Foreign Power Intervention and Civil Conflict

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Abstract

The rise of civil conflict as the dominant form of global warfare shows that the implications for foreign intervention in other nations are more relevant than ever. Yet, there is very little theoretical work on the actions taken by foreign powers in civil conflicts. This paper presents a model to explain the third party choice of aid or sanctions in a country facing an internal commitment problem, a common cause for civil war. To gain further insight into the decisions of third parties, this paper examines the behavior of a foreign power when they support either the incumbent or the opposition. I find that sanctions will only be used to support the opposition, and that the opposition will never fight a civil war when sanctions are used. I also find that when aid is used to support the opposition, it can provoke a civil war, but when it is used to support the incumbent, it can suppress civil conflict. Case studies from four civil conflicts exhibit the analytic leverage of the model.

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To my family, for their love for the past twenty two years.

Contents

1 Introduction

As foreign interventions in other nations have become increasingly prevalent on a global scale, the implications of these intrusions are more relevant than ever. Domestic conflict and internal power struggles are irrevocably altered by the presence of third parties. To change the behavior of other nations, foreign powers have two policy tools at their disposal: aid and sanctions. Aid helps a faction, while sanctions hurt a faction. Understanding why foreign powers choose to pursue either aid or sanctions and how this choice can affect internal politics is important for shaping actions to promote national interest, and possibly, peace. At the very least, it is salient to know when and why foreign powers pursue aid or sanction. Analysis of civil conflict usually does not consider the influence of foreign actors.

Civil conflict commonly arises within divided societies undergoing democratic transitions if one faction believes it will not have sufficient rights or participation within the rules of the new democracy. The inability for either side to commit to future power sharing agreements means it may be optimal for one faction to fight for a chance at power rather than subject itself to the will of the majority. This commitment problem may be the basis for the Syrian civil war, where a minority-Alawite sect (12% of the population) is fighting now to keep power as it would to do poorly in any democratic system. Consociationalism (or power-sharing) has been known for decades to be effective at solving some of the issues of divided societies by promoting cooperation mechanisms among elites. While consociationalism worked to promote peace in South Africa, it failed to work in a number of other divided societies.

Blattman and Miguel (2010, 30) outline some of the motivation for this study, noting in their review of civil war literature that

> The empirical salience of...international issues in driving domestic civil
> conflicts (including the role of foreign aid, Cold War interventions, and
> cross-border raids) highlights an important limitation of the existing the-
> oretical work on armed conflict causes, namely its almost exclusive focus

on the internal armed groups' decision of whether or not to fight. This is an important direction for future formal theoretical work.

The theoretical work on third parties and civil conflict is indeed slim. Gershenson (2002) examines how sanctions affect civil conflict, finding that weak sanctions provoke the incumbent to fight, while strong sanctions result in an incumbent surrender. Chang et al. (2007) finds that third party intervention can be peace making or peace breaking, while Chang and Sanders (2009) show that third party support of an incumbent may or may not provide enough aid to deter rebellion. As third parties have shaped institutions and affected outcomes of other nations for millennia, this represents a gap in the literature that should be filled. As so little theoretical work has been done with foreign powers and civil conflict, there exist few models through which to interpret the empirical work being done on the subject.

Most of the literature on the use of aid and sanctions describes a foreign power (the sending nation) attempting to alter the behavior of a homogenous target nation. The use of aid and sanctions is analyzed individually, as if the third party has a choice between aid and nothing or between sanctions and nothing. Only one paper, Azam and Saadi-Sedik (2004), investigates the idea that foreign powers have a choice between aid or sanction, attempting to explain behavior of a foreign power towards an oppressed opposition group.[1] Sanctions and aid are two sides of the same coin, as they are both used by a sending nation to influence target nations. The causes of foreign involvement are inherently complex as the choice to use aid or sanctions is the result of both internal choices of the foreign power and the power dynamics within the target nation. This complexity is perhaps why foreign intervention has evaded much of the literature on conflict, aid, and sanctions.

In this paper, I aim to explain the foreign power choice between aid and sanctions when supporting the incumbent or the opposition. Adapting a model from Fearon

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[1]The authors note that they are aware of other theoretical work on the choice between aid and sanction.

(1995), I examine the use of aid or sanctions in the face of an internal commitment problem, when the opposition expects a future decline in bargaining power and may fight a civil war now. I find that if the foreign power supports the opposition, they will use sanctions when sanctions are highly effective and the foreign power bears a high cost from civil conflict. Whenever sanctions are used, the opposition will never fight a civil war. The foreign power may also provide aid to the opposition to provoke a civil war that would not occur without foreign intervention. When the foreign power supports the incumbent, it will never use sanctions and may provide enough aid to suppress civil conflict.

I make two significant contributions to the literature on foreign intervention and civil conflict. First, I model the third party as having the choice between aiding one faction, sanctioning the other faction, or doing nothing. Azam and Saadi-Sedik (2004) models the choice between aid or sanction, but the foreign power is only able to sanction or provide conditional aid to the incumbent, and cannot aid the opposition. Second, I model a foreign power that is able to support either the opposition or the incumbent. This way, dependent on which side the third party supports, I can more deftly examine when and why third parties choose to use aid or sanctions and the effects this choice has on conflict outcomes

The paper proceeds as follows. The second section is a literature review, showing both the advances made in conflict and foreign intervention literature and the areas that still remain under-analyzed. The third section builds the model and produces the results of the paper. The fourth section provides historical examples and shows the analytical leverage my model has in explaining foreign power behavior. The fifth section concludes the paper.

2   Literature Review

When examining democracy and conflict, some of the literature classifies countries in a binary system as either democracies or autocracies (Przeworski et al. 2000 is a good example). However, to gain further insight into civil conflict requires a third categorization between the two extremes, known as anocracy (or semi-democracy). Regan and Bell (2010, 748) coalesce varying definitions of anocracy, describing it as "a regime that permits some means of participating through opposition group behavior but that has incomplete development of the mechanisms to redress grievances." Anocratic governments are six times more likely than democracies to experience new outbreaks of civil war (Marshall and Cole 2011). Fearon and Laitin (2003) also connect anocracies with higher levels of civil conflict.

Anocracies represent countries at a crossroads, and foreign powers can influence whether they consolidate their nascent democracies, regress into autocracy, or remain anocracies. While determining quantitative definitions for consolidation is difficult, some of the political science literature describes democratic consolidation in more qualitative terms. A democracy becomes consolidated when democracy becomes "the only game in town", according to Przeworski (1991, 26). Fleshed out, a democracy is consolidated when no groups within a nation attempt to achieve objectives via force, when a majority of voters agree that democracy is the correct form of government under even stressful conditions, and when groups and individuals resolve conflicts within the bounds of the law (Linz and Stepan 1996b provide additional insight). Civil war is the ultimate failure of democracy, as an entire group has decided to ignore the democratic process and instead fight for state control. The factors that result in democratic consolidation should result in lower levels of civil conflict, as democracy enables opposition groups to resolve injustices via nonviolent means.

Two theories have arisen as to why democracy is able to consolidate. The first is modernization theory, put forward in an article by Lipset (1959). Lipset states that

democracy is an outgrowth of economic development. He argues that as a country becomes wealthier, it has to build out large scale social and economic institutions to support its economy, and can use these institutions and its wealth to 'spend' on democracy. This theory suggests that the creation and consolidation of democracy is a path independent phenomenon. Varying levels of support for the modernization theory has been found empirically (see Przeworski and Limongi 1997; Przeworski et al. (2000); Epstein et al. (2006)). Alternatively, Acemoglu, et al. (2009) finds no evidence for the modernization hypothesis. Some of the political economy literature (see Mueller 2003; Acemoglu and Robinson 2006) suggests it is the distribution rather than the level of income that affects democratic consolidations, and lower inequality is more likely to lead to democracy.

The second theory about democratic consolidation is the critical juncture hypothesis, initially put forward by Moore (1966), which suggests that democracies are formed based on institutions and historical actions. North and Weingast (1989) describe the Glorious Revolution of 1688 to demonstrate how certain historical actions lead nations down different development paths. In this model, democratic consolidation is path dependent phenomenon. Institutions literature describes constitutions (Weingast 1997), visible elections (Fearon 2006), "open access" to the formation of organizations (North, et. al. 2006), and other institutions as important to helping install and consolidate democracy. If this theory is correct, democracy grows out of institutions that solve commitment problems between various groups, usually by promoting secure property rights and constraints on executive power. Institutions have recently gained the upper hand in the debate, especially in much of the economic literature.

The debate between modernization theory and critical juncture hypothesis unsurprisingly pervades the literature on civil conflict. Collier and Hoeffler (1998, 2004) find support for a modernization theory of conflict, connecting higher levels of income with

a lower probability of civil war. Sambanis (2001) and Blattman and Miguel (2010, 7) review the civil war literature and find waning support for the modernization hypothesis as a cause for civil conflict, while the latter notes that commitment problems are currently the "dominant rational explanation for civil war."

In a country with two groups, commitment problems exist when one group expects a future loss in power and would prefer to fight for control now than lose power later. Even though both groups would prefer to avoid war, the group gaining power has no way of credibly promising future policy. Fearon (1995) is one of the seminal contributions to the idea that commitment problems are the cause for civil war. Problems of commitment have also been applied to describe interstate warfare in general (see Powell 2006 for a more complete description).

Literature regarding the effect of third parties on civil conflict has been scant. Walter (1997, 340-341) discusses the importance of third parties to help solve the commitment problem by making guarantees to opposition groups. Walter notes that third party guarantees are only credible if the third party has a "self-interest" in upholding the promise, a "willingness to use force" to uphold its agreements, and the ability to "signal resolve."

The literature about foreign aid and civil conflict is sparse, especially for theoretical work. Theoretically, Chang et al. (2007) and Chang and Sanders (2009) find that third party support of an incumbent may deter rebellion. Collier and Hoeffler (2002) agree, showing that aid can reduce the risk of civil conflict by increasing government (and therefore military) spending, resulting in a suppression of rebel groups. Grossman (1992), however, finds that foreign aid makes civil conflict more likely as it increases the rewards for victory. Empirically, Ree and Nillisen (2009) find that in sub-Saharan Africa, foreign aid does not affect the probability that a civil war will begin, but does increase the chance a civil war will stop. Savun and Tirone (2011) agree in part, finding that increased aid lowers the chance of civil conflict after a country

democratizes. Alternatively, Nunn and Qian (*forthcoming*) find that increased U.S. food aid leads to more and longer lasting civil conflicts. Balch-Lindsay et al. (2008) finds third party intervention increases the likelihood of both military victory and negotiated settlement in civil conflict.

The literature about sanctions and civil conflict is equally small. Theoretically, Gershenson (2002) finds that weak sanctions provoke the incumbent to fight, while strong sanctions result in an incumbent surrender. Rogers (1996) comes to a similar conclusion, finding that sanctions may be able to deter civil wars from occurring while noting the difficulties in measuring this effect. Empirically, Escriba-Folch (2010) finds that sanctions shorten the duration of civil conflicts. More generally, most of the literature views sanctions as ineffective policy instruments. Lindsay (1986) finds sanctions are unsuccessful in forcing policy change or acting as deterrents because the targets of sanctions rarely suffer significant economic costs. Davis and Engerman (2003) finds little evidence the sanctions have success in changing behavior. The belief in the ineffectiveness of sanctions may be holding back further inquiry into particular applications of sanctions.

Finally, I have found only one paper that has attempted to model the choice of foreign powers deciding to use sanctions or aid. Azam and Saadi-Sedik (2004) analyze the choice of helping a persecuted minority in an oppressive country, specifically examining the case of the Iraqi Kurds. Generally, their goal is somewhat similar to aspects of my aim; a foreign power aims to support an opposition group. The foreign power threatens (or uses) sanctions, or provides conditional aid to the incumbent to encourage the incumbent to alter their policy. Azam and Saadi-Sedik rely upon altruism, as the foreign power derives their utility from the consumption of the opposition. I improve upon this model in three key ways. First, I imagine that the foreign power seeks to support the opposition for selfish reasons, such as enabling a change in the policy of the target nation. Second, I allow for the third party to aid the opposition,

rather than attempt to influence policy by bribing the incumbent. Finally, I allow for the foreign power to do nothing. This is an important distinction, for without it the above model would be unable to explain Western powers ignoring genocide against persecuted groups in Rwanda.

3 Model

3.1 Model setup

The basic idea for my model comes from Fearon (1995), which describes commitment problems present in a divided society transitioning to democracy. His model is as follows. Imagine two groups, a minority and a majority, in country that recently became independent. In the first period, the minority can choose to acquiesce to the creation of the new state, or fight for control of the state. If the minority fights and wins, they implement their preferred policy. In the second period, the state consolidates and the majority chooses the division of the power of the state (and the economic benefits that come with it). The majority gives itself a payoff of $x \in [0,1]$, which results in a payoff of 1 - x to the minority. The minority can choose to acquiesce and receive 1 - x or fight. C_M and C_m represent the cost of fighting for the majority and the minority, respectively. The minority has a probability P_1 of winning the civil war in the first period, and P_2 of winning the civil war in the second period. The main assumption of the paper is that $P_1 > P_2$, or that the minority has a lower chance of winning a civil war in a consolidated state than an unconsolidated one. This is because after consolidation, the incumbents have the ability to create armed forces, which reduce the ability of the minority to rebel in the future. If the minority wins the civil war, it institutes its preferred policy of $x = 0$, while if the majority wins, it institutes its preferred policy of $x = 1$.
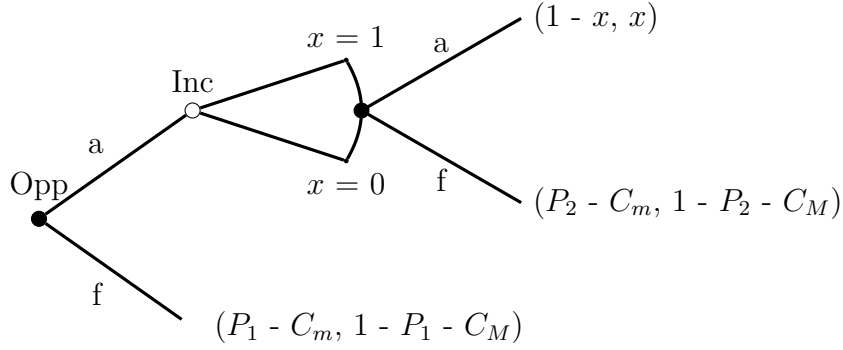
Figure 1: Extended form of Fearon (1995) model

The majority will always offer $x = 1 - P_2 + C_m$ (so the minority receives a payoff of $1 - x = P_2 - C_m$) in the second period so that the minority will choose to acquiesce. This is because for the majority, the payoff to peace, $1 - P_2 + C_m > 1 - P_2 - C_M$, the payoff to civil war. The minority knows they will receive $P_2 - C_m$ in period 2, and as $P_1 - C_m > P_2 - C_m$, the minority will always choose to fight in the first period. Although the majority prefers the outcome without civil war, it cannot commit to creating a state in which the minority is able to obtain its minimum payoff, $P_1 - C_m$, and so the minority chooses to fight in the first period.

One example of a commitment problem (discussed in Acemoglu and Robinson (2006) as their main driver behind democratization) is when the group out of power, the opposition, has solved the collective action problem and is protesting about policies undertaken by the group in power, the incumbent. Protesting is a likely occurrence in anocracies, where opposition groups do not have a legal means to voice concerns (as they would in a democracy) but the incumbent is not powerful enough to repress the opposition (as they would in an autocracy). If the opposition fights while they are still protesting, they have a high chance of winning a civil war and ousting the incumbent. However, if the opposition acquiesces when the incumbent agrees to future concessions, then the protests may disperse. Reigniting a protest is difficult, as the opposition must combat both the collective actions problem and operations by the incumbent to thwart future protests. After the protests have dispersed, the

opposition has a lower bargaining position and a lower chance of winning a civil war. The incumbent will make fewer concessions than the expected value of fighting for the opposition while they were still protesting. So, the Fearon model ca be used for countries that can be broadly drawn into two groups, perhaps split along religious, political, or class lines.

Using the Fearon model as a base, I aim to examine the actions of foreign powers. The two policy tools that foreign powers have to achieve their policy goals are aid and sanction.[2] In order to examine the foreign power choice between aid and sanction, I make the following alterations to the model. First, I add a third player as a self-interested foreign power. The foreign power has exogenous preferences and aligns itself with either the incumbent or the opposition. The foreign power is the first mover and chooses to provide aid, issue sanctions, or do nothing. The choice of the foreign power is public information, available to all parties. The game then proceeds as it does in the Fearon model. The foreign power receives the benefit of their preferred policy being implemented, but bears the costs of aid or sanctions, as well as a fraction of the fighting costs in costs in a civil war.

The foreign power observes the preferences of each group. After observing, the foreign power aligns itself with the group whose goals most closely match its own. These goals are likely economic in nature, such as the support of free trade agreements or protection of foreign capital. However, other non-economic policy goals could affect this choice, such as a military alliance or an ability to use land as a military base. After the foreign power matches its preferences with the opposition or the incumbent, it has the option of doing nothing and letting the game continue as it would have otherwise, providing support to the opposition, or providing support to incumbent.

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[2]Sometimes, foreign military intervention is considered a separate policy tool. For the purpose of this paper military intervention will be considered a form of aid, acting on the side of either the incumbent or the opposition.

If the foreign power chooses to support the opposition, it can choose to either aid the opposition or sanction the incumbent. In the same vein, if the foreign power chooses to support the incumbent, it can choose to sanction the opposition or aid the incumbent. The ability to sanction the opposition assumes that the opposition has control over some aspects of society that can be sanctioned. The foreign power can ban imports in industries where opposition economic power is concentrated. This is especially likely to be true if the power difference between the two groups is small. The foreign power can choose to use either aid or sanction, but not both.[3]

Both aid and sanctions affect the probability of victory, but they function differently. Aid can function as military aid or economic aid. Sender nations can provide aid through military supplies, such as guns, ammunition, or bombs that can be used the when they are received. Economic aid can be best considered as either loans or cash, and can be immediately used to fund troops, purchase military supplies, or keep supply lines open. Aid is more effective when there is a large wealth asymmetry in favor of the foreign power and when a country has small or poorly equipped military forces.[4]

Sanctions can be economic or diplomatic in nature. Economic sanctions can suspend some or all trade and investment between the foreign power and the target country. The relative size of trade between the two nations and the types of goods produced by each nation are some factors that impact the cost and effectiveness of sanctions. Sanctions can also be used to suspend diplomatic relations and the visa rights of members of the target nation, to prevent them from visiting the sender nation. One example of sanctions would be a ban on trade between the two countries. This trade ban does not reduce the assets of the incumbent today. After a

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[3]In actuality, it is not uncommon to see both sanctions and aid being used simultaneously. Making the choice between aid and sanction mutually exclusive aims to provide insight into their use and effects.

[4]When I say aid is effective, I mean that there is high marginal product of aid on the probability of victory, or a high $\frac{\partial P_1(\alpha)}{\partial \alpha}$.

few months, however, the incumbent will have fewer assets than if sanctions were not used. Thus, sanctions weaken the incumbent in the future, but do not weaken them today. Generally, sanctions will be more effective when there is both economic integration between the countries and a significant power and wealth asymmetry in favor of the foreign power.

Aid increases the probability that the opposition or the incumbent will succeed in a civil war. It works in both the first and the second periods of the game. Sanctions decrease the probability that the opposition or the incumbent will succeed in a civil war. In contrast to aid, sanctions do not work until the second period of the game. This key assumption is made to account for the differences in aid and sanctions described above. I attempt to account for the fact that aid can be used immediately while sanctions take time to impact civil war victory probabilities.

Sanctions are announced by the foreign power, so they are clearly public and known to both parties. Aid is also assumed to be public. In reality there are many examples of private aid, including US aid to the Contras in Nicaragua or to Cuban exiles for the failed Bay of Pigs invasion. A version of the model was created using private aid, and showed outcomes that were largely similar to public aid.[5]

3.2 General model

I will use the following notation to describe the rest of the game:

$P_1(\alpha)$, chance the opposition wins a civil war in period 1

$P_2(\alpha, \sigma)$, chance the opposition wins a civil war in period 2

C_m, opposition fighting costs

C_M, incumbent fighting costs

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[5]The main difference was that if the incumbent had a strong belief that the foreign power was going to aid the opposition, then the incumbent would be willing to provide the opposition with a higher payoff to avoid civil war in the second period. Given that the foreign power would know that the incumbent would provide a higher payoff in the second period, the foreign power would never actually provide aid. The incumbent knows this, and then never actually provides the higher payoff. The game devolves into matching pennies.

$x \in [0,1]$, payoff to incumbent

α, cost of aid to the foreign power

σ, cost of sanctions to foreign power

$D = \lambda(C_m + C_M)$, the cost of civil war to the foreign power

$P_1(\alpha)$ represents the probability that the opposition wins a civil war in period 1 given aid. $P_2(\alpha, \sigma)$ represents the probability the opposition wins a civil war in period two, given aid or sanctions. If the opposition wins the civil war, it implements its preferred policy of $x = 0$. while if the incumbent wins the civil war, it implements its preferred policy of $x = 1$. C_m and C_M are fighting costs to the opposition and incumbent, respectively. x is the split of state power (and rents) that the incumbent receives, while $1 - x$ is the split that the opposition receives.

α and σ represent the cost of aid and sanctions to the foreign power, respectively. Let α^* denote the level of α that satisfies $\frac{\partial P_1(\alpha)}{\partial \alpha} = 1$. If $\frac{\partial P_1(\alpha)}{\partial \alpha} < 1$ for all α, then $\alpha^* = 0$. This represents the level of α at which marginal benefit (of increased probability of victory in a civil war) is equal to the marginal cost of providing aid for the foreign power. D represents the cost of civil war to the foreign power, where $D = \lambda(C_m + C_M)$, $\lambda \in [0,1]$. The cost of civil war to the foreign power is dependent upon the overall costs of the war, as well as the exposure of foreign power to a civil war. For instance, a foreign power with significant foreign direct investment in the target nation would have a high λ.

Initially I assume that the foreign power has similar policy goals to the opposition, and aligns with them. If the foreign power chooses to do nothing, then the game continues with its original probabilities. If the foreign power chooses to use aid or sanction, then the foreign power would choose to aid the opposition or sanction the incumbent. As mentioned previously, the foreign power cannot both sanction the incumbent and aid the opposition; it must choose one.

There exist three periods, t = 0, 1, 2 and three players: foreign power, opposition,

and incumbent. I assume no discounting between stages, as the likely timescale for this game is weeks and months rather than years.

In period 0, the foreign power chooses to sanction, aid, or do nothing; if it chooses aid or sanctions, it selects the level of aid or sanctions (in terms of cost to the foreign power). In period 1, the opposition chooses to fight or acquiesce. In period 2, the incumbent chooses a policy, x, dividing the rents from power between incumbent and the opposition. The opposition can then choose to either acquiesce and accept this division, or fight.

The opposition receives a payoff of $1 - x$ if they acquiesce, $P_1(\alpha) - C_m$ if they fight in the first period, and $P_2(\alpha, \sigma) - C_m$ if they fight in the second period. The incumbent receives a payoff of x if opposition does not choose to fight, $1 - P_1(\alpha) - C_M$ if the opposition fights in the first period, and $1 - P_2(\alpha, \sigma) - C_M$ if the opposition fights in the second period.

The foreign power receives payoffs that are similar to those of the opposition. If the opposition acquiesces, the foreign power receives a payoff of $1 - x - \sigma$ (if sanctions are used) or $1 - x - \alpha$ (if aid is used). The foreign power receives a payoff of $P_1(\alpha) - D - \alpha$ (if aid is used) or $P_1(0) - D - \sigma$ (if sanctions are used) if the opposition chooses to fight in the first period, and $P_2(\alpha, 0) - D - \alpha$ (if aid is used) or $P_2(0, \sigma) - D - \sigma$ (if sanctions are used) if the opposition chooses to fight in the second period.
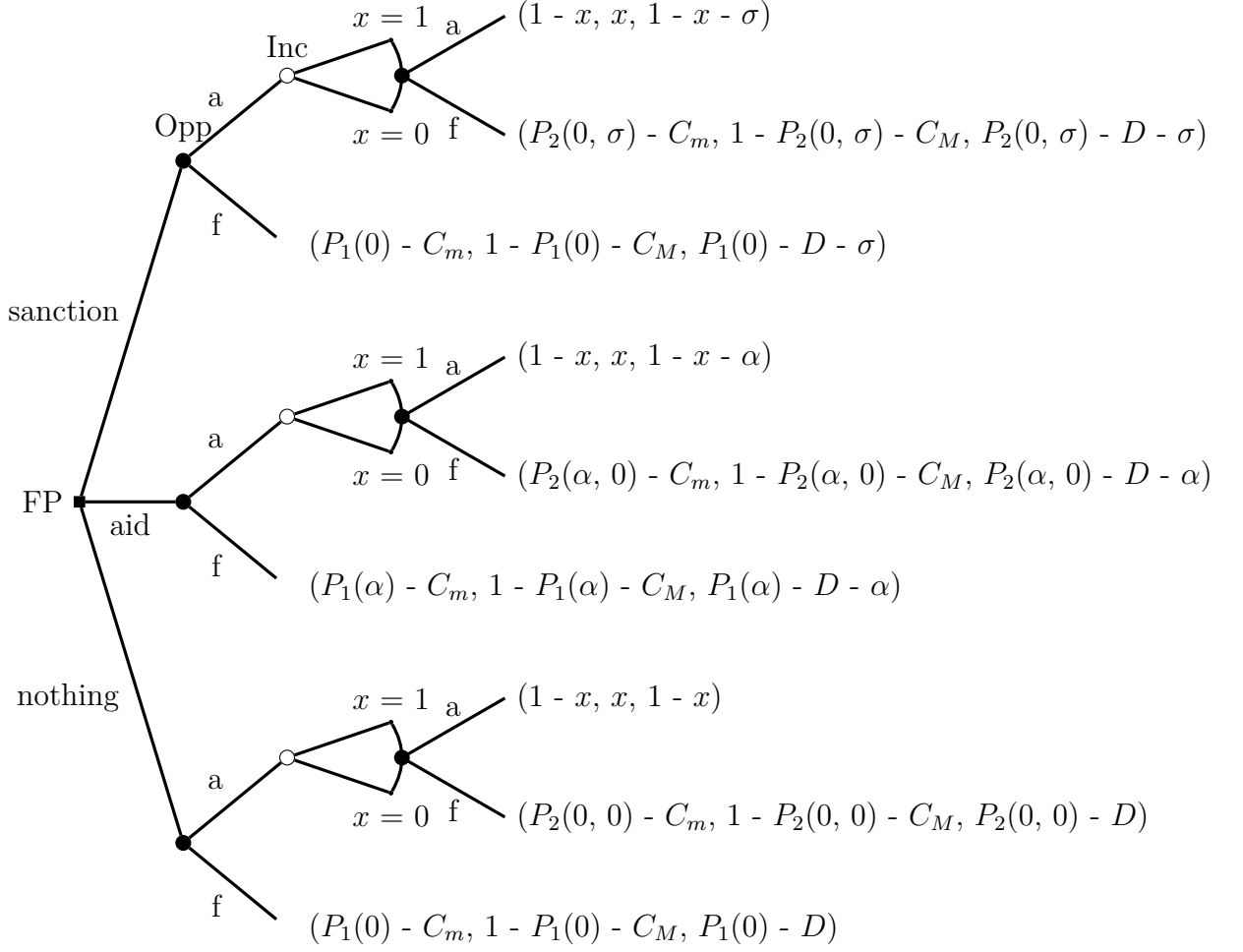
Figure 2: Extended form of the model, where payoffs are (Opp, Inc, FP)

I make the following assumptions about the probability of opposition victory in a civil war, given sanctions or aid.
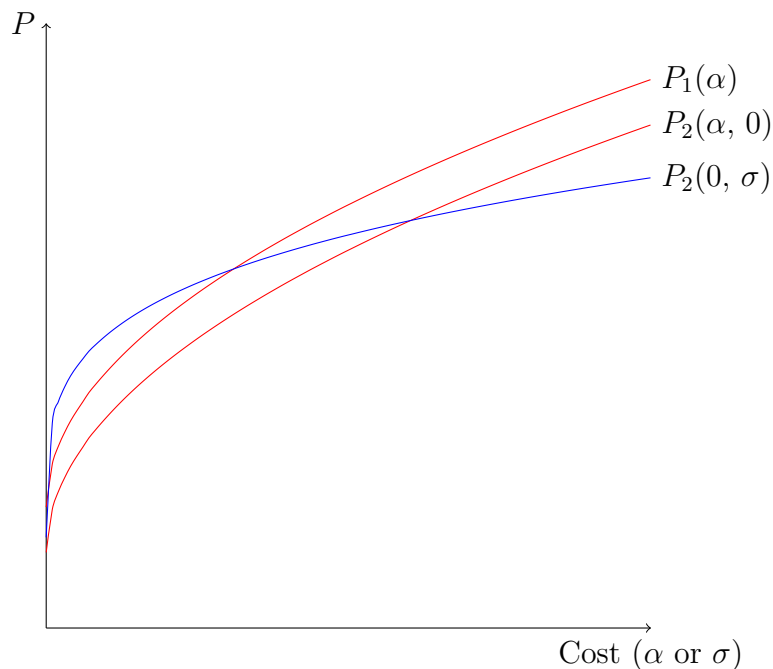
Assumption 1 $P_1(0) > P_2(0, 0)$

Assumption 2 $P_2(\alpha, 0) - P_2(0, 0) = P_1(\alpha) - P_1(0)$

Assumption 3 $P_1(\alpha) > 0,\ \frac{\partial P_1}{\partial \alpha} > 0,\ \frac{\partial^2 P_1}{\partial \alpha^2} < 0;\ P_2(0, \sigma) > 0,\ \frac{\partial P_2}{\partial \sigma} > 0,\ \frac{\partial^2 P_2}{\partial \sigma^2} < 0$

Assumption 4 $\frac{\partial P_2(0,0)}{\partial \sigma} > \frac{\partial P_2(0,0)}{\partial \alpha};\ 1 > P_2(\infty, 0) > P_2(0, \infty)$

Assumption 5 *Given equal payoffs, the opposition will choose to acquiesce rather than fight, and the foreign power would rather do nothing, then provide sanctions, then provide aid.*

Figure 3: Example of the effect of sanctions and aid on the chance of victory for the opposition

Assumption 1, adopted from the Fearon model, invokes the commitment problem as the power of the opposition declines between the two periods. Assumption 2 says the commitment problem persists for any level of aid as aid increases the probability the opposition wins, but does not alter the difference between P_1 and P_2. Assumption 3 describes the shape of the probability functions for opposition victory in a civil war. Aid and sanctions increase the probability of victory by the opposition in a positive and marginally decreasing fashion. Assumption 4 says that sanctions are more effective at low cost, while aid is more effective at high cost. It also notes that neither the incumbent nor the opposition can be certain they will win a civil war. Assumption 5 is simplifying.

Lemma 1 *If the foreign power chooses to sanction the incumbent, the opposition will never fight.*

Please note that proofs are in the appendix.

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The foreign power is only willing to use sanctions when they are able to eliminate the commitment problem. As sanctions change the probability of opposition victory in the second period, they are useless if the opposition chooses to fight in the first period. The foreign power will only use sanctions if they are able to entice the opposition to acquiesce in the first period, such that $P_2(0, \sigma) \geq P_1(0)$.

To be used, sanctions must be both powerful enough to prevent the opposition from fighting in the first period, and low cost enough to entice the foreign power to use them. If the opposition would choose not to fight a civil war without foreign interventions $(P_1(0) \leq C_m)$, sanctions are preferred to nothing when they are able to make the incumbent offer the opposition a share of power that is larger than zero. This occurs when sanctions produce a large shift in P_2 for a small cost of σ, or are highly effective. Sanctions will be preferred to aid when aid is ineffective, or when the foreign power has a high level of exposure to violence from a civil war, λ. Specifically, the foreign power will choose sanctions over nothing if there exists a σ that satisfies

$$P_2(0, \sigma) - \sigma > C_m$$

and prefers sanctions to aid[6] if there exists a σ that satisfies

$$P_2(0, \sigma) \geq P_1(0)$$
$$P_2(0, \sigma) - \sigma \geq P_1(\alpha^*) + (1-\lambda)C_m - \lambda C_M - \alpha^*$$

If the opposition would fight a civil war without foreign intervention $(P_1(0) > C_m)$, sanctions are preferred when aid is less effective, or when the foreign power has a high exposure to the costs of civil war. If the foreign power is willing to provide sanctions, $P_2(0, \sigma) \geq P_1(0)$, which will cause the opposition to acquiesce in the first period. Sanctions are able to increase the future bargaining power of the opposition, and eliminate the need for fighting in the first period. As a result of foreign action,

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[6]The preference of sanctions to aid assumes that $P_1(\alpha^*) > C_m$, so that aid would provoke a civil conflict. See appendix.

sanctions are able to prevent civil war. Specifically, the foreign power will choose sanctions over nothing if there exists a σ that satisfies

$$P_2(0, \sigma) \geq P_1(0)$$

$$P_2(0, \sigma) - \sigma > P_1(0) + ((1-\lambda)C_m - \lambda C_M)$$

and prefer sanctions to aid if there exists a σ that:

$$P_2(0, \sigma) \geq P_1(0)$$

$$P_2(0, \sigma) - \sigma > P_1(\alpha^*) + ((1-\lambda)C_m - \lambda C_M) - \alpha^*$$

Lemma 2 *If the foreign power chooses to aid the opposition, it will select α^*, and the opposition will always fight in the first period.*

If conditions for sanctions are not met, then the foreign power makes a decision to either use aid or do nothing. Unlike sanctions, aid will never be able to eliminate the commitment problem. Aid will be used when a foreign power wants to provoke civil conflict, or when a conflict would occur without foreign intervention. If the opposition would not fight in period 1 ($P_1(0) \leq C_m$), the foreign power and the opposition both receive a payoff of 0. The foreign power will provide aid if the aided opposition is willing to fight in the first period with aid, and if the foreign power has low exposure to a civil war or when aid is effective. This shows that a foreign power has the ability and incentive to provoke civil conflict under certain circumstances. If aid is effective and the foreign power bears very little cost from a civil war, it will provide enough aid to the opposition so that the opposition fights in period 1. Specifically, the foreign power will choose to provide aid over doing nothing if α^* satisfies

$$P_1(\alpha^*) > C_m$$

$$P_1(\alpha^*) - \alpha^* > \lambda(C_m + C_M)$$

If the opposition is planning to fight in period 1 ($P_1(0) > C_m$), the cost of civil war does not matter to the foreign power. As the opposition is already going to fight in

period 1, the foreign power will bear the cost of civil war if it chooses to do nothing. Its decision to aid is only dependent on the effectiveness of aid, and has no bearing on the destructiveness of the civil war. Specifically, the foreign power is willing to provide aid over doing nothing if α^* satisfies

$$P_1(\alpha^*) \text{ - } \alpha^* > P_1(0)$$

Proposition 1 *If a civil war would not occur without foreign intervention ($P_1 \leq C_m$), the foreign power will use sanctions if sanctions are highly effective, aid is ineffective, and the foreign power bears a high cost from civil war. Specifically, if*

$$P_2(0, \sigma) \text{ - } \sigma > C_m$$

then the foreign power prefers sanctions to nothing, and if

$$P_2(0, \sigma) \geq P_1(0)$$
$$P_2(0, \sigma) \text{ - } \sigma \geq P_1(\alpha^*) + (1\text{-}\lambda)C_m \text{ - } \lambda C_M \text{ - } \alpha^*$$

then the foreign power prefers sanctions to aid. The foreign power will use aid if aid is effective and the foreign power bears a low cost for civil war. Specifically, if

$$P_1(\alpha^*) \text{ - } \alpha^* > \lambda(C_m + C_M)$$

then the foreign power prefers aid to nothing. Otherwise, the foreign power will do nothing. The opposition will always fight if aid is used, and never if sanctions are used or the foreign power does nothing.

Sanctions are rare. They must raise the probability of victory enough to provide the foreign power with a positive payoff to be selected over doing nothing. They also must be more effective than aid, which only occurs when aid is expensive or the foreign power bears a high cost of civil war. If sanctions are not provided, then the foreign power will choose to aid the opposition so long as the costs of civil war to the foreign power are low, and if the aided opposition would prefer fight in the first period than

acquiesce ($P_1(\alpha^*) > C_m$). The foreign power creates a civil war through intervention. Foreign powers providing aid increases the incidence of civil war by increasing the probability of victory for the opposition group. Aid can push the opposition to favor civil war instead of acquiescing, producing a civil war. This result fits closes with the empirical literature has connected aid (Nunn and Qian, *forthcoming*) with civil conflict.

Proposition 2 *If a civil war would occur without foreign intervention ($P_1 > C_m$), the foreign power will use sanctions if sanctions are highly effective, aid is ineffective, and the foreign power bears a high cost from civil war. Specifically, if there exists a σ that satisfies*

$$P_2(0, \sigma) \geq P_1(0)$$

$$P_2(0, \sigma) - \sigma > P_1(0) + (1-\lambda)C_m - \lambda C_M$$

then the foreign power will choose sanctions over nothing. If there exists a σ that satisfies

$$P_2(0, \sigma) \geq P_1(0)$$

$$P_2(0, \sigma) - \sigma \geq P_1(\alpha^*) + (1-\lambda)C_m - \lambda C_M - \alpha^*$$

then the foreign power will prefer sanctions to aid.

The foreign power will use aid if aid is effective. Specifically, if

$$P_1(\alpha^*) - \alpha^* > P_1(0)$$

then the foreign power prefers aid to nothing. Otherwise, the foreign power will do nothing. The opposition will always fight if aid is used or the foreign power does nothing, and never if sanctions are used.

Again, sanctions are only provided under very special circumstances. The foreign power must believe that the sanctions will weaken the incumbent significantly enough that the commitment problem is no longer applicable. Then, even if such a σ does exist, sanctions will only be preferred to aid so long as they provide a higher payoff than the use of aid. For sanctions to be used, the initial difference in P_1 and P_2 must be small, sanctions should be more cost effective than aid and the foreign power should have a interest in preventing a civil war (high λ), such as protecting investment or ensuring a continuous supply of important natural resources. If these conditions are met, then sanctions have the power to quell civil conflicts before they begin by increasing the future bargaining power of the opposition. The fits in well with the empirical findings of Escriba-Folch (2010), which finds that economic sanctions shorten the duration of civil wars. It also agrees with elements of Grossman (2002), as in my model only strong sanctions are provided and so a civil war never ensues.

If the somewhat strict conditions for sanctions are not met, it is likely that aid will be given by the foreign power. As the foreign power would bear the cost of war whether or not it provides aid to the opposition, the foreign power will use aid if it provides more benefit than its cost. As aid does not change the intertemporal balance of power, the commitment problem still exists, and a civil war will always happen. Otherwise, the foreign power chooses to do nothing.

3.3 General model with incumbent support

Initially, I assumed that the foreign power would align with the opposition, and so chose to aid the opposition or sanction the incumbent. Now, I examine the model when the foreign power aligns with the incumbent and so chooses to aid the incumbent or sanction the opposition. In this extension, I will change Assumption 3 so $\frac{\partial P_1}{\partial \alpha} < 0$, $\frac{\partial^2 P_1}{\partial \alpha^2} > 0$; $\frac{\partial P_2}{\partial \sigma} < 0$, $\frac{\partial^2 P_2}{\partial \sigma^2} > 0$ so that the probability the opposition wins is lower when the foreign power chooses to support the incumbent. This implies that $P_1(\alpha)$

$< P_1(0)$ and $P_2(\alpha, \sigma) < P_2(0, 0)$ for all α, σ. Assumption 1 still holds, so $P_1(0) > P_2(0, 0)$ and the bargaining power of the incumbent is increasing over time.
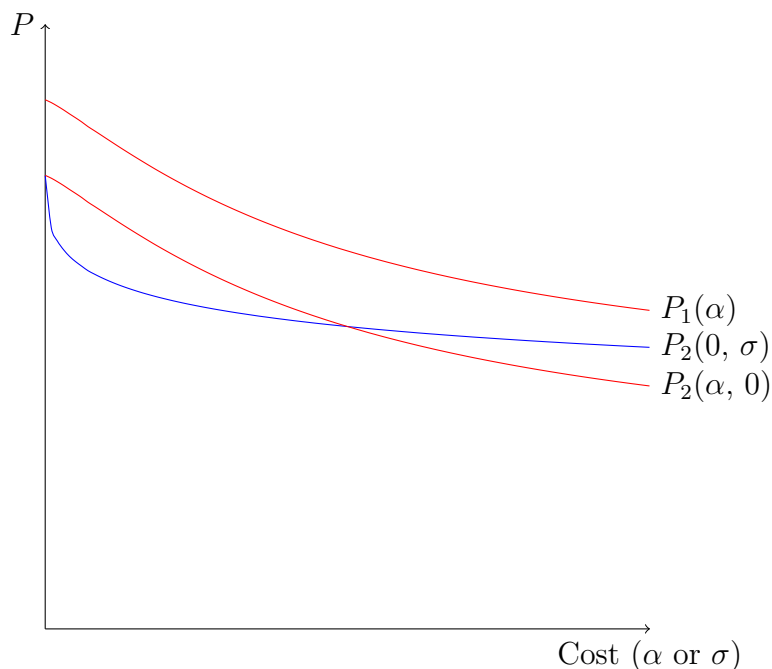
Figure 4: Opposition probability of civil war victory when the foreign power is aiding the incumbent and sanctioning the opposition.

Lemma 3 *The foreign power will never sanction the opposition.*

The imposition of sanctions on the opposition would increase the size of the commitment problem between the two parties. The opposition would see its future power declining significantly, and thus would engage in war during the first period. As sanctions only affect probabilities of victory in period 2, they will never be used against the opposition.[7] When choosing to support the incumbent, the foreign power will either choose to use aid or nothing, as sanctions will never be used.

Lemma 4 *If $P_1(0) \leq C_m$, the foreign power will never aid. If $P_1(0) > C_m$, the foreign power provides enough aid to suppress a civil war if*

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[7]While cases may exist in history, a brief examination of the history of sanctions does not reveal any cases in which sanctions were used against an opposition group.

$$P_1(\alpha^*) \leq C_m$$

or if for α_1 such that $P_1(\alpha_1) = C_m$

$$1 - \alpha_1 \geq 1 - P_1(\alpha^*) - \alpha^* - \lambda(C_m + C_M)$$

Otherwise, the foreign power provides α^*.

If a civil war would not occur ($P_1(0) \leq C_m$), then if the foreign power chooses to provide aid, $P_1(\alpha) < P_1(0)$, so the opposition will still never fight in the first period. Then, the foreign power will receive a payoff of $1 - \alpha < 1$, the payoff for doing nothing. If the opposition will not fight in the first period, the foreign power will never choose to aid, as the opposition would acquiesce in both periods without aid.

If a civil war would occur ($P_1(0) > C_m$), then if aid is effective or the costs of a civil war to the foreign power are high, the foreign power would prefer provide enough aid to the incumbent enough to suppress a civil war. First, imagine that civil war costs are held constant, and the effectiveness of aid varies. Depending on the cost of aid, the foreign power will be willing to provide a level of α at, above, and below the optimal level of aid, α^*. When aid is ineffective, $\alpha^* < \alpha_1$ and the foreign power will choose to supply α^* as the cost of α_1 is too high. This will increases the probability of victory for the incumbent but does not suppress civil conflict. If aid is only somewhat effective, $\alpha^* < \alpha_1$, but the foreign power chooses to supply α_1 to suppress the civil conflict because aid is cheap enough that the foreign power receives a higher payoff for suppressing civil conflict. If aid is effective, $\alpha^* > \alpha_1$ but the foreign power chooses to supply α_1 as α_1 is the minimum level of α required to suppress a civil war. Supplying aid above α_1 will be wasted, as the opposition is already acquiescing in both periods.

Second, imagine that the effectiveness of aid is held constant and the cost of civil war varies. Then, at a low λ, the foreign power does not bear high costs from civil war. As the foreign power does not bear high costs from civil war, they are more likely to provide $\alpha*$ because they do not have an incentive to suppress conflict. At

high λ, however, the foreign power does bear high costs from civil war, and is thus willing to provide high levels of aid to prevent a civil war from occurring.

These findings agree closely with the findings of Chang and Sanders (2009), who find that third parties are sometimes willing to suppress civil conflict and other times willing to merely increase the probability of victory for the incumbent. These findings also agree with the empirical findings of Ree and Nillisen (2009) and Savun and Tirone (2011), but I find that aid solves civil conflict through suppression of the opposition. If the foreign power would not supply aid, the commitment problem would still exist.

3.4   General model with multiple foreign powers

Unfortunately, the model with one foreign power cannot explain all of the behavior seen in the real world. In the Syrian conflict, for instance, no fewer than seven foreign powers have used aid or sanctions to try to influence the outcome of the civil war. While further research on this topic is necessary, my model can provide some insight into what actions taken multiple foreign powers.

If foreign powers move sequentially, the first mover holds a great deal of power. If the first mover uses sanctions, then they may be able to entice other countries to also use sanctions. Smaller nations who could not eliminate the commitment problem by themselves now have more incentive to provide sanctions. However, if the first mover provides aid to the incumbent, international sanctions are less likely. Aid would likely decrease the effectiveness of sanctions, as the aiding foreign power could act as an intermediary for the target nation to trade with other foreign powers. Sanctions would have to both solve the initial commitment problem and counteract some of the provided aid. Under this scenario, sanctions would be unlikely to succeed.

If foreign powers move concurrently, the success of sanctions is dependent upon the ability of foreign powers to coordinate their actions. If foreign powers are able to coordinate their actions, then a group of foreign powers that could not individually

use sanctions successfully could band together to increase the effectiveness of their combined sanctions. This increased effectiveness could eliminate the commitment problem, producing a peaceful outcome. Unfortunately, even if foreign powers could coordinate their actions, a different foreign nation could spoil the effects of sanctions. If one foreign power with very low costs to civil war aided the opposition, sanctions would become significantly less effective for the group of sanctioning nations. Then, the sanctions may no longer eliminate the commitment problem, and civil war might still occur. The inability to control for nations who have different policy preferences may prevent sanctions from being successful at stopping civil conflict.

4 Historical and Current Examples

4.1 South Africa

In the mid 1980s, the United States and other European nations issued sanctions against South Africa. Most examinations of these sanctions have suggested that they were unsuccessful and that the apartheid regime would have collapsed without them (see Evenett 2002; Levy 1999). However, it may be that sanctions in South Africa prevented a possible civil war in the mid 1980s, and were vital in creating conditions for a more peaceful transition to the end of apartheid.

After nearly two years of civil strife and a death toll of 1650 people, the South African incumbent, white South Africans led by the National Party (NP), declared a state of emergency in June 1986.[8] The state of emergency attempted to ban political gatherings and gave the South African police broad powers to quell dissent. The main opposition group, black South Africans led by the African National Congress (ANC) saw that their future power was declining, $P_1(0) > P_2(0, 0)$. The NP was trying to crush the rising anti-apartheid movement.

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[8] *New York Times.* 1986. Huge Bomb Blast in South Africa Kills Two Whites. June 15.

In response, the opposition may have begun preparations for war against the incumbent. Three days after the state of emergency was declared, members of the opposition detonated a car bomb in Johannesburg, killing at least two whites and injuring dozens, which the *New York Times* described as "certain to be a response...to the state of emergency."[9] Bombings were reported throughout the summer.

Indeed, it appears probable that many leaders of the opposition felt that the use of a state of emergency was a tipping point in the fight against apartheid. Requesting the United States place sanctions on the apartheid regime, Desmond Tutu said in a *New York Times* Op-Ed that "there is no guarantee that sanctions will topple apartheid, but *it is the last nonviolent option left*, and it is a risk with a chance."[10] Even Desmond Tutu, winner of the Nobel Peace Prize of 1984 for the promotion of nonviolence means of taking down the apartheid regime, was proposing the use of violence to end apartheid. It was surely on the minds of those in the opposition who were not nearly as committed to nonviolence.

There is evidence that the imposition of sanctions was then able to solve the commitment problem by increasing the future power of the opposition. The model predicts that after sanctions were imposed, $P_2(0, \sigma) > P_1(0)$, and so violence should decline as the opposition would no longer have to fight to secure a chance at power. The model predicts that violence would decrease after the imposition of sanctions in the late summer of 1986. Data on violence in apartheid South Africa agrees with this prediction. Official counts of incidents of unrest in South Africa fell from 14,000 in 1986 to just 4,000 in 1987 (Clark and Worger 2011, 104). A visual graphic of deaths from political violence can can be seen below.

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[9]*New York Times*. 1986. Huge Bomb Blast in South Africa Kills Two Whites. June 15.

[10]Tutu, Desmond. 1986. Sanctions vs. Apartheid. *New York Times*. June 16. Emphasis added.
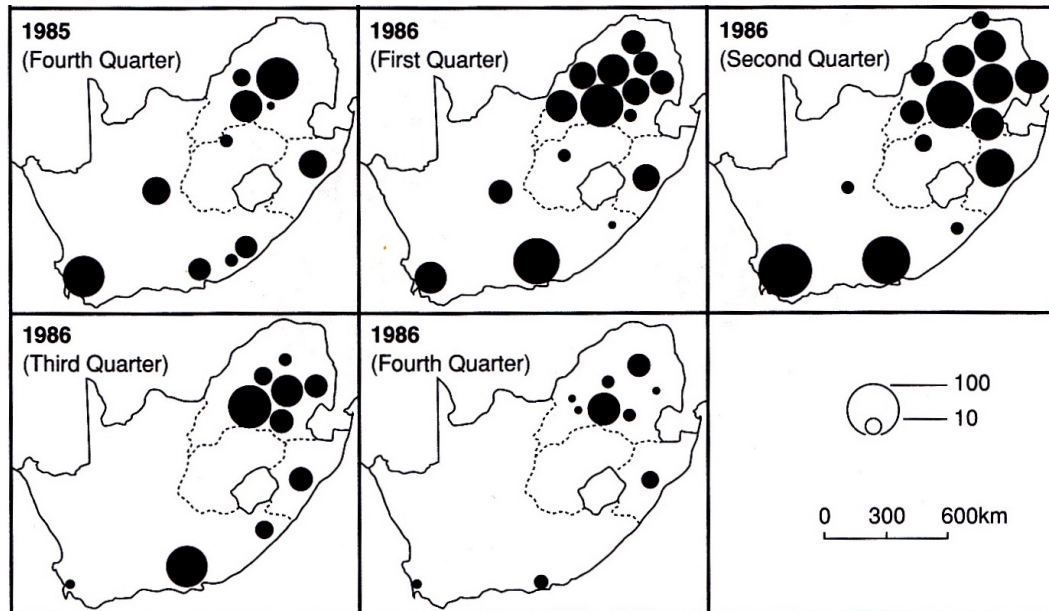
Figure 5: Deaths from political violence in South Africa. Adapted from Clark and Worger (2011, 105).

The number of deaths peaks in the second quarter of 1986, immediately before the imposition of sanctions. Deaths decline significantly in both the third and fourth quarters of 1986, showing that violence declined after the imposition of Western sanctions. As the opposition no longer faced a significant decline in bargaining power, they were willing to reduce their attacks and not begin a civil war.

Why did the United States impose sanctions on the incumbents? First, sanctions would be effective, given that exports to America accounted for an eighth of all South African exports in 1985 or nearly 4% of South African GDP.[11] South African exports to the United States fell by $1 billion USD from 1986 to 1987 due to economic sanctions.[12] These sanctions, combined with sanctions by other Western nations helped multiply the effect of sanctions to significantly reduce South African trade. The drop in trade would weaken the future bargaining power of the incumbent so

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[11]Kristof, Nicholas D. 1986. U.S. Sanctions May Not Hurt South Africa Economy Much. *New York Times*. October 4.

[12]United States Census Bureau: Trade in Goods with South Africa. Available online at `https://www.census.gov/foreign-trade/balance/c7910.html`

that $P_2(0, \sigma) > P_1(0)$, so sanctions could cause the opposition to acquiesce rather than fight.

The cost to these sanctions were low, as the loss of South African imports represented less than a tenth of one percent of American GDP, and exports to South Africa did not decline. Further limiting the cost was that the US still imported key minerals from South Africa, as sanctions were limited to items deemed non-essential to US interests. Because of the size difference between the two economies, σ was very small. Finally, the costs to civil war were moderately high to the US. As of 1985, estimated total American investment in South Africa totalled nearly\$15B billion.[13]. Any civil war would have resulted in destruction to that investment, making a civil war costly to American business interests.

Highly effective sanctions, combined with a moderate cost of civil war, meant that Lemma 1 was satisfied, and so the United States issued sanctions. Violence decreased, and a possible civil war was averted. Counterfactual histories can be dangerous, especially when trying to predict a war that did not occur. But in the case of South Africa, one additional reason that the situation did not end in civil war were that the sanctions enabled the opposition to pursue nonviolent means toppling apartheid.

4.2 Guatemala

In 1950, the people of Guatemala elected Jacobo Arbenz as their president in a landslide. The opposition at the time was weak and disorganized as second place went to a general named Miguel Ydigoras. The significant support for Arbenz implies that he had a high change of winning a civil war, should one have occurred.[14]

Inaugurated in March 1951, Arbenz promised leftist economic reforms to increase

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[13]Rasky, Susan F. 1985. Should U.S. Punish South Africa for Apartheid?. *New York Times.* June 6.

[14]The connection between share of vote received in an election and probability of victory in a civil war has been made by Londregan and Vindigni (2006)

the wealth of the Guatemalan people. As the incumbent, Arbenz pursued a number of policies antagonistic to the United States. One example was the land reforms Arbenz helped pass in June 1952, which would require large landowners (including US companies) to sell their land to the Guatemalan government. Evidence from State Department documents at the time indicate that because of these actions, the United States felt its economic interests were threatened. The United States had significant economic interests in Guatemala as American corporations had ownership stakes in Guatemalan ports, railroads, electric companies, and arable land. Land reform combined with the socialist rhetoric of the Arbenz government made the United States fear that land reform was just be the beginning of more actions against their interests.

The United States chose to align itself with the Guatemalan opposition. The American government perceived the future bargaining position of the opposition to be shrinking, $P_1(0) > P_2(0, 0)$, as the populist reforms of Arbenz proved popular. However, the opposition was weak, and had limited support from the general populace. A CIA report in 1953 suggested that "An attempted revolt by Castillo Armas is quite possible but its success is unlikely."[15] This suggests that the opposition to the Arbenz government, in the hands of Armas, had a low enough chance of victory in a civil war that $P_1(0) \leq C_m$. Indeed, a CIA report suggested that "no internal conditions that could be developed into a vital threat to the present Arbenz administration without determined support from the outside."[16]

Sanctions were not particularly against the Guatemalan incumbents. As most Guatemalan exports came from American owned companies, a ban on Guatemalan exports would have been as costly to the United States as it would be to Guatemala. It is therefore likely that for the United States attempting to sway Guatemala, $P_2(0, \sigma)$ - $\sigma < C_m$ for all σ. The United States would not have chosen to use sanctions.

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[15]US Department of State, Historical Documents, Foreign Relations of the United States, 1952-1954, Guatemala, Document 38

[16]US Department of State, Historical Documents, Foreign Relations of the United States, 1952-1954, Guatemala, Document 51

The United States was then left with the choice of aiding the opposition or doing nothing. The Guatemalan army was considered to be both small and have the potential to defect if an oppposition group gained strength, suggesting that aiding the opposition group would be effective. Armas had 300 troops under his command. The CIA provided Armas with weapons, cash, and anti-Arbenz propaganda. The cost to the US government was \$3 million. For reference, the value of some of the land that Arbenz attempted to expropriate from the United Fruit Company was worth over \$10 million (Kinzer 2013, 156). Aid therefore was very effective, providing a large shift in P_1 for a low cost. This aid provided a significant enough boost of $P_1(0)$ to $P_1(\alpha^*)$ for Armas that $P_1(\alpha^*) > C_m$, so Armas was willing to fight against the Arbenz government. Even with a somewhat high cost of civil war for the United States given their holdings in Guatemala, the US was willing to provide the opposition with aid. This suggests that aid was so effective that $P_1(\alpha^*) - \alpha^* > \lambda(C_m + C_M)$ was satisfied. Armas ultimately won the civil war, quickly deposing Arbenz and installing a military junta to rule the country. Notably, one of his first acts was to repeal the land reform passed years earlier.

Given the low cost and high effectiveness of aid, and the high cost and low effectiveness of sanctions, even with a moderate exposure to civil war the United States was still willing to aid the opposition in Guatemala to provoke a civil war. This provides a clear example of a foreign power aiding an opposition group that would not have begun a civil war without foreign help, but with American aid was willing to fight the incumbent.

4.3 Ukraine

In the late 2000s, the incumbent in Ukraine, led by President Viktor Yanukovych was left with a stark choice: they could join the Eurasian Economic Community (EEC) customs union, anchored by Russia, or attempt further integration with the

EU. The European Commission President, Jose Barroso, said "One country cannot at the same time be a member of a customs union and be in a deep common free-trade area with the European Union."[17] Meanwhile, in 2011, Putin had told Ukraine that "I have to remind you that ... [if Ukraine signed a free-trade deal with the EU] we would have to implement the protective measures."[18] Ukraine could choose not to align with either foreign power, but this would be difficult as aligning with either power would be better than aligning with neither. Aligning with the EU would allow for preferential trade status and the first step towards EU membership while aligning with Russia would lower the price of natural gas and possibly eliminate some of the debt Ukraine owed to Russia.

Russia has significant interests in Ukraine. First, Russia was interested in keeping control of the Black Sea port of Sevastopol. Second, a significant portion of the natural gas that Russia sells to Europe travels through pipelines in Ukraine. As of 2009, 80% of all the natural gas that Russia exports to the EU was sent through Ukrainian pipelines.[19] Any damage in these pipelines or stoppage in the supply of natural gas to Europe would be harm Gazprom, the state-owned natural gas company of Russia. This implies that the Russian cost of civil war, λ, was high.

Russian sanctions on Ukraine would be extremely effective. Russia is the largest Ukrainian trade partner, accounting for 27% of all Ukrainian exports and nearly 36% of Ukrainian imports.[20] Ukraine, on the other hand, is a much smaller part of Russian trade, representing only 6% of Russian exports and 7% of Russian imports.[21] As well, nearly half of all natural gas usage in Ukraine is supplied by Russia, making sanctions

[17] *National News Agency of Ukraine.* 2013. Barroso reminds Ukraine that Customs Union and free trade with EU are incompatible. February 25.

[18] Weir, Fred. 2011. Ukraine struggles to balance lure of Europe, pull of Russia. *The Christian Science Monitor* April 13.

[19] *BBC.* 2009. EU reaches gas deal with Ukraine. August 1.

[20] Observatory of Economic Complexity: Ukraine. Available online at `http://atlas.media.mit.edu/profile/country/ukr/`

[21] Observatory of Economic Complexity: Russia. Available online at `http://atlas.media.mit.edu/profile/country/rus/`

even more effective.[22] This implies that the cost of sanctions, σ, would be low for Russia relative to the increase from $P_2(0, 0)$ to $P_2(0, \sigma)$.

Aiding the Ukrainians would be effective, although less effective than sanctions. In 2009, Ukraine had an external debt/GDP ratio of 76.6% and burdensome debt servicing costs.[23] The Ukrainian military had been described as "ill equipped" and "underfunded", but some military analysts said that the Ukrainian military would "in a major land war [against Russia], be fighting on reasonable terms."[24] This implies that the cost of aid α^* was low relative to the increase in $P_1(0)$ to $P_1(\alpha^*)$, but that aid was not as effective as sanctions. In sum, the Russians had a high cost to civil war, λ, highly effective sanctions, and slightly less effective aid.

In mid 2013, Russia began regulating the import of Ukrainian goods into Russia, equivalent to issuing sanctions. This caused a significant drop in Ukrainian industrial production and exports during the second half of 2013. These sanctions may have been pursued by the Russians as a credibility mechanism to indicate the seriousness in their desire for Ukraine to not pursue relations with the EU. Given that the opposition had not yet mobilized, and the political situation was stable, my model does not account for this type of sanction. The imposition of these sanctions fits more closely with a credible signaling mechanism taken by the Russians to alter the behavior of the Ukrainian incumbent. In response, the Ukrainian incumbents announced a few months later that they would not sign an agreement with the EU to pursue closer relations.

This acted as a coordinating device among members of the opposition, who then began protesting to demand closer relations with the EU.[25] The opposition began

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[22]Center for Eastern Studies. 2013. Kyiv's gas strategy: closer cooperation with Gazprom or a genuine diversification. July 15.

[23]Moody's Investor Service. 2013. Moody's downgrades Ukraine's government bond rating to Caa1 from B3 and places the rating on review for downgrade. September 20.

[24]Erlanger, S., and Kramer, A. 2014. Ukraine Finds Its Forces Are Ill Equipped to Take Crimea Back From Russia. *New York Times*. March 1.

[25]Choosing to not sign a piece of promised legislation may be similar to the idea of constitutions as coordination devices, put forward in Hadfield and Weingast (2013)

protesting against the incumbents for signing the agreement with Russia. The power of the opposition is only high when they are protesting, but if the protests ceased, the bargaining position of the opposition would decline significantly. For the opposition, $P_1(0) > P_2(0, 0)$.

The Russians were concerned about the ability of the Ukrainian incumbent to hold power. To support the incumbents who signed a trade deal with Russia, the Russian government chose to aid the incumbent, as, by Lemma 3, Russia would not sanction the opposition, even though sanctions were the most effective Russian policy option. Thus, the Russians offered α^* to the incumbent by ending previous sanctions, promising to purchase \$15B dollars of Ukranian bonds, and lowering the price of natural gas by a third.

This aid improved the position of Ukrainian incumbent, and lowered the probability of victory for the opposition from $P_1(0)$ to $P_1(\alpha^*)$. However, this did not suppress the protests and the opposition continued to rally in the streets, as, $P_1(\alpha^*) > C_m$. The incumbent made a number of concessions, attempting to quell the opposition by agreeing to new elections, a restoration of a previous constitution, and amnesty for protestors. Unfortunately, this did not quell the opposition, as Yanukovych could renege on his promise for new elections once the protests had died down. While the total conflict was minimal, the opposition won the civil war, and instituted its preferred policy of agreements with the EU.

At one point, Yanukovych requested that Russian troops enter Ukraine to help quell the opposition, and yet the Russians did not fully comply with his request to keep him in power. Military aid in the form of Russian troops into mainland Ukraine may have suppressed $P_1(\alpha^*) < C_m$ to stop the protestors. However, by Lemma 4 the cost of providing troops, α, would have been much higher than α^*, which the Russians were unwilling to provide.

Russian sanctions were more effective than aid, but were not used because Russia

chose to support the incumbent, rather than the opposition. Even so, aid was effective enough for the Russians to supply the incumbent with economic aid after the opposition began their protests. This level of aid was not high enough to suppress the protests, who were then able to oust the incumbents in a rapid civil conflict.

4.4   Venezuela

During the first decade of the 2000s, the leader and incumbent in Venezuela, Hugo Chávez, had exhibited significant dislike for many aspects of American policy. He also took a number of actions hostile to American business interests, including raising taxes on foreign oil companies in 2001, and resisting a US push for a NAFTA-like free trade agreement for the Americas. Even as early as 2001, Chávez was being described as a "strident critic of the U.S."[26] It had become clear that the United States was against the incumbent, Chávez, and aligned with the opposition.

Tensions in Venezuela had been rising significantly during the end of 2001 and beginning of 2002. Protests had begun, and in early April, nearly 200,000 protestors marched in the streets to oppose Chávez.[27]   The opposition was mobilizing, and the United States had the opportunity to pursue significant policy changes within Venezuela.

In mid April 2002, there was a coup attempt against Hugo Chávez. The leaders of the coup were in power for two days before being reversed, and Chávez was returned to power. US leaders were ecstatic at the ouster of Chávez, claiming (non-ironically) that it was a "victory for democracy" that he was removed from office in a coup.[28] Just before the coup attempt, the opposition perceived both declining future bargaining power, $P_1(0) > P_2(0, 0)$, and a willingness to begin a civil war, $P_1(0) > C_m$. If the United States was thrilled out his ouster, why did the United States do very little, if

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[26]Handelman, Stephen. 2001. Special Report: Summit of the Americas. *Time*. April 19.

[27]Isikoff, Michael. 2002. Hugo's Close Call. *Newsweek*. April 28.

[28]Forero, Juan. 2002. Uprising In Venezuela: The Government; Venezuela's Chief Forced to Resign; Civilian Installed. *New York Times*. April 13.

anything to evict Chávez from his position as President of Venezuela?

First, the United States did not issue sanctions against Venezuela. Sanctions against Venezuela would likely not been effective, and would have only caused a small change in the probability of victory for the opposition. This is because nearly all Venezuelan exports were in the form of oil. Nearly 40% of Venezuelan oil production was exported to the United States.[29] Oil, however, is highly demanded and can be easily shipped around the world. If the United States had banned oil exports, it would not have been difficult for the Venezuelans to find other trading partners. The overall effect of sanctions meant that $P_2(0, \sigma) < P_1(0)$, so, by Lemma 1, the United States would never choose to sanction the Venezuelan incumbent. It is unsurprising that even though Venezuelan policy has become more hostile to American interests over the past decade, the United States has not issued sanctions against Venezuela.

Knowing that the United States did not sanction the Venezuelan incumbents, we need to examine whether America aided the opposition. Unfortunately, this analysis is more boring; if aid was effective, it would have been provided, but if aid was ineffective, the United States would not have provided aid. One possibility is that the US did not provide aid. This suggests that $P_1(\alpha^*)$ - $\alpha^* < P_1(0)$ for the United States. Aid was too expensive and did not provide enough benefit to make providing it worthwhile. As the opposition in Venezuela consisted of wealthier people, additional US funding may not have made a significant difference to the opposition.

A second possibility is that the US provided the Venezuelan opposition with secret aid which has been yet to be declassified. There have been some suggestions that the US provides aid to the opposition in the name of democracy building over the past decade, which totalled $6 million in 2009.[30] If aid was provided, it would be that $P_1(\alpha^*)$ - $\alpha^* > P_1(0)$, and the United States provided that minimal level of aid. Given

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[29]U.S. Energy Information Administration, Analysis Briefs, Venezuela. (2012).

[30]Department of State Congressional Budget Justification, Volume 2, Foreign Operations, Fiscal Year 2014, 126. Accessed at `http://www.state.gov/documents/organization/208290.pdf`

that it has been over a decade since the coup attempt, it seems likely that if the United States had chosen to funnel large sums or money or arms to the Venezuelan opposition, it may have leaked by now. It seems like that if any aid was given, it was very small.

As sanctions would have been ineffective given the oil exports of Venezuela, the United States had a choice between nothing and aid to support the Venezuelan opposition. Given the large size of the opposition, and their relative wealth, providing significant aid to the opposition may not have had a significant effect on their probability of victory.

5 Conclusion

In this paper, I have shown that sanctions can induce peace in civil conflict, while aid can suppress or provoke civil war. I created a model of third party behavior in which a self interested foreign power uses sanctions and aid to support different factions. This analysis is the first to examine foreign power behavior in which the foreign power can support the opposition or the the incumbent. I also model the choice between aid and sanctions in a novel way, using a third party who is able to use aid and sanctions to affect the behavior of both the incumbent and the opposition.

I find that sanctions are only used in very specific circumstances. The foreign power will never use sanctions against the opposition, and only use sanctions against the incumbent. Sanctions must be powerful enough to solve the commitment problem for the opposition, yet be low cost enough to make sanctions attractive compared to aid or nothing. If the foreign power bears a high cost from civil war, it is more likely to issue sanctions to solve the commitment problem. In my model, sanctions are able to prevent a future civil war. Identifying prevented civil wars is an empirical problem, as it requires knowledge of civil wars that would have happened had a foreign power

not used sanctions. However, the use of sanctions should correlate with more peaceful outcomes.

Aid will be used in many scenarios. When the foreign power supports the incumbent, it will use enough aid to suppress a civil war if aid is effective or costs to civil war are high. When the foreign power supports the opposition, the foreign power will provide aid if aid is more beneficial than costly. If the opposition would choose not to fight the incumbent without foreign intervention, aid may raise the probability of victory for the opposition high enough for the opposition to prefer civil war over acquiescing. If the foreign power supports the opposition, aid should therefore result in more civil conflict, while if the foreign power supports the incumbent, we should see less civil conflict.

More work on the subject of third parties and civil conflict is necessary. In a model with multiple coordinating foreign powers, the effectiveness of sanctions may rise and make their usage more likely. Additionally, I ignore the effect aid and sanctions have on the value of victory of war. Aid may increase the value of control of the state, making fighting more valuable (a la Grossman 1992) while sanctions may decrease the value of control of the state.

A final area for further examination would be the exogenous policy preferences of the foreign power. In this model, the preferences of the foreign power are given, and align perfectly with either the opposition or the incumbent. In reality, foreign powers may find their preferred policy is halfway between the incumbent or the opposition. Additionally, the foreign power may not have a preference for either the incumbent or the opposition, but simply have a high cost of civil war. Attempting to capture the multitude of drivers behind foreign power policy is a difficult task for future studies.

6   Appendix

Proof of Lemma 1

Case 1: $P_1(0) \leq C_m$.

As $P_2(0, 0) < P_1(0) \leq C_m$, the opposition will acquiesce both periods. So, if the foreign power does nothing, in period 2, the incumbent will offer $x = 1$, and the opposition and the foreign power will receive a payoff of $1 - x = 0$.

The foreign power will prefer to use sanctions instead of nothing so long as the payoff to sanctions is greater than 0. If the foreign power uses sanctions, then they will receive a payoff of

$$P_2(0, \sigma) - C_m - \sigma$$

which they prefer to nothing so long as $P_2(0, \sigma) - C_m - \sigma > 0$. If this holds,

$$P_2(0, \sigma) - C_m - \sigma > 0$$
$$P_2(0, \sigma) > C_m + \sigma$$
$$P_2(0, \sigma) > P_1(0)$$

As $P_2(0, \sigma) > P_1(0)$, the opposition will acquiesce in the first period. The incumbent will offer $1 - x = P_2(0, \sigma) - C_m$ in the second period, the opposition gets a payoff of $P_2(0, \sigma) - C_m > 0$, and the foreign power receives $P_2(0, \sigma) - C_m - \sigma$.

The foreign power will prefer to use sanctions instead of aid depending on the value of $P_1(\alpha^*)$. If

$$P_1(\alpha^*) \leq C_m$$

then the opposition will acquiesce in both periods, and the foreign power receives a payoff of $-\alpha^* < 0$, so the foreign power prefers nothing to aid. If

$$P_1(\alpha^*) > C_m$$

Then, as $P_1(\alpha^*) > P_2(\alpha^*, 0)$, the opposition will choose to fight in the first period. The foreign power will receive a payoff of

$$P_1(\alpha^*) + (1\text{-}\lambda)C_m \text{ - } \lambda C_M \text{ - } \alpha^*$$

As this is the payoff to the use of aid when $P_1(\alpha^*) > C_m$, the foreign power prefers sanctions to aid when

$$P_2(0, \sigma) \text{ - } \sigma \geq P_1(\alpha^*) + (1\text{-}\lambda)C_m \text{ - } \lambda C_M \text{ - } \alpha^*$$

Case 2: $P_1(0) > C_m$

As $P_1(0) > C_m$ and $P_1(0) > P_2(0, 0)$, the opposition will choose to fight in the first period. If the foreign power does nothing, the payoffs are $1 \text{ - } P_1(0) \text{ - } C_M$ to the incumbent, $P_1(0) \text{ - } C_m$ to the opposition, and $P_1(0) \text{ - } \lambda(C_m + C_M)$ to the foreign power.

If $P_2(0, \sigma) < P_1(0)$ for all σ then the opposition will choose to fight in the first period, and the payoff to the incumbent will be $P_1(0) \text{ - } \lambda(C_m + C_M) \text{ - } \sigma < P_1(0) \text{ - } \lambda(C_m + C_M)$. The incumbent will prefer nothing over sanction.

If $P_2(0, \sigma) \geq P_1(0)$, then the opposition will acquiesce in period 1, and the game will proceed to the second period. The payoff to the foreign power for using sanctions is

$$1 \text{ - } x \text{ - } \sigma = P_2(0, \sigma) \text{ - } C_m \text{ - } \sigma$$

The payoffs for the foreign power to nothing are

$$P_1(0) \text{ - } \lambda(C_m + C_M)$$

So, the foreign power will choose to sanction over nothing if

$$P_2(0, \sigma) \text{ - } C_m \text{ - } \sigma > P_1(0) \text{ - } \lambda(C_m + C_M)$$
$$P_2(0, \sigma) \text{ - } \sigma > P_1(0) + ((1\text{-}\lambda)C_m \text{ - } \lambda C_M)$$

As the opposition will fight in the first period, the payoff to the foreign power for using aid would be

$$P_1(\alpha^*) - \lambda(C_m + C_M) - \alpha^*$$

So, the foreign power prefers sanctions over aid so long as

$$P_2(0, \sigma) - C_m - \sigma \geq P_1(\alpha^*) - \lambda(C_m - C_M) - \alpha^*$$
$$P_2(0, \sigma) - \sigma > P_1(\alpha^*) + ((1\text{-}\lambda)C_m - \lambda C_M) - \alpha^*$$

and $P_2(0, \sigma) \geq P_1(0)$.

If there exists a σ that satisfies these requirements, the foreign power will choose to use sanctions instead of doing aid or nothing. When sanctions are provided, $P_2(0, \sigma) \geq P_1(0)$, so the opposition will always acquiesce in the both periods.

Proof of Lemma 2

Case 1: $P_1(0) \leq C_m$

As $P_2(0, 0) < P_1(0) \leq C_m$ the opposition will acquiesce in both periods. So, if the foreign power does nothing, in period 2, the incumbent will offer $x = 1$, and the opposition and the foreign power will receive a payoff of $1 - x = 0$.

If the foreign power chooses to provide aid, it receives a payoff of

$$P_1(\alpha) - \lambda(C_m + C_M) - \alpha$$

The foreign power wishes to maximize its payoff, so it selects α such that

$$\frac{\partial P_1(\alpha)}{\partial \alpha} - 1 = 0$$

which satisfies the first order condition. The foreign power selects α^*, where

$$\frac{\partial P_1(\alpha^*)}{\partial \alpha^*} = 1$$

If $P_1(\alpha^*) \leq C_m$, the opposition will acquiesce in both periods, and so the foreign power will not provide aid, or else it would receive a payoff of $-\alpha^*$.

If $P_1(\alpha^*) > C_m$, the opposition will fight in the first period. The foreign power receives a payoff of

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$$P_1(\alpha^*) - \lambda(C_m + C_M) - \alpha^*$$

If the opposition chooses to fight in the first period. So, the foreign power is willing to provide α^* so long as

$$P_1(\alpha^*) - \alpha^* > \lambda(C_m + C_M)$$

and $P_1(\alpha^*) > C_m$.

Case 2: $P_1(0) > C_m$

As $P_1(0) > C_m$ and $P_1(0) > P_2(0, 0)$, the opposition will choose to fight in the first period. If the foreign power does nothing, the payoffs are $1 - P_1(0) - C_M$ to the incumbent, $P_1(0) - C_m$ to the opposition, and $P_1(0) - \lambda(C_m + C_M)$ to the foreign power.

If the foreign power provides aid, it will receive a payoff of

$$P_1(\alpha^*) - \lambda(C_m + C_M) - \alpha^*$$

where α^* is the same as it was in Case 1. The foreign power will then choose to aid so long as

$$P_1(\alpha^*) - \lambda(C_m + C_M) - \alpha^* > P_1(0) - \lambda(C_m + C_M)$$
$$P_1(\alpha^*) - \alpha^* > P_1(0)$$

Put another way, the foreign power will prefer aid over nothing so long as $\alpha^* > 0$.

Proof of Lemma 3

If the foreign power ever chose to use sanctions

$$P_1(0) > P_2(0, 0) > P_2(0, \sigma)$$

If $P_1(0) \leq C_m$, the opposition will acquiesce in both periods, and so the foreign power will receive a payoff of 1. If the foreign power chose to use sanctions, then the opposition will still acquiesce in both periods, as $P_2(0, 0) > P_2(0, \sigma)$. Then, the

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foreign power will receive a payoff of 1 - σ, which is less than 1, the payoff to doing nothing.

If $P_1(0) > C_m$, the opposition will choose to fight in the first period, and the foreign power will receive a payoff of $1 - P_1 - \lambda(C_m + C_M)$. If the foreign power chose to use sanctions, the opposition will still fight in the first period, as $P_1(0) > P_2(0, \sigma)$. Then, the foreign power will receive a payoff of $1 - P_1 - \lambda(C_m + C_M) - \sigma$, which is less than $1 - P_1 - \lambda(C_m + C_M)$, the payoff to doing nothing.

Proof of Lemma 4 If $P_1(0) \leq C_m$, the opposition will acquiesce in both periods, and the foreign power will receive a payoff of 1. If the foreign power ever provided aid,

$$P_2(\alpha, 0) < P_1(0) < C_m$$

for all α. Thus, as the opposition will still acquiesce in both periods, the payoff for the foreign power for providing aid would be $1 - \alpha < 1$, so the foreign power would never provide aid.

If $P_1(0) > C_m$, providing aid will make

$$P_1(\alpha) < P_1(0)$$

If $P_1(\alpha) - C_m \leq 0$, then the opposition acquiesces for both periods.

If $P_1(\alpha) - C_m > 0$, the opposition fights in the first period.

Let α_1 be the level of aid such that $P_1(\alpha_1) = C_m$, so that the opposition will acquiesce for two periods, and let α^* be the level of aid such that $\frac{\partial P_1(\alpha)}{\partial \alpha} = 1$. If $\alpha^* \geq \alpha_1$, then the foreign power would provide α_1. If the incumbent provides α_1, it receives a payoff of $1 - \alpha_1$, as the opposition will acquiesce for both periods. As

$$\alpha^* \geq \alpha_1$$

then

$$P_1(\alpha^*) \leq P_1(\alpha_1) = C_m$$

So, if the foreign power provided α^*, the opposition will still acquiesce for both periods, and the foreign power receives a payoff of $1 - \alpha^* < 1 - \alpha_1$ by assumption. If $\alpha^* < \alpha_1$, there are two possibilities. If foreign power selects α_1, it will receive $1 - \alpha_1$ as a payoff as the opposition will acquiesce both times.

If the foreign power selects α^*, $P_1(\alpha^*) > P_1(\alpha_1) = C_m$, so the opposition will always go to war in the first period. The foreign power will then receive a payoff of

$$1 - P_1(\alpha^*) - \alpha^* - \lambda(C_m + C_M)$$

Therefore, if

$$1 - \alpha_1 > 1 - P_1(\alpha^*) - \alpha^* - \lambda(C_m + C_M)$$

the foreign power will choose to provide α_1 and suppress the civil conflict. Otherwise, it will provide α^*.

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