Strategic Anticipation and Adjustment: Ex Ante and Ex Post Information in Explaining Sanctions Outcomes

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Abstract. The outcomes of economic sanctions should not be explained by ex ante information that has already been discounted by the interested parties when they decided to initiate or resist economic coercion. Therefore, contrary to much of the existing literature, only ex post information becoming available after the occurrence of sanctions should explain their results. This logic of strategic anticipation and selection applies to interstate interactions generally, such as those pertaining to the success of deterrence policy and the outbreak of war.

Keywords: • Economic sanction • Strategic selection • Strategic anticipation • Ex ante and ex post information

Puzzles

Students of economic sanctions are presented with seeming paradoxes. States and international organizations have increasingly resorted to this form of coercive diplomacy even though it has been generally ineffective. Between 1945 and 1990 the United Nations Security Council called for a mandatory sanction (against Rhodesia) only once (Kaempfer and Lowenberg, 2005: 1). It had, however, undertaken this step thirteen times by the end of the 1990s. The United States alone initiated sanctions against 35 countries from 1993 to 1996.

The increasing application of sanctions is puzzling because these attempts have usually failed to achieve their announced objectives. Hufbauer et al. (1990) observed that about one-third of them were successful (see also Elliott, 1998). Applying more stringent criteria, Pape (1988a, 1988b, 1997) concluded that only 5 percent had "worked." More generally, Baldwin (1985: 57) remarked that "[i]t would be difficult to find any proposition in international relations literature more widely accepted than those belittling the utility of economic techniques of statecraft."

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Considering that sanctions are usually undertaken by powerful states (often acting together) against smaller or weaker states, they should have "worked" more effectively. Given their highly asymmetric capabilities, the initiating states should have prevailed over the target states with relative ease. Yet this intuition is often contradicted. For instance, Hart (2000: 278) noted "increasing levels of trade between sender and target have little substantive impact while increasing relative capabilities reduces the probability of outright success by 5 percent." Similarly, Dashti-Gibson et al. (1997: 613) reported that a target state's commercial dependence on the sanctioning state(s) contributes little to sanction success, and McGillivray and Stam (2004: 168) found that the opposing parties' power disparity does not shorten sanction duration. These tendencies seem counterintuitive. So does the apparent willingness of the weaker and vulnerable targets to defy their more powerful opponents in the first place.

Furthermore, neither a sanction's length nor its cost to the target contributes to its success (Dashti-Gibson et al., 1997; Jing et al., 2003). Cuba has been subjected to US embargo for decades now, and Iraq's economy was cut in half by international sanctions before 2003. Such anecdotal evidence reinforces quantitative research, concluding that longer and costlier sanctions are not more successful. That more prolonged and severe material deprivation does not necessarily incline a target to concede again appears odd. Contrary to conventional expectation, this deprivation does not cause a target's psychological demoralization and political disintegration (Galtung, 1967).

These paradoxes raise questions. How can we reconcile the increasing use of sanctions with their perceived ineffectiveness? How can we explain this ineffectiveness given the lopsided nature of most such contests? Why do most sanctions fail, and why does this failure rate appear to be higher for the longer and costlier sanctions? I argue that strategic anticipation and selection account for these phenomena.

To preview my attempt to solve the above puzzles, one cannot infer inductively the success of sanctions from their historical outcomes. Observed instances of sanctions reflect those occasions when officials have deliberately chosen to confront each other rather than to settle their differences without public coercion. A sanction's occurrence and its outcome are therefore not independently determined. Their interdependence suggests a selection bias, causing an overestimation of these influence attempts' ineffectiveness (Eaton and Engers, 1999; Hovi et al., 2005; Jing et al., 2003; Lacy and Niou, 2004; Nooruddin, 2002; Smith, 1996, 1999). Moreover, one should distinguish between information that is available before a sanction's onset (ex ante) and that which becomes known only subsequently (ex post). Ex ante information, such as readily available data on national capabilities, cannot predict sanction outcomes. Officials should have already accounted for it when deciding whether to undertake or confront a sanction. Both the sanctions' occurrence and outcome tend to reflect uncertainties about intentions rather than capabilities. This uncertainty gains clarification from information that becomes available after a sanction's imposition. Only ex post variables that are poorly anticipated by officials should influence sanction outcomes. Finally, officials are strategic: they decide their moves based on their anticipation of their counterparts' reactions. Therefore, they would not have initiated or resisted protracted and costly sanctions if they had expected to reach accommodation easily.

Longer and costlier sanctions imply higher stakes and more incompatible interests. They thus represent the most difficult cases for coercive diplomacy to succeed in.

Although addressing strategic interactions between states, I do not apply formal game theory. In addition to seeking an improved understanding of sanctions as an important policy problem, I try to show that this article's perspective has broad relevance to studying international conflict. Sometimes called rationalist explanations or signaling games, this perspective is useful for analyzing other types of coercive statecraft, such as war initiation and extended deterrence (Fearon, 1995, 2002; Huth, 1988).

In what follows, I first discuss the nature of economic sanctions. Next, I relate the existing literature to my perspective. The subsequent sections in turn elaborate my theoretical rationale, present empirical propositions, and describe the data and variables for the statistical analysis. The analysis results are then discussed. The conclusion recapitulates this study's major policy and theoretical implications.

Sanction Process

An economic sanction is an act of coercive diplomacy. The initiator (commonly called the sender, or S) deliberately politicizes international commerce in order to compel a target (abbreviated as T below) to change its behavior. This undertaking attempts linkage politics, whereby S threatens to suspend, limit, or otherwise manipulate commercial relations unless T makes a concession (typically on an issue unrelated to economics, such as human rights or nuclear proliferation).

A sanction's imposition entails economic costs to both S and T. When S threatens to sanction T, it is declaring that it cares more about a concession from T than the costs that it (S) will have to incur as a result of the sanction being imposed. This threat also suggests S's belief that T cares less about the concession being demanded than the opportunity costs it (T) will suffer if a sanction is imposed. If S and T have complete information, there should never be a sanction encounter between them (Hovi et al., 2005; Lacy and Niou, 2004; Smith, 1996). If T knows that S will execute its threat to sanction, if T cares more about the opportunity costs of lost trade or investment than a change in its policy, and if T believes that S's threat to sanction will be cancelled if it (T) makes the concession being demanded, T should comply immediately with S's demands so that S will not carry out its threat. T would have "selected" itself out of a potential sanction encounter. If S knows T's situation perfectly, it will not make any threat that can be exposed as a bluff and it will not make excessive demands that produce T's rejection. The implementation of a sanction amounts to an act of self-denial by S (which deliberately forgoes the benefits of commerce with T). Presumably, it would not want to pay these costs and suffer damage to its reputation if the sanction is expected to fail (unless, of course, its policy is intended for other purposes, such as domestic partisanship or rent-seeking, or as a public advertisement to influence third parties; Drezner, 1999; Kaempfer and Lowenberg, 1988, 1989, 1999). Therefore, S would not initiate a sanction if it does not expect to succeed. If T shares S's expectation, it will comply preemptively so that S will not have to actually impose the sanction. Mutual strategic anticipation by S and T causes sanctions to be a rare phenomenon. Moreover, when sanctions do happen, they should conclude quickly because T prefers to yield right away rather than to end

up with the same eventual outcome after paying the penalty of being sanctioned, or because S decides to cut its material and reputation costs after discovering that its coercion has not worked. That these episodes do occur and sometimes last many years must mean that strategic anticipation has broken down or some other factor, such as the commitment problem (Powell, 2006), has prevented the parties from reaching a settlement.

By implication, when sanctions occur, T has declined to make preemptive concessions to head off these confrontations. By virtue of their occurrence, these are precisely encounters in which S faces greater difficulty in prevailing. And when S fails to cancel or discontinue its coercion, it must also be highly resolved. Accordingly, protracted sanctions imply that both S and T care more intensely about some political objective than the evident economic costs of continuing their deadlock. There must be offsetting political gains for S's leaders to persist in a sanction effort even though it has become increasingly obvious over time that this effort will not change T's policy. Conversely, T's leaders must have concluded that the political costs of complying with S's demand outweigh the economic costs of having to endure the sanction. That is, for a sanction to persist, the leaders of both S and T must have concluded that they value their respective current policy more than the alternative of terminating the sanction.

Earlier Research on Sanctions: Motives and Results

The perspective just introduced helps us to appraise and synthesize existing research on sanctions following the pioneering work by Hufbauer et al. (1990). Some of this scholarship has focused on the motivations to undertake sanctions, while other studies have sought to determine factors that influence their outcomes.

The former type of work addresses deliberations and circumstances leading to a decision to undertake sanctions (e.g. Drury, 2000, 2001). The determination of S's motivation is germane because its declared objectives may not be its true objectives. If S's goal is to seek T's regime change and the physical demise of T's leaders, short of making these ultimate concessions there is little that T can do to satisfy S. Pape (1997: 102) observed that the US has often used sanctions to destabilize unfriendly regimes. Naturally, T will be reluctant to make concessions if it perceives S's ultimate objective is not to change its policy but rather to topple its leaders and overthrow its political system. Kaempfer and Lowenberg (1989, 2005) pointed to the domestic political economy as an alternative source of incentives for undertaking sanctions. Their "public choice" perspective argues that S's expected domestic partisan gain or economic rent is the primary motivation behind sanctions. If so, T's ability to satisfy S is again limited, and S can be expected to sustain a sanction even when it fails to change T's policy after a long time, and even when T makes important concessions or signals its willingness to do so (Dorussen and Mo, 2001). Although promoting democracy is usually given as a justification, US sanctions against Cuba and China have encountered suspicions of domestic motivation (Chan, 2000; Fisk, 2000). As Dashti-Gibson et al. (1997: 616) remarked: "sanctions are not always specifically designed to succeed, or at least not to succeed in their ostensible (i.e., publicly stated) goals."

This article concerns itself less with the motivations behind sanctions than with their outcomes. What factors contribute to a sanction's success or failure? Scholars addressing this question often subscribe to the "duress" model. This model basically claims that sanctions are more likely to succeed when T suffers

a large power disadvantage relative to S, when T is economically and militarily vulnerable, and when T has been subjected to severe and sustained deprivation. T is more likely to reach its "breaking point" under these conditions. Yet, as noted already, the results of existing analyses often confound the duress model's expectations. I argue that these results are more understandable if one applies an alternative logic reflecting strategic selection and anticipation.

To elaborate, one should recognize that countries do not fight wars unless they have a serious dispute that cannot be resolved by less costly means. When sanctions are undertaken in conjunction with military force, they are usually only a "side show" (Pape, 1997). Similarly, when S resorts to outright intervention or covert subversion, it obviously wants large concessions from T. Under these circumstances, T's leaders often become targets of assassination plots, coup attempts, or insurgency campaigns sponsored by S, and even come under military attack by S or its proxies. These actions suggest that S and T are both highly resolved and understand the importance of the stakes being contested. S's show or use of military force is unsurprisingly associated with those sanctions motivated by S's desire to overthrow T's regime rather than just to change its policy (Hufbauer et al., 1990). Because S's resort to military force implies that T's regime survival is at stake, T is likely to resist more strenuously and hold out longer. Indeed, Bolks and Al-Sowayel (2000: 260) reported "the show and use of force increased the duration of sanctions 244.2 months and 111.3 months [respectively]." Furthermore, Hart (2000: 279) showed that the pursuit of companion military policies has had hardly any effect on sanction outcomes. This phenomenon does not mean that military force is irrelevant to achieving S's objectives but rather implies a tense, even deadly, impasse (recalling US show or use of military force against Cuba, North Korea, Iraq, and other targets).

If S and T have very lopsided military and economic capabilities, only a very determined T would have defied S. This logic explains the above observation on impasse and Hart's conclusion that sanctions are not more likely to succeed when T is heavily dependent on S for trade or when it suffers a severe capability disadvantage relative to S. In a similar vein, both Drury (1998) and Hufbauer et al. (1990) reported that the ratio between S's and T's gross national product (as an indicator of their power differential) has had an insignificant impact on sanction success. Such ex ante public information is readily available to T. Being well aware of its weakness and vulnerability, only a highly resolved T would resist S. A less resolved T would make preemptive concessions, thus nullifying S's need to actually impose a sanction.

Other research results also become more understandable in this light. Drury (1998) and Kaempfer and Lowenberg (1999) showed that sanctions undertaken by multilateral diplomacy and involving international institutions have been less effective than unilateral efforts. Far from being counterintuitive, this tendency suggests that the international community would not have engaged in successful collective action except in those cases involving highly salient issues to both itself and the target, and that the target was obviously aware of this overwhelming pressure and had nevertheless chosen to resist it. The mobilization of multilateral efforts implies that both S and T are contesting over important stakes. If the stakes are lower and T is expected to yield under less pressure, strenuous international mobilization will not be necessary (Hufbauer et al., 1990). When a leading S invests its efforts and reputation in organizing a multinational sanction against T, it evidently cares about the values at stake and is determined to have its way

(Martin, 1992). Given this mutual recognition of important stakes and communication of resolve, it is not surprising that sanctions are less likely to succeed when there is substantial multinational cooperation. Space does not permit an extensive review, but the international community's attempts to pressure Rhodesia, South Africa, Iraq, Sudan, Iran and North Korea come to mind. The United Nations, with support from all permanent members of the Security Council, has passed resolutions imposing sanctions on these recalcitrant states. When such multilateral diplomacy fails, it is not necessarily due to the international institutions' impotence or the difficulty of organizing collective action. A more obvious explanation is that the targets feel deeply about and are strongly committed to those policies that they are being pressured to abandon.

The perspective offered here can integrate other research results. Factors that lead to the imposition of sanctions are negatively related to the probability of their success (Nooruddin, 2002: 74). Sanctions occur and persist only if both S and T feel that, despite the consequent economic costs, they would be better off politically with continuing their deadlock than terminating it (Smith, 1996). The conventional view argues that longer and costlier sanctions should force T to concede (e.g. Daoudi and Dajani, 1983; Galtung, 1967). But as noted earlier, Dashti-Gibson et al. (1997: 613) found that a sanction's length and the extent of trade between S and T make little statistical contribution to explaining its outcome unless intended to destabilize T. If anything, as Bolks and Al-Sowayel (2000: 242) observed, failed sanctions typically last longer than successful ones (an average of 100 months compared to 53 months, respectively). Again contradicting conventional wisdom, Jing et al. (2003) concluded that sanction effectiveness is unrelated to T's economic costs or multilateral cooperation among S. Similarly, Nooruddin (2002) reported that, after controlling for selection effects in determining S's decision to impose a sanction, whereas the severity of a sanction's costs to T contributed to success, the amount of international cooperation extended to S (in this case, the US) actually undermined it. These results appear enigmatic to those who expect T to yield more readily when suffering severe deprivation and facing overwhelming opposition.

Theoretical Rationale

The logic of strategic anticipation argues that sanctions are most likely to achieve S's objectives when they are threatened but not actually carried out. Conversely, when S has to actually carry out its threat – thus presenting analysts with observed instances of sanctions – these episodes are less likely to succeed. The history of sanctions presents a biased sample, thus producing a misleading impression that they do not work. It reflects selection effect because it reports only those episodes when sanctions are actually implemented and not others when T's preemptive concessions to S's threats have made such implementation unnecessary.

Strategic anticipation also implies that the outcomes of those observed sanctions should bear little relation to factors commonly assumed to influence them, such as T's economic and demographic size, the involvement of a superpower like the US, the nature of T's regime, and whether the sanction is a multilateral effort. The officials involved should have already considered all the publicly available ex ante information in reaching their decision. Therefore, this information should not affect sanction success.

Before committing an act that it knows to be objectionable to S, T must have already taken into account S's likely reaction. It would presumably compare the expected disutilities of facing a sanction with the expected utilities of undertaking the objectionable behavior. It could calibrate its policy so that its provocation would stop just short of offending S to the extent that S would threaten sanctions or other retaliation. Accordingly, by its own action or inaction a prospective T can influence a sanction's probability (Cetinyan, 2002). As already noted, even when T makes a mistake so that its conduct provokes a threat from S, it can still prevent this threat from being implemented by making timely concessions to S. Officials undertake sanctions and other costly policies because talk is cheap (Fearon, 1994; 2002). Their intentions and preferences are not directly observable by their counterparts, and they are wary that others will engage in deliberate misinformation or misrepresentation. In order to persuade their counterparts to take them seriously, they have to assume costs and run risks that a bluffer would not. The act of imposing or resisting a sanction communicates information that is more credible than pronouncements (which are likely to be dismissed as verbal posturing). When a sanction is very costly to T and when T is nevertheless defiant, this phenomenon must mean that T is highly resolved – offering ex post information that discloses T's real intentions and true preferences by its actual conduct. A less resolved T would have "selected" itself out of such confrontation. The high cost imposed on T must mean that S is also "sincere," and implies that S is very "demanding." S inflicts serious deprivation on T because it anticipates less draconian measures to be ineffective for its aims. One would not expect S to mobilize extensive international cooperation against T or to impose costly (rather than just symbolic) penalties on T except when S does not expect to prevail easily and is highly resolved. Therefore, the severity of T's distress and the size of the multinational coalition mobilized against it are indicative of both parties' high resolve and their perception of the high stakes being contested. Sanction costs and international mobilization communicate each side's policy intention and situational evaluation – information that is more reliable and credible than that which is conveyed just by words.

Empirical Expectations

Some implications from the above discussion are testable, whereas others are not. Among the latter, one cannot directly confirm that threatened but unimplemented sanctions are more likely to succeed than actual sanctions. Drezner (2001) showed that states often comply with international regulations when faced with possible sanctions and before such punitive steps are undertaken. Our knowledge, however, is more limited in highly sensitive cases impinging on a country's sovereignty, military security, or regime legitimacy. These cases usually involve protected diplomatic communication. Rumors have it that South Korea and Taiwan came under successful US pressure to cancel their nuclear programs with possible military application (Moore, 2008: 14–15). Both Seoul and Taipei denied that they had ever wanted to pursue nuclear weapons, claiming in effect that US influence did not change their intention. Although obviously satisfied, Washington has not publicized its influence attempts, and we do not know what punitive action (if any, including economic sanction) was implicitly or explicitly threatened. When such quiet diplomacy works, neither S nor T has an incentive

to publicize that coercive influence was successful or even attempted. When S's threat (typically communicated in privacy) fails to change T's policy and S decides not to carry out its threat, it would surely also not want to broadcast this fact. Thus although sanctions that are threatened but not actually implemented tend to be more successful, not all cases of threatened sanction are successful. We do not know how often S's bluffs are called (when it fails to follow through on its threat). The universe of sanction threats, whether successful or unsuccessful, is for all practical purposes unknown and unknowable. The analytic challenge is even more daunting if one considers the possibility that a country, say Syria, could have been deterred from starting a nuclear program without the US having even to threaten it. This deterrence could have been achieved by Syria's awareness that others like Iran, Iraq, and North Korea have been subjected to sanctions.

For reasons given above, one would not expect variables representing ex ante public information to show a statistically significant influence on sanction success. Some ex ante variables, however, are more easily distinguished from ex post variables than others. A country's demographic size, military capabilities, and trade dependence constitute common knowledge before a sanction's imposition. As well, the strength of the international coalition mobilized against T is widely known. Although T will try to anticipate sanction costs, their magnitude may become clear only some time after a sanction's onset. Commonly expected though yet unrealized sanction costs can be an ex ante variable that communicates T's resolve to S.

A sanction's duration is a more credible ex post variable that should be inversely related to sanction success. If S and T can anticipate a settlement, they would rather strike a deal sooner than later in order to avoid the opportunity costs of a prolonged sanction. If a sanction has achieved its purpose, S would presumably discontinue it. One could plausibly argue that S persists in its sanction because its effort has not yet succeeded. This view argues that failure prolongs a sanction. An alternative interpretation, however, is more reasonable. S usually undertakes protracted sanctions despite strong cumulative evidence suggesting that its coercion will encounter continued failure and even produce negative results (a "boomerang" as described by Galtung, 1967). US embargoes against North Korea (65 years as of 2005), Cuba (55 years), North Vietnam (36 years), and China (21 years) exemplify this situation. These sanctions are long despite rather than because of their ineffectiveness. Their length is a symptom rather than a product of ineffectiveness. Why does S continue an ineffective sanction after years, even decades, of unsuccessful coercion? One suspects reasons other than the professed objectives (e.g. domestic partisanship, rent-seeking). Protracted sanctions represent mutual resolve and signal S's disapproval of T rather than its confidence in being able to eventually coerce T successfully.

Turning around the concern that protraction of sanctions may be caused by their ineffectiveness, why are longer sanctions not more effective? The duress model argues that the longer T has to endure privation, the more likely it is that T will yield to S's pressure. As will be shown shortly, the available evidence contradicts this expectation. The hazard rate for sanctions suggests that the longer they have lasted, the greater the odds that they will "survive" another year. With the passage of time, both S and T should gain a more accurate understanding of the situation. When sanctions persist, they must both prefer to put up with deadlock rather than settle their differences some other way. Given an extensive history, this impasse happens not because there is an underestimation of each other's resolve or stake

in the dispute, but rather because there are fundamental incompatibilities in the contestants' interests. Long sanctions tend to be ineffective, and some of them even produce a reaction from T that undermines S's putative objectives. The length and ineffectiveness of sanctions are both due to the incompatibilities between S and T. Although T would naturally like to avoid the costs of being sanctioned, it is evidently reluctant to pay the necessary price (such as in national security and sovereignty, regime ideology, leadership survival) in order to have the sanction lifted. Even though S knows that its sanction has not worked after years of trying, it also feels it has more to lose by discontinuing than continuing its policy.

Protracted sanctions indicate a stalemate because neither side is willing to make a change that can bring an end to them. This deadlock suggests that, in the absence of regime change in T, prolonged sanctions are unlikely to produce a change in its behavior. Naturally, and as already mentioned, a change of T's regime may very well be the real motivation behind S's sanctions. Indeed, Marinov (2005) showed that leaders of regimes suffering from sanctions tend to have shorter tenure. The duration of sanctions also tends to be related to the longevity of leaders (especially the authoritarian ones) because, obviously, a change of policy, as indicated by S's decision to terminate its sanctions or by T's decision to comply with S's demand, is more likely to be undertaken by a new administration than by an incumbent regime (McGillivray and Stam, 2004; Smith, 1999).

Another piece of ex post information presents itself when a sanction is followed by the use or escalation of military force. This military action is ex post if it follows a sanction's imposition, although it may be highly anticipated. T's anticipation can be supported by indications such as S providing a safe haven for T's dissidents, arming an insurgency inside T, enforcing a no-fly zone over T's airspace, or stationing troops on T's borders. These precursors leading to a military attack communicate S's serious intentions and, when T refuses to back down in the face of these warning signs, it also demonstrates its resolve. S's military attack may well have been fully factored into T's calculations even if this attack is mounted after a sanction's onset. If so, it should not contribute statistically to a sanction's success. Whatever success S was able to achieve should be more plausibly attributed to its military campaign than to its economic sanction.

Still a third ex post variable pertains to the role of a "black-knight." Counter-intervention by a powerful third party offsets S's sanction effort and enables T to hold out against S's pressure. Cuba, Rhodesia, and North Korea received aid from the USSR, South Africa, and China respectively. The potential for T to receive this aid should be already known to S before it imposes a sanction and to T before it decides to confront it. If fully incorporated into their decisions, the actual involvement by this black-knight should not affect a sanction's success. If, however, this variable shows a statistical effect, it implies that S has not adequately anticipated its influence (or it has dismissed its influence because it cares more about the sanction's impact on domestic partisanship or rent-seeking, for instance, than on T's regime or policy).

This discussion suggests several hypotheses. First, ex ante variables reporting widely available public information should not influence sanction outcomes. Second, ex post variables are more likely to be influential. A sanction's costs to T, S's accompanying military pressure, and counterintervention by a black-knight are such ex post variables. Third, those ex post variables that are poorly anticipated are more likely to be influential. One may surmise that S and T are better able to estimate prospective sanction costs and the probability of a military

escalation because, after all, these variables pertain to their own capabilities and intentions. Conversely, it is more difficult for them to account for the possible involvement of a black-knight because this variable depends on a third party's motivations. Fourth, longer sanctions tend to be less successful. The rationale behind this hypothesis is that S and T would both be better off if they can strike a deal earlier and avoid the costs of a prolonged sanction. That a sanction has persisted for a long time naturally indicates that it has not "worked." The parties' inability to come to terms despite their protracted contest suggests their strong and incompatible preferences. As discussed below, a sanction's length acts as a surrogate for such preferences and the parties' determination to pursue them.

Data Measurement

A modified data set based on Hufbauer et al. (1990) is used to verify the empirical propositions just stated. The dependent variable is a sanction's contribution to S's imputed objective. It addresses the extent to which sanctions have made a difference in policy outcomes.

Naturally, S's success in attempting to influence T depends on the nature of the concessions being demanded from T. It would be one thing to ask Ceylon (Sri Lanka) and Peru to compensate US oil companies for the expropriation of their assets, and quite another thing to demand regime change in white Rhodesia and communist Cuba. Success is easier when S has modest rather than ambitious objectives. Concomitantly, whether S is successful in achieving its objectives depends on the other companion measures being applied. When covert political subversion and even outright military force are used along with sanctions, the outcome of a confrontation is "over-determined." It would be unwarranted to attribute success to the sanction effort when military defeat or a coup d'état caused an unfriendly regime's downfall, thereby bringing a halt to T's objectionable policy. It therefore makes sense to focus on a sanction's contribution to S's objectives as the dependent variable.

In their original study, Hufbauer et al. (1990) assessed a sanction's outcome based on two components. The first is a four-point ordinal measure called policy result, which rates the extent to which S's objectives were achieved (with 1 indicating "failed outcome," 2 "unclear but possibly positive outcome," 3 "a somewhat successful result," and 4 "successful outcome"). The second component, again based on a four-point ordinal scale, is called sanction contribution. This scale points to the extent that a sanction had contributed to the policy outcome. The four points on this scale indicate 1 "zero or negative contribution," 2 "minor contribution," 3 "modest contribution," and 4 "significant contribution." Hufbauer et al. (1990) multiplied policy result and sanction contribution to produce a 16-point scale, reflecting each sanction's effectiveness. A product of 9 or higher was deemed a success.

Several scholars have voiced concerns about Hufbauer et al.'s (1990) measure of sanction effectiveness (e.g. Bonetti, 1998; Dashti-Gibson et al., 1997; Drezner, 2000; Drury, 1998; Jing et al., 2003; Lam, 1990). Some, however, have continued to use this combined measure, while others have adopted one or the other component as their dependent variable. These differences account for some disparate results in the sanction literature. For reasons given already, I focus on the contribution component because I am interested in a sanction's impact, if

any, on an episode's outcome. I examine how much difference sanctions made to an outcome, attending to those episodes that occurred after World War II. I consider 104 sanction cases between 1946 and 1990.

The independent variables represent standard factors included in statistical analyses of sanction effectiveness. Most of them are derived from Hufbauer et al. (1990). A five-point ordinal "hostility level" taps the threat, display, mobilization, or actual use of armed forces, and is taken from the Militarized International Disputes project. The involvement of international organizations is based on A. Cooper Drury's coding of the pertinent sanction episodes. The characterization of T follows James Rosenau's (1966) typology referring to a state's political accountability (open versus closed), size (large versus small), and development (industrialized versus unindustrialized). These and other indicators are observed at the time of the sanction's onset. Hufbauer et al.'s (1990) data ended in 1990, when several sanctions were still ongoing. I re-coded the length of these episodes to the end of 2005, thus addressing the problem that some would have been otherwise censored (meaning that some sanctions that were still ongoing when the original data collectors ended their project would have otherwise been given an artificially short duration).

The other independent variables incorporated in the analysis are intended to discern the statistical significance of involvement by the US and international institutions in a sanction, S's organization of multilateral cooperation, the counterintervention by a black-knight, economic distress caused for T by the sanction, and the disparity between S and T as indicated by the ratio between their gross national products. Except for the last two, these are binary variables indicating the presence or absence of a particular factor. T's economic distress is a trichotomous variable based on Hufbauer et al. (1990), with 1 indicating the highest level of distress and 3 the lowest. Although the operationalization of these variables follows conventional practice, the analytic logic behind their incorporation differs from the standard rationale.

Implicitly or explicitly, most researchers use these independent variables as indications of S's and T's relative power. A sanction episode is accordingly seen as a contest of capabilities, with the expectation that the more S can bring its own and others' power to bear on T and the more T can be subjected to prolonged severe privation, the more likely S's coercion is to succeed. This article, however, takes these variables to be more indicative of how intensely the parties feel about their preferences and how seriously they are committed to their objectives. Its logic follows recent research on signaling games in international conflict. According to this research, it is inherently difficult – not just for the analyst but also for the relevant officials themselves – to gauge variables such as resolve, preferences, and intentions. A government's public statements cannot be taken at face value because officials often engage in deliberate misrepresentation (such as exaggerating their determination or capability, or bluffing a showdown without actually intending to carry out a threat). Because talk is cheap, officials have to undertake tangible actions to be credible. In order to demonstrate their commitment to an announced policy, they will have to pay costs and run risks that others who are less resolved would not accept. These costly and risky actions communicate a state's true preferences and intentions that are not directly observable. Outsiders are not privy to this private information (Fearon, 1994; 1995) and can only draw inferences from observed actions and situational context. The independent variables described above

serve as surrogates of states' motivations because we lack any a priori indicators of the contestants' actual resolve and inherent interest – variables that officials themselves have great uncertainty in discerning and seek to signal to each other during a sanction process.

Analysis Results

Table 1 reports the breakdown of sanctions according to their relative policy contribution and their duration (longer or shorter than one year). This frequency distribution confirms our expectation that even when applying Hufbauer et al.'s (1990) rather generous standards, most sanctions have not made a significant contribution (coded as 4 in the table) to achieving S's objectives. Such coercive attempts made a significant contribution in only 12 of the 104 sanction episodes, accounting for 11.5 percent of the total. In contrast, in 30 of these episodes (or 28.8 percent) sanctions had no effect or even a negative effect on the eventual outcome (coded as 1). Sanctions making a "minor" and "modest" contribution (coded 2 and 3, respectively) represent 26.9 percent and 32.7 percent of the cases.

As hypothesized earlier, the longer a sanction has lasted, the less likely it is associated with T's policy change in accordance with S's preference. Bolks and Al-Sowayel (2000: 242) reported that failed sanctions last about twice as long as successful sanctions. Similarly, Dashti-Gibson et al. (1997: 601) found that the probability of a sanction's success declines over time. According to Table 1, nearly one quarter of those sanctions lasting less than one year made a significant contribution to S's objectives. When sanctions dragged on beyond one year, however, only 8 percent produced such an effect. The average length of episodes where sanctions contributed significantly to S's objectives was two years, whereas the average length of episodes where sanctions made no or even a negative contribution was eight and a half years. In 26.9 percent of sanctions lasting more than one year, T resisted and even "pushed back" so that S failed to achieve its objectives or even saw them set back. This situation occurred proportionately (34.6 percent) even more often for sanctions lasting less than one year. When faced with ineffective and even counterproductive results, S terminated its sanctions within one year in 9 of 104 cases. For the 21 other comparable cases, S ended 4 within three years and another 6 in the fourth year. Therefore, in about one-third of cases where sanctions met failure and even a "boomerang" effect, this coercive diplomacy was terminated within one year. In about two-thirds of these cases, it was ended within four years. Consequently, ineffectiveness does not necessarily prolong sanctions. Rather, sanctions lasting several decades predict ineffectiveness as they disclose strong mutual resolve.

TABLE 1. *Sanction Contribution and Sanction Duration*

		Sanctions contribution to S's objectives				Total
		1.00	2.00	3.00	4.00	
Sanctions Duration	< 1 year	9 (34.6%)	1 (3.8%)	10 (38.5%)	6 (23.1%)	26 (100%)
	> 1 year	21 (26.9%)	27 (34.6%)	24 (30.8%)	6 (7.7%)	78 (100%)
Total		30 (28.8%)	28 (26.9%)	34 (32.7%)	12 (11.5%)	104 (100%)

Table 2 reports the extent to which those variables suggested by conventional wisdom reach statistical significance. According to my hypotheses, whether a sanction involved the US, multilateral cooperation, sponsorship by international institutions, or even the application of military coercion (if the latter is fully anticipated and thus discounted) should not be statistically significant in

TABLE 2. *Logistic Regression on Sanction Contribution to Sender Objectives*

Part A

Contribution 1 vs. 2, 3 & 4	B	S.E.	Wald	Sig.	Exp(B)
T's regime	1.958	1.121	3.049	.081	7.082
T's size	–.382	.694	.303	.582	.683
T's development	–1.408	1.062	1.759	.185	.245
Hostility	–.258	.147	3.100	.078	.772
US involved	.260	.706	.135	.713	1.296
Multi-coop	.018	.280	.004	.949	1.018
International institutions	.194	.318	.372	.542	1.214
Black-knight	–1.932	.669	8.344	.004	.145
T's distress	–1.245	.513	5.889	.015	.288
Ln length	.484	.264	3.366	.067	1.623
Ln GNP ratio	–.197	.188	1.094	.295	.822
Constant	4.489	1.689	7.065	.008	89.034

Cox–Snell R square: .223 Nagelkerke R square: .319
–2 Log likelihood: 98.709 Overall correct prediction: 77.9%

Part B

Contribution 1 & 2 vs. 3 & 4	B	S.E.	Wald	Sig.	Exp(B)
T's regime	1.541	.955	2.606	.106	4.671
T's size	–.109	.620	.031	.861	.897
T's development	–.801	1.028	.607	.436	.449
Hostility	–.149	.139	1.157	.282	.861
US involved	.317	.685	.214	.644	1.373
Multi-coop	.082	.282	.085	.771	1.086
International institutions	–.227	.282	.648	.421	.797
Black-knight	–.365	.635	.331	.565	.694
T's distress	–1.292	.449	8.268	.004	.275
Ln length	–.583	.254	5.259	.022	.558
Ln GNP ratio	–.069	.169	.167	.683	.933
Constant	3.470	1.477	5.518	.019	32.122

Cox–Snell R square: .244 Nagelkerke R square: .327
–2 Log likelihood: 113.668 Overall correct prediction: 70.2%

(TABLE 2 continued)

(TABLE 2 continued)

Part C

Contribution 1, 2 & 3 vs. 4	B	S.E.	Wald	Sig.	Exp(B)
T's regime	2.037	1.394	2.136	.144	7.667
T's size	–1.734	1.268	1.869	.172	.177
T's development	–2.147	1.743	1.517	.218	.117
Hostility	.301	.272	1.228	.268	1.352
US involve	2.255	1.389	2.636	.104	9.535
Multi-coop	–1.093	.710	2.368	.124	.335
International institutions	–.353	.466	.575	.448	.702
Black-knight	.194	1.333	.021	.884	1.215
T's distress	.694	.702	.978	.323	2.002
Ln length	–1.938	.634	9.353	.002	.144
Ln GNP ratio	.059	.303	.038	.846	1.060
Constant	–1.918	2.277	.710	.399	.147

Cox–Snell R square: .226 Nagelkerke R square: .443
–2 Log likelihood: 47.677 Overall correct prediction: 89.4%

contributing to S's policy goals. As well, the GNP ratio between S and T, and the nature of T's regime, population size, and economic development should not have a discernible effect on a sanction's contribution to S's goals. I hypothesized that only those variables that disclose ex post information should show statistical significance. The counterintervention by a black-knight (a sanction buster that comes to T's aid) and T's distress level caused by a sanction would be candidates for such information. Their influence, however, would be attenuated if or to the extent that officials have anticipated these developments.

Table 2 reports the results of logistic regressions (Menard, 1995) that pertain to these expectations. This table has three parts. In Part A, the binary dependent variable separates those episodes where a sanction made "zero or negative" contribution from all other cases. In Part B, the binary dependent variable is changed to refer to cases where sanctions made "zero or negative" or "minor" contribution, and others where they made a "modest" or "significant" contribution. Finally, the dependent variable in Part C separates cases where sanctions made a "significant" contribution to S's objectives from all other cases. I undertake these serial analyses in order to determine whether similar results are produced by alternative ways to partition the dependent variable. To the extent that the results are robust and stable regardless of how the dependent variable is partitioned, one can gain more confidence in them. This procedure also allows one to discern any threshold effects, such as whether a particular independent variable can discriminate decisively between cases where sanctions have contributed significantly to S's objectives, and others where they have not.

Although I report pseudo R squares, they are not intended for the usual assessment of a model's overall performance in explaining a dependent variable. The model in Table 2 has deliberately included independent variables (the ex ante ones reporting publicly available information) that, according to my hypotheses,

are unlikely to affect sanction outcomes. It is therefore inappropriate to judge my hypotheses by reference to the model's overall fit with the observed data. I hypothesized about which factors are likely to influence sanction outcomes and the direction of their putative influence, but not the relative size of their impact on these outcomes. Hence, my discussion focuses on the statistical significance (or insignificance) of the independent variables and the sign of the logit coefficients. The R squares and likelihood tests enable comparisons across the dependent variable's different partitioning. Because most sanctions failed to make a significant contribution to policy, it is not surprising that the results in Part C appear stronger when these cases are distinguished from the relatively few that did make a significant contribution. The model's ability to correctly predict sanction outcomes is substantively more meaningful, albeit lower, for Parts A and B because the distribution of cases is less skewed.

Only one variable, the length of a sanction episode (logged), is consistently significant in all three logistic regression equations. This is a quintessential ex post variable. As expected, effective sanctions should be settled in relatively short order. The longer sanctions last, the stronger the evidence that both parties prefer living with the deadlock to paying the price for terminating their dispute. Hence, sanctions' length and effectiveness are inversely related. This relationship is strong and consistent with the logic presented earlier. It makes sense that, as time passes, both S and T gain more information about each other – and if they fail to resolve their differences in view of this progressive removal of uncertainties about their respective intentions and capabilities, their policy positions must be deeply entrenched. Protracted sanctions point to this mutual intransigence and consequently their ineffectiveness.

The level of distress felt by T makes a difference in distinguishing between lower levels of a sanction's contribution to achieving S's objectives. While T's distress level is an ex post variable, T's leaders must have tried to anticipate and prepare for the economic costs of enduring a sanction. That they have not recoiled from the prospect of this hardship, and have in fact declined to relent even when faced with mounting costs, is instructive about their determination. In Parts A and B of Table 2, we observe a statistically significant relationship between T's distress level and a sanction's contribution to S's objectives. Significantly, the greater T's distress, the less likely would be its contribution. This relationship may appear puzzling from the conventional perspective but is more understandable according to this article's logic. S would only want to impose severe distress on T when it makes ambitious demands on T and when it expects T to be more resistant. Under these circumstances, T is unlikely to comply with S's terms even when it is severely stressed. Accordingly, T tends to face higher distress in cases where a sanction makes a "zero or negative" contribution to S's objectives, compared with other cases where such efforts are better able to promote S's interests. This interpretation receives indirect support from the failure of T's distress to turn up as a significant factor separating the most "contributing" sanctions from the rest. That is, as shown in Part C of Table 2, this variable cannot account for the difference between cases where sanctions made a "significant" contribution and others where they made less difference in outcome. Specifically, when sanctions made a "significant" contribution, T had on average suffered less distress than in the other cases. Thus, again contrary to the duress model's expectation that T's greater distress should make S's coercion more effective, one does not observe

this tendency. The observed pattern makes sense only if one understands that when S has to cause severe distress to T, it must have realized that it faces greater difficulty in influencing T. Those cases where sanctions made a "significant" contribution to S's objectives are not usually accompanied by T's greatest distress for the reason that S did not have to undertake highly punitive action to accomplish its presumably more modest goals.

In Part A of Table 2, the presence of a black-knight turns out to be statistically significant, and it contributes to a sanction's ineffectiveness. As an ex post variable, its influence is understandable. Note, however, that this factor is only pertinent in separating cases where a sanction made "zero or negative" contribution to S's objectives from other cases where a sanction made some contribution. It thus seems that a black-knight's assistance to T often results in the defeat of S's coercive diplomacy, but does not explain the different levels of contribution that S's coercion can achieve. Accordingly, a black-knight tends to play a decisive role in causing a sanction to fail completely. This appears to be a critical piece of information for "sanction busting." It also implies that whether (or how much) a black-knight will intervene is a matter of some uncertainty for S, whose efforts to coerce T are frustrated by this intervention.

The one other major conclusion to be drawn from Table 2 is that many of the usual factors suspected to influence a sanction's effectiveness are actually insignificant. These usual suspects include T's characteristics, the capability discrepancy between S and T, the presence of multilateral cooperation in coercing T, and the involvement of the US and international institutions in sanctioning T. As argued previously, these factors represent ex ante information and, as such, one would expect both S and T to have already taken them into account in formulating their respective policies. Consequently, one would not expect these factors to make a difference to a sanction's contribution to S's objectives. Their statistical insignificance would be surprising according to conventional wisdom, but is entirely expected from this article's perspective. The one ex post variable that shows up as insignificant in its contribution to a sanction's outcome is escalation to various levels of military force. This result implies that in those disputes that become eventually militarized, T has typically anticipated and thus discounted this prospect. S's use of military force would not therefore have come as a surprise to T, and would have already been accounted for by T in its prior decision to resist S's demand.

Conclusion

Should we conclude from this analysis that sanctions rarely work? Paradoxically, such an inference would be unwarranted. Even if most observed instances of sanctions show that these coercive efforts have made little or no contribution to S's objectives, this form of statecraft can still serve an important purpose. Even when usually ineffective in forcing T to concede, sanctions advertise S's reputation for resolve – such as in the hypothetical example mentioned earlier about Syria's nuclear armament. As Lacy and Niou (2004: 39) remarked: "If a coercer never imposes sanctions, then the target – and other potential targets – will always ignore sanction threats. Sanctions must be imposed sometimes, even in cases where they are likely to fail, in order to lead targets to believe that threatened sanctions are not always a bluff." Similarly, given the selection effect, sanctions are directed against those targets that are unmoved by threats. Yet, Eaton and

Engers (1999: 411) rightly cautioned that from such a biased sample "an observer might conclude that sanctions are futile, when in fact they exact the compliance of targets against whom measures are never taken, possibly the vast majority." Consequently, those instances when sanctions do happen, though usually not contributing significantly to S's objectives, can make a difference in attaining its objectives in other instances when it does not have to impose or even threaten sanctions. Even though one does not observe sanctions in the latter situation, such instances of non-occurrence (when T "selects" itself out of an encounter) cannot be disregarded in assessing sanctions' general effectiveness.

Studies such as this one necessarily eschew examining and explaining idiosyncratic decisions that can affect a particular sanction episode. I have not undertaken detailed case studies here. As I argued earlier, inside information on S's attempt to coerce T, whether successful or unsuccessful, is hard to come by. Moreover, due to its knowledge that S has previously sanctioned other states, T can be deterred without S even having to threaten it. "Mundane" information in the public domain is available not just to researchers. S's and T's officials would also have this information, and they would have considered it before deciding whether to confront each other. The results of this and other studies suggest that such ex ante information does not explain a sanction's outcome. The outcome is more likely to be determined by ex post information – or, more precisely, the discrepancy between the parties' prior expectations and information disclosed by subsequent developments. To the extent that they have not been fully anticipated, events occurring after a sanction's onset – such as its duration, a black-knight's involvement, and T's distress – should more plausibly influence the outcome.

Significantly, the pertinent variables do not just tell us about the parties' relative capabilities – about which we already know a great deal before a sanction. Everyone "knows" that the US is stronger than Cuba, Iraq, and North Korea. The mystery is why the latter states, evidently much weaker, are willing to defy a powerful adversary. They must care more about the issues being contested and be more committed to their cause. Other weak but less resolved states would not have resisted the US. This article suggests that it is fruitful to interpret the standard variables in sanction research as signals of intentions and motivations in an ongoing contest. S and T cannot easily and credibly disclose private information, which is of course also inaccessible to researchers. The ex post variables communicate through tangible action the contestants' resolve, commitment, and preferences that are otherwise notoriously subject to misrepresentation and cheap talk. They also enable researchers to gain analytic traction by inferring the contestants' intentions and motivations from their actions. One infers their evaluation of the stakes being contested and their determination to carry on their contest by the amount of cost, effort, and time they were willing to wager and the degree of escalation risk they were willing to run.

This article's arguments pertain to strategic studies generally. Selection effect applies to many other interstate phenomena in addition to sanctions. For instance, the decision to go to war and the success of deterrence policies are also subject to this effect. One would expect that countries that start wars usually win them (those that expect to lose would not start wars). Similarly, only a highly resolved challenger would be undeterred by a much stronger opponent. The Vietnam and Korean wars come to mind. Less resolved states would not have challenged a powerful state's deterrence policy, but our data analyses do not usually include such non-occurrences indicating deterrence success. Therefore, studying just

the occurrence of historical events – the outbreak of armed hostilities and the failure of deterrence – overlooks a vast majority of instances when such events could have happened but did not. Inductive inferences based on a biased sample of historical cases can produce misleading conclusions. Moreover, to the extent that such inferences rely on publicly available ex ante data, they tend to focus on the relative capabilities rather than the intentions of states. As already argued, such indicators of capabilities are well known to officials and should have already been discounted by them in reaching decisions. Rather, as Lacy and Niou (2004: 39) noted, the real challenge to analysts is to grasp the relevant officials' preferences and intentions. Sanctions, whether merely threatened or actually implemented, serve to signal preferences and intentions both for those directly involved in a confrontation and for others who represent domestic and international audiences. Sanctions communicate relative resolve and are a harbinger of future actions, and therefore help officials to undertake anticipatory adjustment. A turn away from treating sanctions as a matter of physical contest to an emphasis on strategic signaling can offer a rewarding new direction for future research.

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