $S$  decides whether to implement sanctions ( $I$ ) or not ( $\sim I$ ). If  $S$  elects against imposing sanctions, the game ends. However, if  $S$  chooses to implement sanctions, the game moves on to the next stage where  $D$  has the opportunity to choose to carry out sanction-busting activities ( $B$ ) or refrain from doing so ( $\sim B$ ). If the third-party state chooses to not sanction bust, the game ends. In this scenario I assume that the sanctioner will always enforce sanctions. Otherwise, the game moves on to the next, and last, stage where the sanction sender decides between enforcing sanctions ( $E$ ) or not ( $\sim E$ ).

The two actors have ideal outcome policies specifically related to the issue that economic sanctions are intended to solve. These ideal policy preferences are denoted by  $t_S$  and  $t_D$ , both of which lie on a one-dimensional policy space  $T \subset R$ . At the status quo when the game starts the policy outcome is at point  $q$ . For this game I make no assumptions on the relative positions of  $t_S$  and  $t_D$  in order to reflect that for any given sanction episode and the issue involved each state could hold a wide range of preferences. However, for the sake of clarity and without loss of generalizability in the two-player game I assume that  $t_S$  falls to the right of  $t_D$ . Therefore, the distance between the two players' ideal policy points can be represented by  $\Delta_t = t_S - t_D$ . Furthermore, I set the status quo point  $q = 0$ . From this, how much each of the players benefit from moving the policy away from status quo and towards their preferred policy points, is represented by  $-(t_S)^2$  and  $-(t_D)^2$ , respectively. Lastly, I also scale the ideal policy points so that  $t_S$ ,  $t_D$ , and  $q$  all fall between  $[-1,1]$ .

For the sanction-sending state, the saliency of the sanction issue is modified by a multiplier,  $k$ , where  $k \geq 0$ . The more important the issue is to the sender state, the larger the multiplier. The saliency is different from the distance from status quo for the sender state.

Any imposed sanction has the probability  $p_j, j \in \{a, b\}$  of success, where  $p_a$  and  $p_b$  denotes the probability of success when the third-party state does not engage in busting and when it does, respectively. Therefore,  $p_a \geq p_b$ , as sanctions without the involvement of a sanction buster should have a higher probability of succeeding.

Any time sanctions are implemented and enforced, the sanction sender must bear the cost of sanctions, which is denoted as  $c_E$ . The cost term encompasses all domestic, be they economic, political, or social, that come from engaging in sanctions. Examples of what might contribute to  $c_E$  include domestic opposition or lobbying against economic sanctions, as well as the usual economic considerations of trade or financial losses, which have been discussed by previous research (Allen, 2008; Lektzian & Souva, 2003).<sup>2</sup>

Should the sanction-sender decide not to enforce economic sanctions, it would incur a cost,  $c_{NE}$ . This cost is a reputational cost and can include the lack of credibility to convince other states that it would enforce economic sanctions in the future, as well as domestic audience cost for failing to punish sanction-busters.

The last cost that the sanction sender could incur is what I term the “international” cost. The international cost occurs when the third-party state is driven by non-economic motivations and would only be borne by the sender state if it enforces sanctions after sanction-busting actions by the third party has taken place. The cost is denoted as  $c_I(D)$ .

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<sup>2</sup> One concern is that the cost of economic sanctions is the same for the sender state whether it enforced sanctions with or without sanction-busting by the third party. It is possible that the sanction sender’s domestic cost for enforcing sanctions after  $D$  chooses to sanction-bust. However, the only thing that would change is reduce the attractiveness of enforcement, and it would not alter how the main parameters of interest,  $c_I(D_i)$  and  $b_e$  and  $b_I * 1_{type= strategic}$  affect the decision of the sender state.

The third-party states' payoffs are composed of four additional parameters. The first two are the benefits that it would gain by engaging in sanction-busting behavior. The first,  $b_e$ , denotes the economic benefit of sanction-busting. This benefit exists for both types of third-party states, and reflects that fact that regardless of motivation, sanction-busting tends to bring economic benefits to the sanction buster. The second type of benefit is the strategic benefit that the security and influence-motivated type of third parties receive from spoiling sanctions and it is denoted by  $b_j$ .

The last two parameters associated with the third-party state is the cost it would incur. The first is the reputational cost to the sanction-buster. This exists regardless of whether the sender state decides to enforce sanctions and is denoted by the term  $c_E$ . The second is from sanction-busting if the sender state decides to enforce sanctions, denoted by  $c_g$ . There are many possible sources for this cost.  $D$  could suffer an international reputational cost for being known as a sanction-buster. The sanction sender could also decide to punish the third-party state, whether through enacting secondary sanctions or other non-sanction related measures. The sequence of the game, as well as the payoffs that each player would receive, is illustrated in Figure 1.

### Implications

The model is solved through backwards induction. The detailed solution of the model can be found in the appendix to this paper, along with the full comparative statics. Here, I highlight the most relevant implications to my theory.

*Implication 1: When the third-party state ( $D$ ) sanction-busts ( $B$ ) for geopolitical reasons,  $S$  is less likely to impose economic sanctions.*

From the proof of the model, we know that  $S$  would never choose to not enforce if  $D$  engages in sanction-busting. Therefore, the only decision for  $S$  when there is a sanction-busting  $D$  is between not implementing sanctions ( $\sim I$ ) at all and implementing and enforcing sanctions.

However, from the comparative statics, the higher the geopolitical cost,  $c_I(D)$ , the less likely the sanctioning state would be to impose economic sanctions.

*Implication 2: When the issue under sanction is more salient or important to the sender state (S), the third-party state (D) is less likely to engage in sanction-busting.*

As the issue under sanction increases in importance for the sanction-sender, S is more likely to enforce sanctions, which in turn leads to a decrease in willingness to sanction-bust for the third-party state (D).<sup>3</sup>

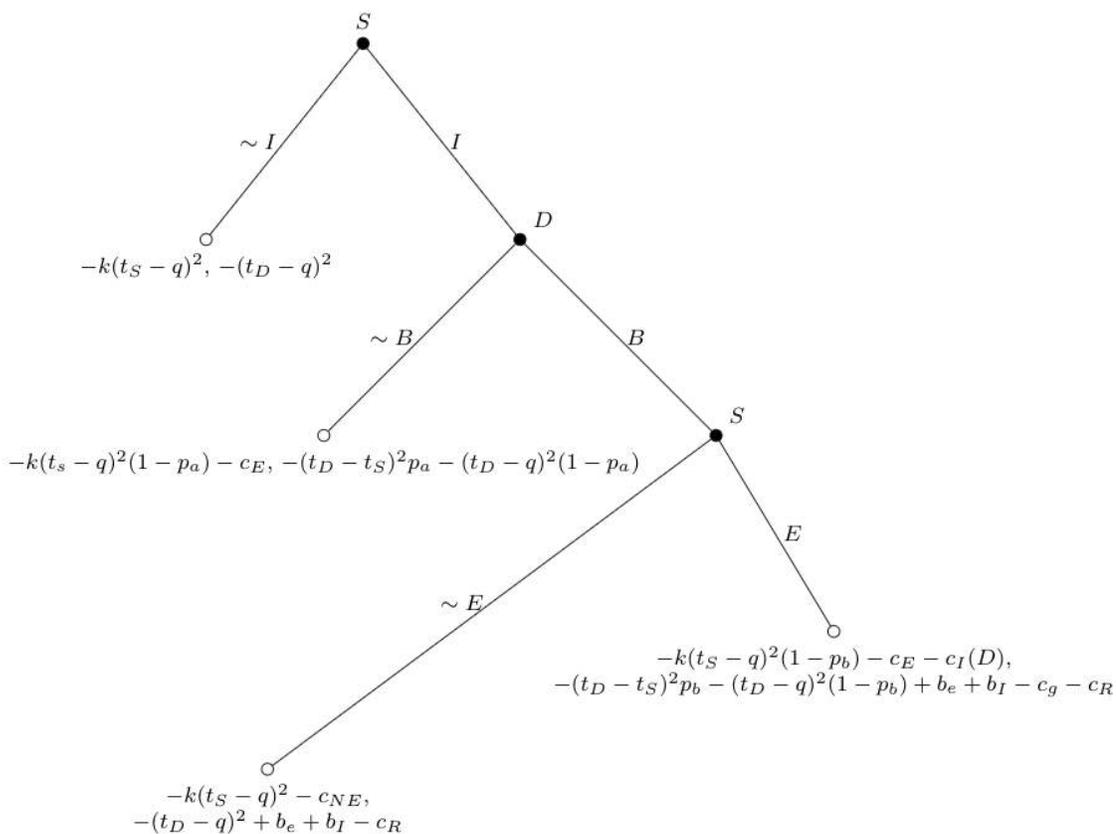


Figure 1: Baseline Model, Third-Party State Intervention

### Japan and Economic Sanctions

<sup>3</sup> This is evident from both the comparative statics and the simulated results, which can be found in the Appendix.

To highlight the mechanisms at play in the model, I examine Japan's attitude towards economic sanctions for India in 1998 and Myanmar in 2021. The cases provide comparison between a geopolitical context where there is a rival state with strong strategic interest in the target, and one where Japan's main competitor in the region has little to no opportunity in gaining geopolitically. Both contexts were where the target state engaged in activity that was widely condemned in the international community, and where China was Japan's geopolitical rival. Furthermore, Japan has or had substantial investments and economic interests in India in 1998 and Myanmar in 2021. By 1997, car manufacturers, Honda and Toyota, both had plants in India, while major Japanese companies such as Kirin, Suzuki and Toyota have partnerships or plants in Myanmar. Japan was also the largest Official Development Aid (ODA) donor to India, with bilateral aid commitments running at around US \$1 billion annually in the 1990's (Wadhva, 1998). Similarly, Japan is Myanmar's largest OECD ODA donor. In 2019, Japan provided US \$1.74 billion in development aid (Tobita, 2021).

#### Japan Sanction on India in 1998

In May 1998, India drew widespread condemnation from the international community as it carried out the Pokhran-II nuclear tests, a series of five nuclear bomb test explosions conducted by the Indian Army. Though the tests enjoyed high domestic support, with an opinion poll showing that 91% of those surveyed approved of the first series of tests, the reception by the international community was chillier. Then-President Clinton announced wide-ranging sanctions soon after the last two of the tests, and Japan soon followed suit (Burns, 1998), announcing its intentions to cut aid to India. In doing so, it joined forces with other countries such as Germany, Sweden, and Denmark in suspending ODA.

Turning to the potential third-party state that could cause Japan to hesitate in imposing sanctions, it is important to examine the perception of Tokyo towards China and its likelihood of busting sanctions.<sup>4</sup> Despite relatively cordial relationships in the 1980's, by the mid 1990's, Japan

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<sup>4</sup> There were other third-parties that may have played a role in the dynamic. The United Kingdom, France, and Russia chose not to condemn India, and did not impose sanctions. However, it is likely that Japan considered the geopolitical

viewed China as a potential threat, and was suspicious of its geopolitical ambitions. From 1995-1997 Japan even suspended its foreign aid to China due to Chinese nuclear tests (Katada, 2001). Therefore, were China to engage in sanction-busting activities, it would have been highly likely that Japan would not have gone forward with the sanctions.

However, China was not interested in busting sanctions or playing a spoiler role. In fact, China's ideal point was highly aligned with Japan's, as well as the other sanctioners'. China became one of the most vociferous critics of the nuclear tests, particularly after the publication of Indian Prime Minister Atal Behari Bajpayee's letter to President Bill Clinton, where he justified the tests by citing China as the major reason that the tests were conducted (Acharya, 1999). Given China's reaction and the circumstances surrounding the nuclear tests, it is likely that Japan determined that China would not play a spoiler role in the sanctions.

#### Japanese Inaction in Myanmar in 2021

Earlier this year, Myanmar's military overthrew the democratically elected government in a bloody coup. While the military junta found itself subject to sanctions from countries around the world, including again, Japan's ally the United States, Japan withstood international pressure to impose its own sanctions and cut off its considerable aid. Myanmar is an important partner, both in terms of trade and politically, for Japan in Southeast Asia, and Tokyo, hesitant of providing an opening for China to make inroads in the country, went against the tide by continuing its relationship with Naypyidaw despite undermining the U.S.'s sanctions.<sup>5</sup>

The major difference in the Myanmar case is China. Although China was not entirely satisfied with the military takeover (Myanmar's military is highly suspicious of China, and Beijing enjoys more cordial relations with the ousted Aung San Suu Kyi), it adopted a policy of non-interference, blocking a United Nations resolution to condemn the coup. China has exhibited a

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costs of these sanction-busters to be negligible (Japan was enjoying relatively cordial relations with Russia at the time)

<sup>5</sup> Although Japan did not impose sanctions, it did temporarily halt negotiations for new aid. However, currently allocated aid and resources are allowed to be used, and projects are continued, and as such it stopped short of implementing aid sanctions.

strong interest in expanding its influence in Southeast Asia. Geopolitically, Myanmar provides a corridor that allows China to access the Indian Ocean through its southwestern provinces. Moreover, Myanmar is rich in natural resources, including oil. Economically, China is one of Myanmar's largest investors, and it also recently signed agreements for multiple projects with Myanmar under the Belt and Road Initiative.

China's intent to bust sanctions was very clear, and indeed it has continued, and even increased economic with Myanmar. In spite of China's veto of the U.N. resolution, China's ideal point is probably more aligned with Japan's than it is with the military junta's. However, the benefits of sanction-busting are large enough that it supersedes the gain that a deviation from the status quo would bring. Given that Japan knows that China will simply increase its economic ties to Myanmar, and that it will lose out geopolitically if it severs relations with the military generals, it is reasonable that Japan would choose to not impose economic sanctions.

The two cases demonstrated the role that the presence of a sanction-busting third-party state plays in the sender's decision to impose economic sanctions. In the Indian case, China was not interested in sanction-busting, and indeed Sino-Indian relations hit a low point immediately after the nuclear tests. In the Myanmar context, Japan was unwilling to impose sanctions due to China's substantial geopolitical interests in the region (and its own potential loss of influence).

## **State-Owned Enterprises and Extended Model**

### *State-Owned Enterprise and Sanction-Busting*

Although the model described above seems to appropriately describe the interaction between the sanctioning and third-party states, it is quite limited in scope. There are three fundamental conditions that must be met for the model to be true. First, the sanction must not be symbolic or performative. That is to say, the sender state must implement sanctions with the intention to hurt or coerce the target state. Second, the sanction-sending state and the third-party state must both be fully in control of sanction-busting activities. Enforcement for sanction-

busting activities has to be possible, even if it is not carried out. Lastly, the sanctioned products and services should be completely substitutable. Namely, the products or services under sanction are able to be replaced by the products and services of other countries.

In reality, however, sanctions are often symbolic or performative, and are sometimes intended to “play to the home crowd (Whang, 2011).” Sanction-busting can be carried out by non-state actors, a point that will be elaborated on in the following paragraphs, and not all sanctioned products are substitutable due to rarity (minerals, etc.) or technology (weapons systems, etc.). The only types of sanction that meet the requirements laid out above are military aid or official state assistance.

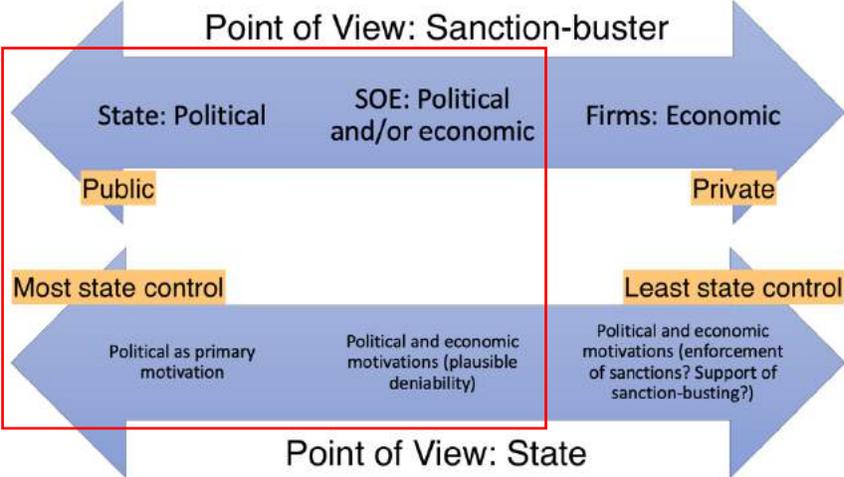
The scope condition means that the model above is unable to describe the dynamics of other types of sanction-busting activities. Military and state aid are just one of the sanction instruments that sender states employ. Going beyond those two types of sanction instruments, however, requires the involvement of other actors and entities beyond state actors. Embargoes, export and import restrictions, financial sanctions, etc. are all tools where the cooperation of non-state actors are required. If non-state actors choose to sanction-bust, the third-party’s decision becomes whether it would choose to, in essence, enforce economic sanctions for the sender by not providing challenges or obstacles to the punishment that sender states may apply to their companies. This can be seen from two contrasting examples. In 2019, the United States placed sanctions Chinese state-owned Zhuhai Zhenrong for importing oil from Iran, in violation of Washington’s secondary sanctions targeted at Tehran. The move enraged Chinese officials, who vowed to keep importing Iranian oil, with the Foreign Ministry spokesperson, Geng Shuang, announcing, “The Chinses government is committed to protecting the legitimate rights and interests of Chinese enterprises (Wong, 2019).” On the other hand, Beijing recently asked its SOEs to undergo investigations on overseas compliance risk, with sanctions listed as one high-risk area that SOEs should pay special attention to (Bai & Jia, 2021). The former is a case where the third-party government, China, allowed and supported its SOE in sanction-busting, while the latter

Beijing at least communicated publicly to its SOEs to take a more cautious approach to potential sanction violations.

The “majority stakeholder” of trade and financial sanctions is the private enterprise. However, before theorizing on when and how private corporations would sanction-bust and the third-party state’s reaction, as well as the dynamic with the sender state, we need to take the first step in incorporating state-adjacent actors into the interaction. State-owned enterprises (SOEs) provide a good intermediate step between the state-centric model above and the full firm-centric model. Although state-owned enterprises vary quite widely in terms of governance, proportion of state ownership, and product or service type, they do share a few common traits that are important to the analysis under consideration. In particular, SOEs are companies that the state has some control over, and therefore is tied more closely to the goals of the state than private enterprises. First and foremost, SOEs exist to fulfill the goals of the state, be they economic, sociopolitical, or international (Davis et al., 2019). SOEs vary widely in terms of governance structures, the industries they are in (strategic vs. non-strategic), as well as across other dimensions. SOEs with high state ownership may enjoy low state control and vice versa (Bruton et al., 2015). Despite the fact, I posit that the state’s ownership in the SOE is provides a good proxy, and a first-cut examination, for the costs and benefits that the third-party state would incur should its SOE decide to sanction-bust, and I will go into the reason in a later paragraph.

At this point it is important to note that the *sanction-busting actor* and the *third-party state* become divorced as sanctions-busting activities are conducted by non-state actors. As we move away from sanction-busting activities controlled by the state and gradually into the private realm, the incentives to sanction-bust also changes. Instead of purely political reasons, the sanction-busting actor could also bust for economic reasons. In fact, as we move closer to the purely private end of the spectrum, where economic benefits accrue to the private actor, the sanction-busting actor acts for purely economic benefit. On the other hand, from the perspective of the *third-party state*, the consideration grows more complicated. For the third-party state, the

decision becomes whether or not to support its companies when they engage in sanction-busting behavior. If we consider state control over the activities of sanction-busting activities from highest level to the lowest, as if on a spectrum, then we can produce a figure similar to the one below. In this paper, I only discuss the sanction-busting activities undertaken by the SOEs and the state, while leaving the role of private companies to another project.



One recent example of what was essentially state-sanctioned SOE sanction-busting occurred when India allowed its state refiners to import oil from Iran by making an arrangement in 2018 with the National Iranian Tanker Company that effectively allowed it to circumvent U.S. sanctions. Under a CIF (cost, insurance, and freight) arrangement, Indian refiners could ensure a continued supply of oil from Iran despite the refusal of western insurance companies to cover oils shipped from Iran due to Washington’s sanctions (Verma, 2018).

With state-owned enterprises, the motivation to sanction becomes more complicated. Whereas the busting of sanctions on state or military aid could only be conceived as a political maneuver, state-owned companies could genuinely engage in sanction-busting due to economic factors, such as is with the above example. On the other hand, the unique nature of SOEs, particularly the fact that they are in some cases extensions of the state, mean that when SOEs sanction-bust, they could also be acting for geopolitical reasons. Last year, Reuters obtained records that showed that Panda International Information Technology Co, a company controlled

by state-owned China Electronics, worked with Huawei to help Iran acquire hardware and software (Stecklow, 2020). While economic incentives may have played a role in the companies busting U.S. sanctions, there was also the possibility that the company engaged in illicit activities in order to maintain China's geostrategic influence in the region.

The above examples highlight that SOEs can be driven by purely economic or both economic and geopolitical concerns. However, the sanction-sender may not always be certain which SOEs are motivated by what factor. It is possible, though, for the sanctioning state to make an educated guess about the sanction-buster's intentions through factors such as the SOE's industry, the relationship between the third-party state and the target, the target's geopolitical value to the third-party state, and the third-party state's relations with the sender state. Uncertainty will always exist. However, the more certain the sanction sender is that the SOE is of the geopolitically motivated type, the less likely it would be to implement and enforce sanctions. Conversely, though, if the sanction-buster is likely to be engaging in sanction-violation activities purely for economic profit, the sanction-sender should be more likely to enforce sanctions, all else equal.

There has been rich literature on sanction-busting and enforcement. However, less focus has been placed on the dynamic between the state and non-state actors in the sanctions sphere. I argue that in order to gain a comprehensive picture of how sanction-busting could impact the sanction-sending state, and even the third-party state, it is important to consider what the role private and semi-private actors may play.

### Extended Game

The extended game is quite similar to the baseline model. The major difference is the  $\lambda$ ,  $0 \leq \lambda \leq 1$  term, which denotes the percentage of state ownership in the SOE. SOEs range widely across several dimensions, including governance structure and industry. These dimensions could impact the ways in which the enterprises interact with the state and their tendencies to sanction-bust. I argue, however, that in the view of the third-party state, the considerations that drive it are: economic benefit, costs from punishment, and geopolitical gain (if it is of the non-economically motivated persuasion). Thus, while governance structure, industry, etc. could impact how the SOE

itself would behave as a sanction-busting actor, it should not impact the benefit and costs that would partially accrue to the third-party state as the partial owner.

The only other changes from the baseline model are the introduction of an economic type of sanction buster and the uncertainty surrounding the sanction-buster's type. The political benefit that the security and influence-motivated type of third parties receive from spoiling sanctions exists only for the non-economically motivated  $D$ . As such, it is denoted by  $b_I * 1_{type=strategic}$ . Moreover, the sanction-sender loses out geopolitically only when the third-party SOE is of the political type. Therefore, the cost,  $c_I(D)$ , is augmented by probability  $\theta$  that  $D$  would be a non-economically motivated type. The uncertainty exists because the sender state, a priori (or even sometimes ex ante), cannot know for certain what type of sanction-buster the SOE may be, though the uncertainty varies depending on the context. For example, the United States could anticipate with a high degree of certainty that Chinese SOEs may engage in sanction-busting if it sanctions Sri Lanka, since Sri Lanka is a country where China has strong economic and geopolitical interest in.

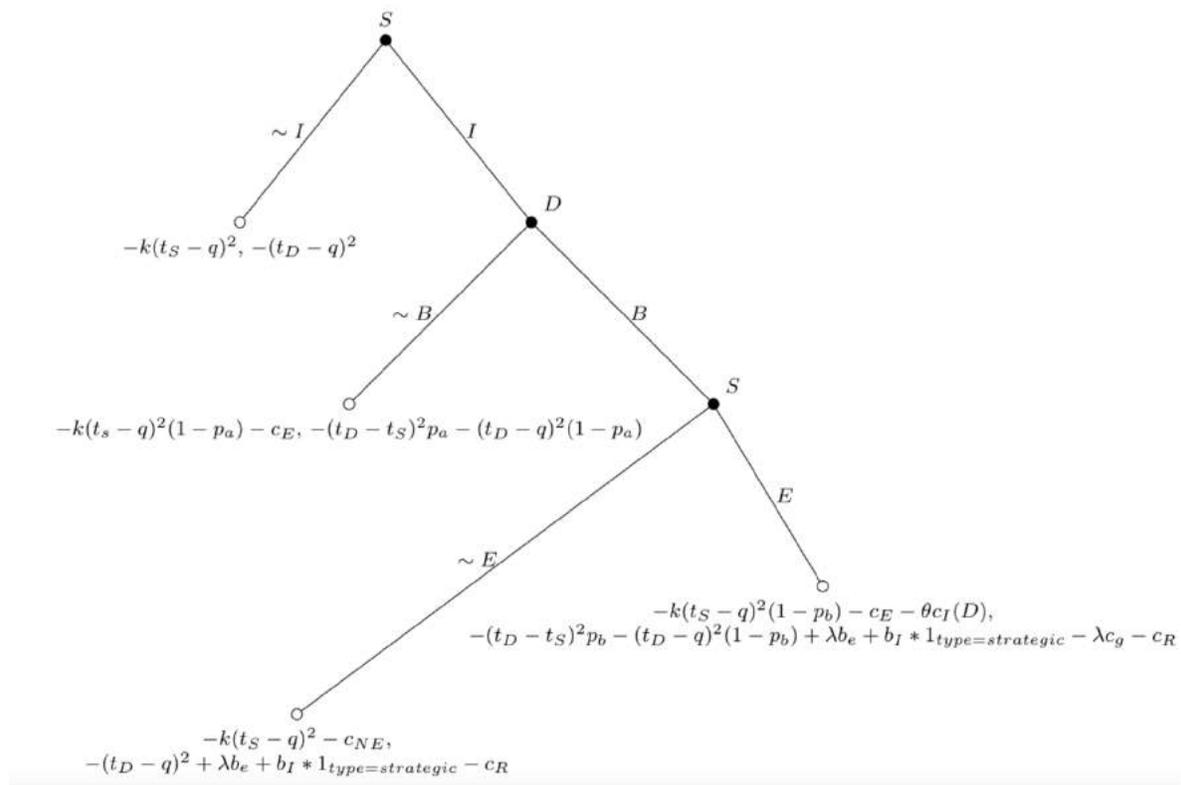


Figure 2: Extended Model, Third-Party State and SOEs

### Implications

Similar to the baseline model, this game is solved through backward induction. The full solution and complete set of comparative statics can be found in the Appendix. In this section, I will only highlight a couple of the more relevant implications.

*Implication 1: When the third-party SOE sanction-busts for geopolitical reasons, S is less likely to impose economic sanctions.*

From the proof in the Appendix, we can see that when  $D$  is of the geopolitically driven type, it is more likely to direct or allow its SOEs to engage in sanction-busting. This is because  $D$  receives the “international” benefit of  $b_I$ , which the economically motivated type does not. When the benefit accrued to  $D$  as it engages in or allows for sanction-busting,  $S$  is less likely to want to impose sanctions.

*Implication 2: When a third-party state owns a higher percentage of the sanction-busting SOE, it is more likely to allow or utilize its SOEs to engage in sanction-busting activities when the economic benefits from sanction-busting are greater than the costs of punishment. Conversely, the third-party state is less likely to allow or utilize its SOEs to engage in sanction-busting activities when the economic benefits from sanction-busting are smaller than the costs of punishment.*

This implication is drawn directly from the comparative statics calculated in Appendix B. The intuition behind it is that since the third-party state owns only a portion of the SOE, it would accrue only part of the benefit and bear part of the economic costs of punishment. If the benefit is greater than the cost, the more the third-party state owns, the more it benefits. On the other hand, if the benefits are less than the costs incurred from punishment, the third-party state would suffer greater losses the larger its ownership stake in SOEs.

### **Plan for Empirical Analysis**

I intend to test the second implication of the extended game, which relates the proportion of state ownership to the likelihood that the third-party state will allow its SOEs to engage in sanction-busting activities or use its SOEs to sanction-bust, with U.S. sanctions from the EUSANCT database.  $\lambda$ 's effect on the third-party state's willingness to allow or encourage sanction-busting is dependent on when the economic benefits from sanction-busting are smaller than the costs of punishment. In order to isolate the cases where the economic benefit would be greater than the cost of punishment, I plan to subset sanction cases to those that are high in value for the sanction-buster economically. As such, I look at sanctions on arms, oil and other natural resources, since those are likely the cases where any economic gain accruing to the sanction-buster would be greater than the cost incurred.

The dependent variable is whether a specific SOE engaged in sanction-busting, and the main independent variable of interest is the proportion of state ownership. Data on the former still need to be collected, particularly cases of sanction-busting where no punishments were enacted, and I intend to rely on media sources and government documents, though any cases of sanction-busting by SOEs are likely to be an undercount, since sanction-busting tends to be a covert activity.

## **Conclusion and Next Steps**

I have shown that enforcement, but most importantly, the imposition of economic sanctions is impacted by the presence of strategic third-party states. That sanction-senders are selecting out of sanction impositions when there is a third-party state that may be motivated by geopolitical reasons to sanction-bust is something that has not yet been explored thoroughly by current sanction-busting literature. Yet, geopolitically motivated sanction-busters exist, and their influence are felt before sanctions are imposed.

I also highlight the need to distinguish the sanction-busting actor from the third-party state actor when looking at sanction-busting and the effects that it may have on sanction enforcement, compliance and imposition. In this paper I look at purely the utility functions of the state but expanded the baseline model to include the state adjacent SOEs. In a related paper, I examine the role private enterprises play in the sender-third-party state dynamic.

The next steps for this project is to finish data collection, so that I may be able to test the second implication of my extended model. Furthermore, I also intend to model the calculus of SOEs when deciding whether to engage in sanction-busting or not, and compare it with the calculus of private companies.

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## Appendix A – Baseline Model Solution

The baseline model is solved through backwards induction.

*S will choose Enforce over Not Enforce when*

$$-k(t_S - q)^2(1 - p_b) - c_E - c_I(D) \geq -k(t_S - q)^2 - c_{NE}$$

After algebraic rearrangement:

$$kp_b(t_S - q)^2 - c_E - c_I(D) + c_{NE} \geq 0$$

This results in the following comparative statics:

$$\frac{\partial}{\partial k} = p_b(t_S - q)^2 \geq 0$$

$$\frac{\partial}{\partial p_b} = k(t_S - q)^2 > 0$$

$$\frac{\partial}{\partial c_E} = -1 < 0$$

$$\frac{\partial}{\partial c_I(D)} = -1 < 0$$

$$\frac{\partial}{\partial c_{NE}} = 1 > 0$$

$$\frac{\partial}{\partial (t_S - q)^2} = kp_b > 0$$

*D will choose to sanction bust (B) over not sanction busting (~B), conditional on S enforcing sanctions (E) when*

$$\begin{aligned} & -(t_D - t_S)^2 p_b - (t_D - q)^2(1 - p_b) + b_e + b_I - c_g - c_R \\ & \geq -(t_D - t_S)^2 p_a - (t_D - q)^2(1 - p_a) \end{aligned}$$

After algebraic rearrangement:

$$(p_a - p_b)(t_D - t_S)^2 + (-p_a + p_b)(t_D - q)^2 + b_e + b_I - c_g - c_R \geq 0$$

From this we can obtain the following comparative statics:

$$\frac{\partial}{\partial b_e} = 1 > 0$$

$$\frac{\partial}{\partial c_R} = -1 < 0$$

$$\frac{\partial}{\partial b_I} = 1 > 0$$

$$\frac{\partial}{\partial c_g} = -1 < 0$$

The comparative statics for the ideal point distances (from each other and from the status quo) are presented through simulation.

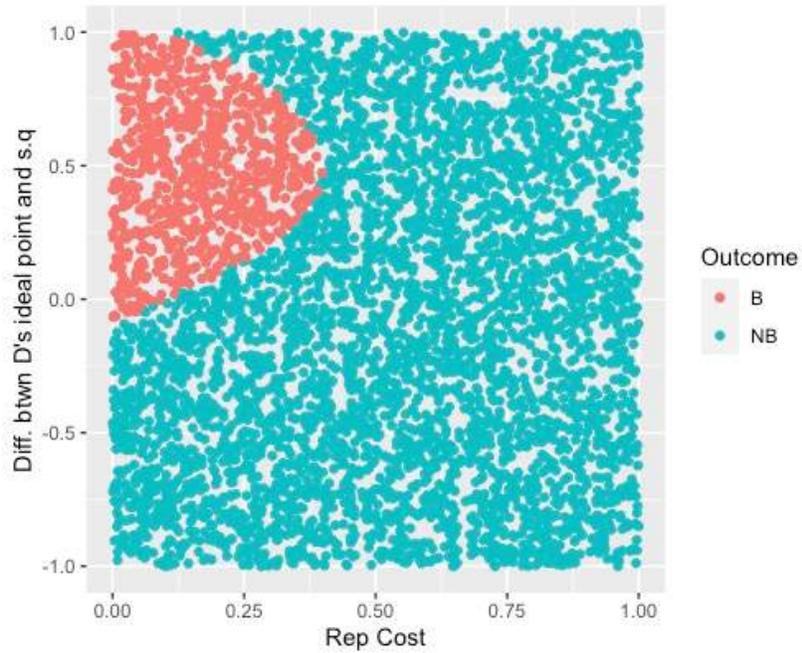


Figure A1: Simulated outcome (for busting vs. not busting conditional on S enforcing) for  $t_D - q$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.3$ ,  $c_{NE} = 0.4$ ,  $b_e = 0.5$ ,  $b_I = 0.5$ ,  $c_I = 0.4$ ,  $k = 3$

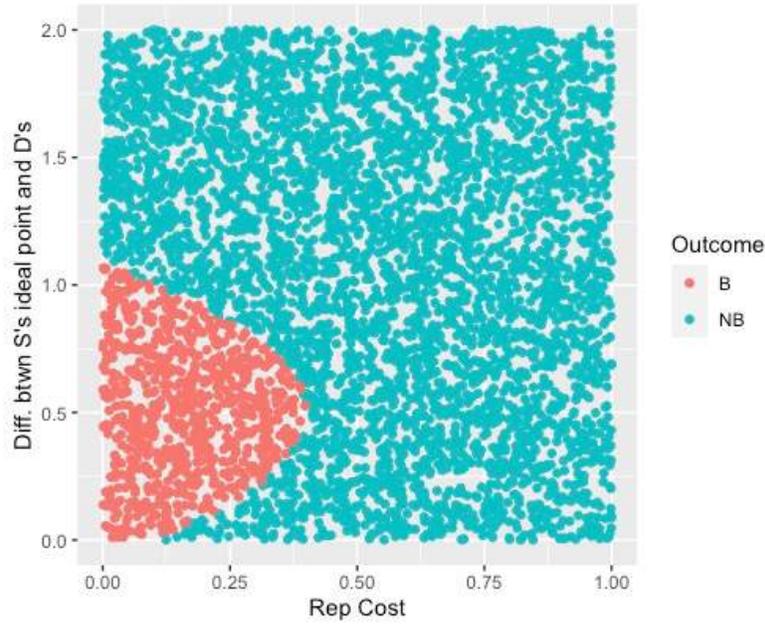


Figure A2: Simulated outcome (for busting vs. not busting conditional on  $S$  enforcing) for  $t_S - t_D$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.3$ ,  $c_{NE} = 0.4$ ,  $b_e = 0.5$ ,  $b_l = 0.5$ ,  $c_l = 0.4$ ,  $k = 3$

$D$  will choose to sanction bust ( $B$ ) over not sanction busting ( $\sim B$ ), conditional on  $S$  not enforcing sanctions ( $\sim E$ ) when

$$-(t_D - q)^2 + b_e + b_l - c_R \geq -(t_D - t_S)^2 p_a - (t_D - q)^2 (1 - p_a)$$

After algebraic rearrangement:

$$(t_D - q)^2 p_a + (t_D - t_S)^2 p_a + b_e + b_l - c_R \geq 0$$

From this inequality, we get the following comparative statics:

$$\frac{\partial}{\partial b_e} = 1 > 0$$

$$\frac{\partial}{\partial b_l} = 1 > 0$$

$$\frac{\partial}{\partial c_R} = -1 < 0$$

$$\frac{\partial}{\partial p_a} = (t_D - q)^2 + (t_D - t_S)^2 \geq 0$$

The comparative statics for the ideal point distances (from each other and from the status quo) are presented through simulation.

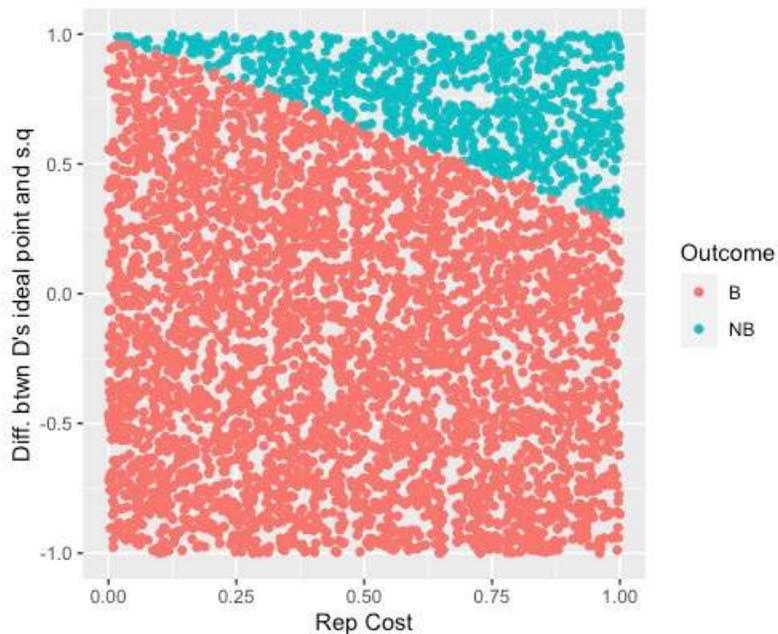


Figure A3: Simulated outcome (for busting vs. not busting conditional on  $S$  not enforcing) for  $t_D - q$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $b_l = 0.2$ ,  $c_l = 0.4$ ,  $k = 3$

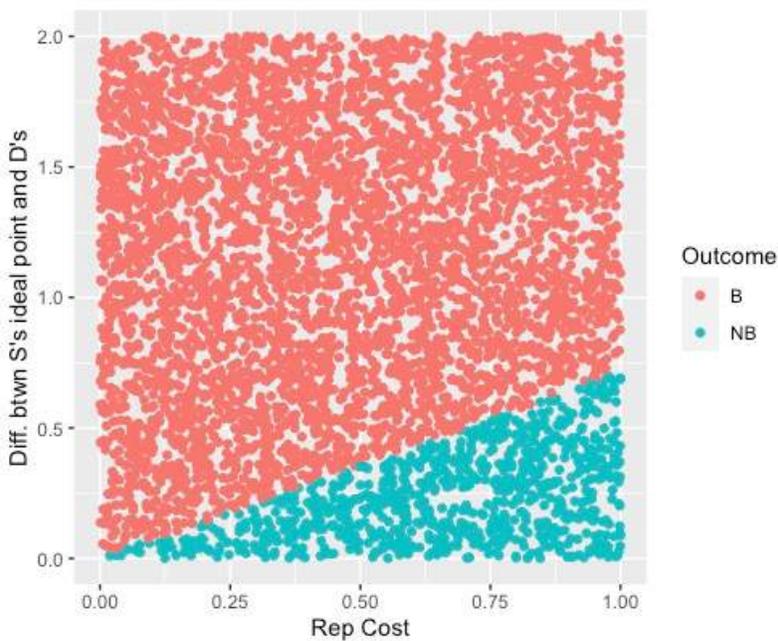


Figure A4: Simulated outcome (for busting vs. not busting conditional on  $S$  not enforcing) for  $t_S - t_D$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $b_l = 0.2$ ,  $c_l = 0.4$ ,  $k = 3$

$S$  will choose to not implement sanctions ( $\sim I$ ) over implementing sanctions ( $I$ ), conditional on  $D$  choosing to not sanction bust ( $\sim B$ ) when

$$-k(t_S - q)^2 > -k(t_S - q)^2(1 - p_a) - c_E \geq 0$$

After algebraic rearrangement we get:

$$-kp_a(t_S - q)^2 + c_E \geq 0$$

From the above inequality we can obtain the following comparative statics:

$$\frac{\partial}{\partial k} = -p_a(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial (t_S - q)^2} = -kp_a \leq 0$$

$$\frac{\partial}{\partial p_a} = -k(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial c_E} = 1 > 0$$

*S* will choose to not implement sanctions (~*I*) over implementing sanctions (*I*), conditional on *D* choosing to sanction bust (*B*) when<sup>6</sup>

$$-k(t_S - q)^2 \geq -k(t_S - q)^2(1 - p_b) - c_E - c_I(D)$$

After algebraic rearrangement we get:

$$-kp_b(t_S - q)^2 + c_E + c_I(D) \geq 0$$

From the above equation we obtain the following comparative statics:

$$\frac{\partial}{\partial k} = -p_b(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial p_b} = -k(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial (t_S - q)^2} = -kp_b \leq 0$$

$$\frac{\partial}{\partial c_E} = 1 > 0$$

$$\frac{\partial}{\partial c_I(D)} > 0$$

It is also interesting to note how issue salience, or the parameter  $k$ , indirectly affects  $D$ 's willingness to sanction-bust through increasing  $S$ 's willingness to enforce. For example:

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<sup>6</sup>  $S$  will never choose to not enforce sanctions if  $D$  sanction busts, because  $-k(t_S - q)^2$  is always greater than  $-k(t_S - q)^2 - c_{NE}$

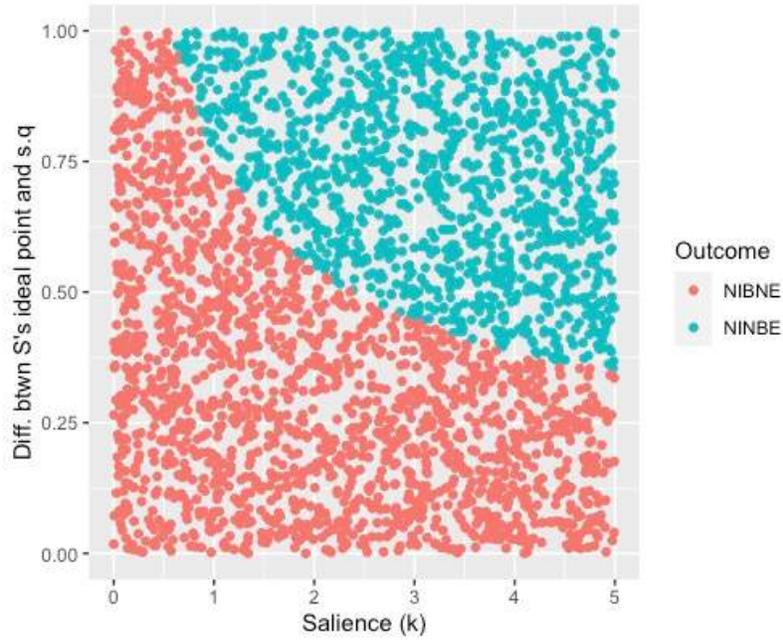


Figure A5: Simulated outcome for  $|t_s - q|$ , plotted against salience,  $k$ . Values of other parameters held constant at:  $p_a = 0.8$ ,  $p_b = 0.5$ ,  $q = 0$ ,  $c_E = 3$ ,  $c_R = 2$ ,  $c_g = 3.5$ ,  $c_{NE} = 3$ ,  $b_e = 1.5$ ,  $b_I = 2.5$ ,  $c_I = 0.3$

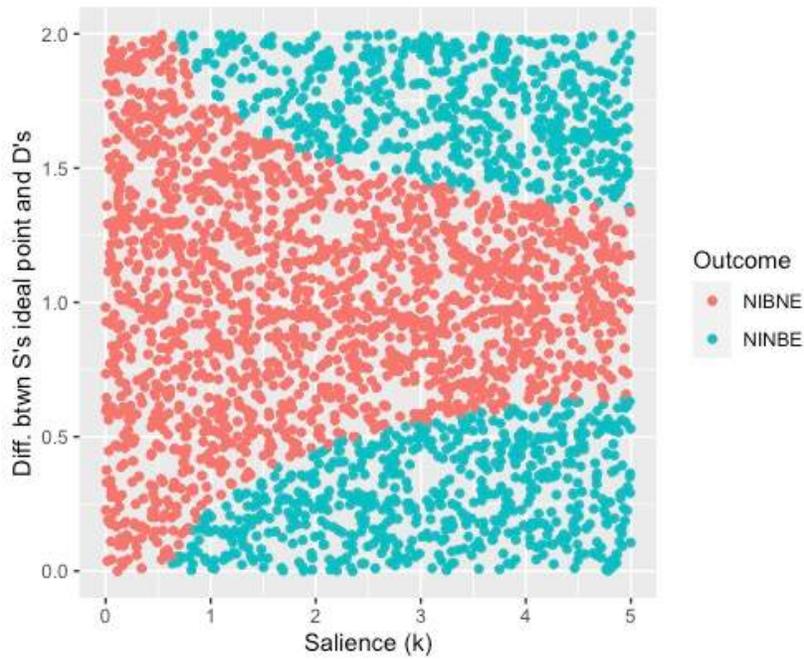


Figure A6: Simulated outcome for  $t_s - t_D$ , plotted against salience,  $k$ . Values of other parameters held constant at:  $p_a = 0.8$ ,  $p_b = 0.5$ ,  $q = 0$ ,  $c_E = 3$ ,  $c_R = 2$ ,  $c_g = 3.5$ ,  $c_{NE} = 3$ ,  $b_e = 1.5$ ,  $b_I = 2.5$ ,  $c_I = 0.3$

## Appendix B – Extended Model Solution

The baseline model is solved through backwards induction.

*S will choose Enforce over Not Enforce when*

$$-k(t_S - q)^2(1 - p_b) - c_E - \theta c_I(D) \geq -k(t_S - q)^2 - c_{NE}$$

After algebraic rearrangement:

$$kp_b(t_S - q)^2 - c_E - \theta c_I(D) + c_{NE} \geq 0$$

From the inequality we get the following comparative statics:

$$\frac{\partial}{\partial k} = p_b(t_S - q)^2 \geq 0$$

$$\frac{\partial}{\partial p_b} = k(t_S - q)^2 \geq 0$$

$$\frac{\partial}{\partial (t_S - q)^2} = kp_b \geq 0$$

$$\frac{\partial}{\partial c_E} = -1 < 0$$

$$\frac{\partial}{\partial \theta} = -c_I(D) < 0$$

$$\frac{\partial}{\partial c_I(D)} = -\theta < 0$$

$$\frac{\partial}{\partial c_{NE}} = 1 > 0$$

*D will choose to sanction bust (B) over not sanction busting (~B), conditional on S enforcing sanctions (E) when*

$$\begin{aligned} & -(t_D - t_S)^2 p_b - (t_D - q)^2(1 - p_b) + \lambda b_e + b_I * 1_{type=strategic} - \lambda c_g - c_R \\ & \geq -(t_D - t_S)^2 p_a - (t_D - q)^2(1 - p_a) \end{aligned}$$

After algebraic rearrangement:

$$(p_a - p_b)[(t_D - t_S)^2 - (t_D - q)^2] + \lambda(b_e - c_g) - c_R + b_I * 1_{type=strategic} \geq 0$$

There are two cases, when *D* is the economic type and when *D* is the geopolitical type. We examine each type separately.

When *D* is the economic type

The inequality in this case is:

$$(p_a - p_b)[(t_D - t_S)^2 - (t_D - q)^2] + \lambda(b_e - c_g) - c_R \geq 0$$

From this we can get the following comparative statics:

$$\frac{\partial}{\partial b_e} = \lambda > 0$$

$$\frac{\partial}{\partial c_g} = -\lambda < 0$$

$$\frac{\partial}{\partial c_R} = -1 < 0$$

$$\frac{\partial}{\partial \lambda} = (b_e - c_g)$$

$$\frac{\partial}{\partial (p_a - p_b)} = (t_D - t_S)^2 - (t_D - q)^2$$

The comparative statics for  $\lambda$  is negative when  $c_g > b_e$ , and positive when  $b_e > c_g$ , indicating that  $D$  is more likely to sanction-bust the higher proportion the state ownership when the economic benefit exceeds the costs of punishment, and less likely to do so vice versa. Meanwhile, the comparative statics for  $p_a - p_b$  is positive when  $(t_D - t_S)^2 - (t_D - q)^2 > 0$ , or when the distance between the two players' ideal points is greater than the distance between the sanction-buster's ideal point and status quo, and negative otherwise. The comparative statics for the ideal point distances (from each other and from the status quo) are presented through simulation.

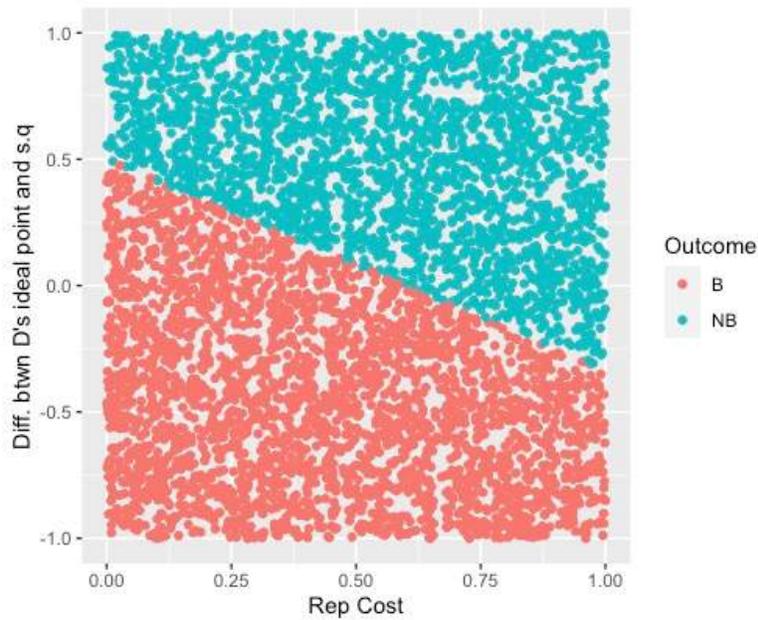


Figure A7: Simulated outcome (for busting vs. not busting conditional on  $S$  enforcing when  $D$  is of the economically-motivated type) for  $t_D - q$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $c_I = 0.2$ ,  $k = 3$ ,  $\theta = 0.6$ ,  $\lambda = 0.8$

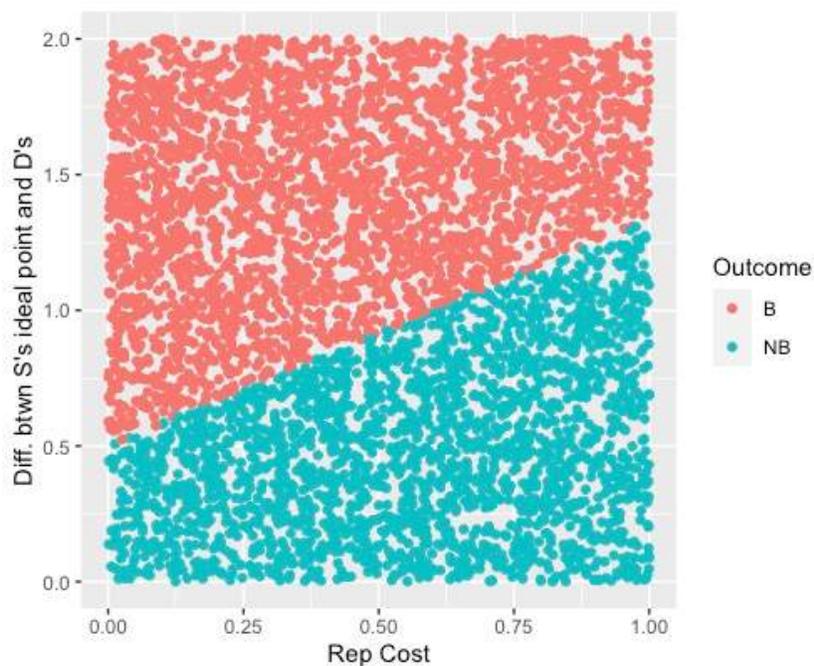


Figure A8: Simulated outcome (for busting vs. not busting conditional on  $S$  enforcing when  $D$  is of the economically-motivated type) for  $t_S - t_D$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $c_I = 0.2$ ,  $k = 3$ ,  $\theta = 0.6$ ,  $\lambda = 0.8$

### When $D$ is the geopolitical type

The inequality is:

$$(p_a - p_b)[(t_D - t_S)^2 - (t_D - q)^2] + \lambda(b_e - c_g) - c_R + b_I * 1_{type=strategic} \geq 0$$

From this, we get the comparative statics:

$$\frac{\partial}{\partial b_e} = \lambda > 0$$

$$\frac{\partial}{\partial c_g} = -\lambda < 0$$

$$\frac{\partial}{\partial c_R} = -1 < 0$$

$$\frac{\partial}{\partial b_I} = 1 > 0$$

$$\frac{\partial}{\partial \lambda} = (b_e - c_g)$$

$$\frac{\partial}{\partial (p_a - p_b)} = (t_D - t_S)^2 - (t_D - q)^2$$

The comparative statics for  $\lambda$  is negative when  $c_g > b_e$ , and positive when  $b_e > c_g$ , indicating that  $D$  is more likely to sanction-bust the higher proportion the state ownership when the economic benefit exceeds the costs of punishment, and less likely to do so vice versa. Meanwhile, the comparative statics for  $p_a - p_b$  is positive when  $(t_D - t_S)^2 - (t_D - q)^2 > 0$ , or when the distance between the two players' ideal points is greater than the distance between the sanction-buster's ideal point and status quo, and negative otherwise. The comparative statics for the ideal point distances (from each other and from the status quo) are presented through simulation.

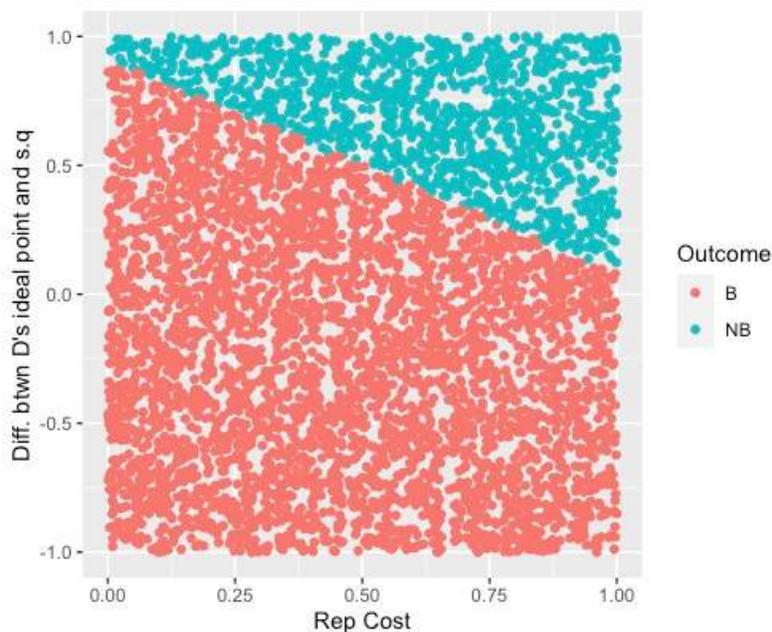


Figure A9: Simulated outcome (for busting vs. not busting conditional on  $S$  enforcing when  $D$  is of the geopolitically-motivated type) for  $t_S - q$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $b_l = 0.2$ ,  $c_l = 0.2$ ,  $k = 3$ ,  $\theta = 0.6$ ,  $\lambda = 0.8$

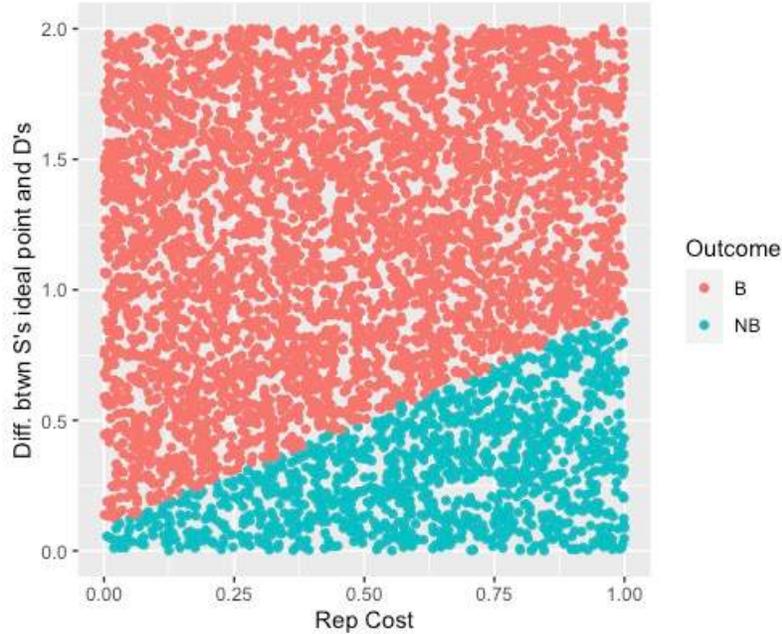


Figure A10: Simulated outcome (for busting vs. not busting conditional on  $S$  enforcing when  $D$  is of the geopolitically-motivated type) for  $t_S - t_D$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $b_l = 0.2$ ,  $c_l = 0.2$ ,  $k = 3$ ,  $\theta = 0.6$ ,  $\lambda = 0.8$

$D$  will choose to sanction bust ( $B$ ) over not sanction busting ( $\sim B$ ), conditional on  $S$  not enforcing sanctions ( $\sim E$ ) when

$$-(t_D - t_S)^2 p_a - (t_D - q)^2 (1 - p_a) \leq -(t_D - q)^2 + \lambda b_e + b_l * 1_{type=strategic} - c_R$$

After algebraic rearrangement:

$$[(t_D - t_S)^2 - (t_D - q)^2] p_a + \lambda b_e + b_l * 1_{type=strategic} - c_R \geq 0$$

When  $D$  is the economic type

The inequality in this case is:

$$[(t_D - t_S)^2 - (t_D - q)^2] p_a + \lambda b_e - c_R \geq 0$$

From this we get the following comparative statics:

$$\frac{\partial}{\partial \lambda} = b_e > 0$$

$$\frac{\partial}{\partial b_e} = \lambda > 0$$

$$\frac{\partial}{\partial c_R} = -1 < 0$$

$$\frac{\partial}{\partial p_a} = (t_D - t_S)^2 - (t_D - q)^2$$

The comparative statics for  $p_a$  is positive when  $(t_D - t_S)^2 - (t_D - q)^2 > 0$ , or when the distance between the two players' ideal points is greater than the distance between the sanction-buster's ideal point and status quo, and negative otherwise. The comparative statics for the ideal point distances (from each other and from the status quo) are presented through simulation.

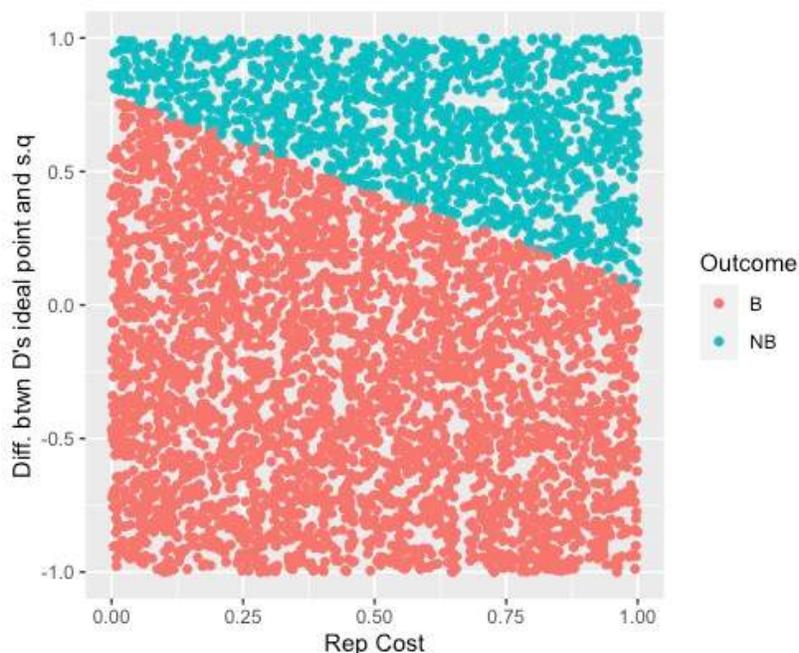


Figure A11: Simulated outcome (for busting vs. not busting conditional on  $S$  not enforcing when  $D$  is of the economically-motivated type) for  $t_D - q$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $c_l = 1$ ,  $k = 3$ ,  $\theta = 0.9$ ,  $\lambda = 0.8$

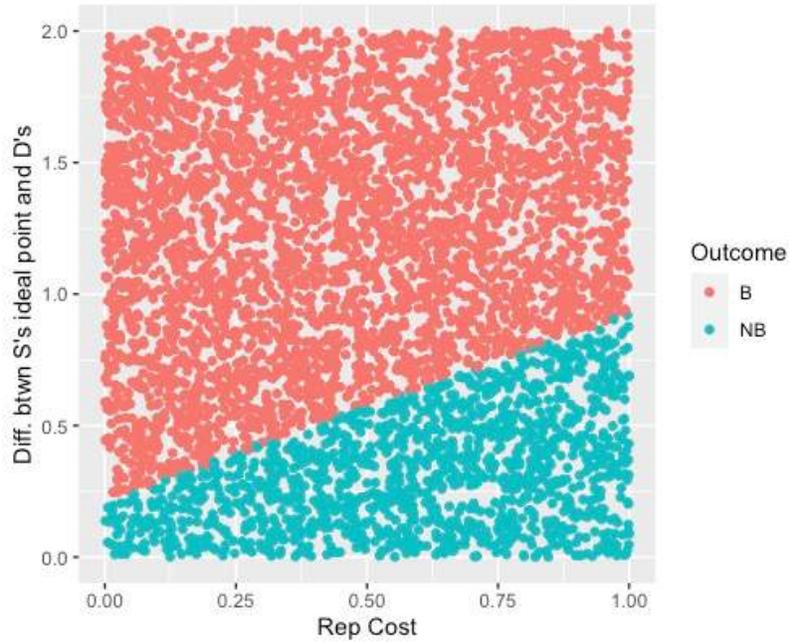


Figure A12: Simulated outcome (for busting vs. not busting conditional on  $S$  not enforcing when  $D$  is of the economically-motivated type) for  $t_S - t_D$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $c_I = 1$ ,  $k = 3$ ,  $\theta = 0.9$ ,  $\lambda = 0.8$

### When $D$ is the geopolitical type

The inequality is:

$$[(t_D - t_S)^2 - (t_D - q)^2]p_a + \lambda b_e + b_I * 1_{type= strategic} - c_R \geq 0$$

From this we get the following comparative statics:

$$\frac{\partial}{\partial \lambda} = b_e > 0$$

$$\frac{\partial}{\partial b_e} = \lambda > 0$$

$$\frac{\partial}{\partial c_R} = -1 < 0$$

$$\frac{\partial}{\partial b_I} = 1 > 0$$

$$\frac{\partial}{\partial p_a} = (t_D - t_S)^2 - (t_D - q)^2$$

The comparative statics for  $p_a$  is positive when  $(t_D - t_S)^2 - (t_D - q)^2 > 0$ , or when the distance between the two players' ideal points is greater than the distance between the sanction-buster's

ideal point and status quo, and negative otherwise. The comparative statics for the ideal point distances (from each other and from the status quo) are presented through simulation.

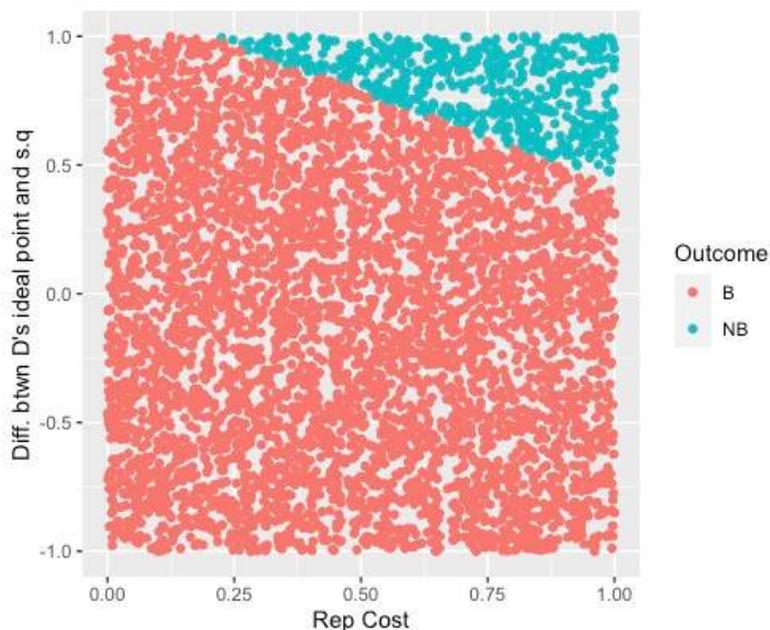


Figure A13: Simulated outcome (for busting vs. not busting conditional on  $S$  not enforcing when  $D$  is of the geopolitically-motivated type) for  $t_D - q$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $c_l = 1$ ,  $k = 3$ ,  $\theta = 0.9$ ,  $\lambda = 0.8$

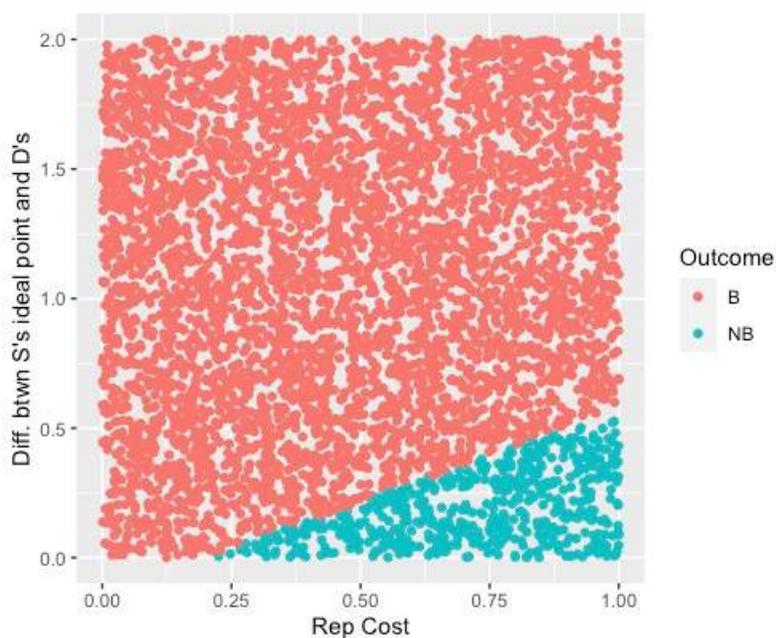


Figure A14: Simulated outcome (for busting vs. not busting conditional on  $S$  not enforcing when  $D$  is of the geopolitically-motivated type) for  $t_S - t_D$ , plotted against reputational cost,  $c_R$ . Values of other parameters held constant at:  $p_a = 0.7$ ,  $p_b = 0.1$ ,  $q = 0$ ,  $c_E = 0.1$ ,  $c_g = 0.5$ ,  $c_{NE} = 0.1$ ,  $b_e = 0.5$ ,  $c_l = 1$ ,  $k = 3$ ,  $\theta = 0.9$ ,  $\lambda = 0.8$

*S will choose to not implement sanctions (~I) over implementing sanctions (I), conditional on D choosing to not sanction bust (~B) when*

$$-k(t_S - q)^2 > -k(t_S - q)^2(1 - p_a) - c_E \geq 0$$

After algebraic rearrangement we get:

$$-kp_a(t_S - q)^2 + c_E \geq 0$$

From the above inequality we can obtain the following comparative statics:

$$\frac{\partial}{\partial k} = -p_a(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial (t_S - q)^2} = -kp_a \leq 0$$

$$\frac{\partial}{\partial p_a} = -k(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial c_E} = 1 > 0$$

*S will choose to not implement sanctions (~I) over implementing sanctions (I), conditional on D choosing to sanction bust (B) when<sup>7</sup>*

$$-k(t_S - q)^2 \geq -k(t_S - q)^2(1 - p_b) - c_E - \theta c_I(D)$$

After algebraic rearrangement:

$$-kp_b(t_S - q)^2 + c_E + \theta c_I(D) \geq 0$$

From the inequality, we can obtain the following comparative statics:

$$\frac{\partial}{\partial k} = -(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial p_b} = -k(t_S - q)^2 \leq 0$$

$$\frac{\partial}{\partial (t_S - q)^2} = -kp_b \leq 0$$

$$\frac{\partial}{\partial c_E} = 1 > 0$$

$$\frac{\partial}{\partial \theta} = c_I(D) > 0$$

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<sup>7</sup> *S* will never choose to not enforce sanctions if *D* sanction busts, because  $-k(t_S - q)^2$  is always greater than  $-k(t_S - q)^2 - c_{NE}$

$$\frac{\partial}{\partial c_1(D)} = \theta > 0$$