

Intervention, War Expansion, and the International Sources of Civil War

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Abstract

Why do some civil wars turn into interstate wars? I analyze a formal model of civil war onset, rebel-sided intervention, and interstate retaliation where the domestic government, but not the rebels, are uncertain about whether a third party will intervene. The domestic government risks war with the rebels when it is uncertain about intervention, but the type of war that follows depends on how much the government can gain from war expansion and the autonomy costs the rebels incur for external support. Interstate war occurs when the domestic government has much to gain from expansion and the rebels pay low costs for support. The model also provides an international and informational explanation for civil war; it shows that common predictors of civil war, such as intervener-rebel relations, have conditional effects on conflict onset; and it demonstrates that uncertainty over intervention can cause peace or interstate war, depending on the stakes.

1 Introduction

Why do some civil wars turn into interstate wars while others do not? In this paper I seek to explain when and why domestic governments retaliate against foreign states that support rebels, because governments vary in how they respond to costly third-party interventions. During the U.S. occupation of Iraq, Iranian and Iranian-supported militia frequently targeted coalition troops. Yet the Bush administration decided not to retaliate. Sometimes intervention triggers interstate war. South Africa waged war against both Angola and Mozambique during the 1970s and 1980s in response to their support for the African National Congress, resulting in hundreds of thousands of deaths.

International disputes often coincide with interventions (Gleditsch et al. 2008), but existing theories of retaliation assume that war expansion is suboptimal for the domestic government (Schultz 2010, p. 285) and that they must be pushed into retaliating (Carson 2016, pp. 111-4). These assumptions narrow the scope conditions to states who are either unwilling or unable to retaliate, which elides the possibility that states might prefer fighting an interstate war to tolerating intervention. Instead, we should consider how domestic and international conflict intersect. Conflicts that involve multiple actors can have varying stakes depending on who is fighting (Gartner and Siverson 1996, Werner 2000), so war expansion means fighting over a larger pie. Furthermore, existing theories of retaliation do not account for bargaining between the domestic government and opposition groups (Maoz and San-Akca 2012, pp. 722-4). Given that the threat of intervention can cause civil war in the first place (Cetinyan 2002, Thyne 2006), and the threat of retaliation can deter intervention and thus the onset of civil war, they cannot explain why these conflicts start in the first place, and why some become civil wars while others

become international conflicts.

To answer these questions, I develop an asymmetric information model of civil war onset, rebel-sided intervention, and interstate retaliation that considers the actors' incentives for expanding the stakes of the war from domestic to interstate. The model has three innovations. First, I assume that the domestic government is uncertain about the third party's willingness to intervene on the side of the rebels, but the rebels are fully informed. Second, by retaliating against the third party, the domestic government can raise the stakes being fought over. Third, I loosen the common assumption that rebels always prefer external support to fighting alone. Instead, the rebels' preferences over support depend on how much autonomy they lose when a third party intervenes.

Uncertainty over intervention explains why the domestic government risks war when bargaining with the rebels, but the type of war that follows depends on two factors: how much the domestic government can gain from war expansion, and the autonomy costs the rebels incur in the event of intervention. In a civil war, the domestic government is fighting over the local stakes, but it can retaliate against the third party and thus expand the fighting to include what the other state also controls (i.e. the international stakes). Because the stakes are endogenous, the domestic government and the third party must both be willing to fight over the larger set of stakes that come with an interstate war. Interstate war occurs in equilibrium when the local stakes are low enough relative to the international stakes for the domestic government to prefer retaliation to tolerating intervention. But the higher the local stakes are relative to the international stakes, the more likely the third party is to intervene. Furthermore, interstate war depends on the rebels' autonomy costs for two reasons. First, when they are low, the rebels prefer external support to fighting alone. Second, low autonomy costs make guaranteed peace

costlier and thus relatively less attractive, which induce the domestic government to risk war.

My theory explains a number of important historical cases that do not fit existing theories of intra- or interstate war. Furthermore, it shows how the content of private information matters for explaining different kinds of wars. We know that private information can cause costly conflict. Sometimes the domestic government is uncertain about the rebels' capacity for fighting, which helps explain the outbreak of civil war. Other times the private information is about the likelihood of foreign intervention, and as I show in this paper, such uncertainty can help explain internationalized civil war or interstate war.

The model also has implications for civil wars. First, it provides a novel explanation for local-only civil war, based on uncertainty over external intervention. When rebels lose too much autonomy with intervention, governments risk war when they think intervention is likely, because they can extract larger concessions from the rebels. But rebels with high autonomy costs only go to war when intervention will not occur. Therefore, civil war without intervention is more likely when the rebels are vulnerable to being dominated by a third party, not because the rebels are too strong to want help. Second, when we account for the triadic interaction, common predictors of civil war have different effects on the probability of civil war onset. For instance, higher affinity between the third party and the rebels make internationalized civil war more likely, but interstate less likely. Lastly, uncertainty over intervention can either induce peace or cause war, depending on the stakes of the civil war. When expansion promises big gains for the domestic government, uncertainty actually deters the government from risking war compared to conditions of complete information, because there is always some probability that intervention will *not* happen. When expansion does not promise large extra gains for the domestic government, increased likelihood of intervention discourages the government from risking war.

2 Explanations for intervention and retaliation

To explain how civil wars become interstate wars, we first have to consider how the threat of intervention can affect domestic bargaining. First, potential foreign intervention by a third party can disrupt domestic bargaining (Thyne 2006, pp. 942-5) or embolden rebels (Kuperman 2008).¹ Second, interventions are not at random. States intervene in civil wars to affect the outcome (Regan 1996), defeat rivals (Findley and Teo 2006, Maoz and San-Akca 2012), promote their ideology (Choi 2013, pp. 128-9) or support ethnic brethren (Gleditsch 2007, p. 298), and ensure access to markets (Aydin 2012). Therefore, the civil wars we observe are the result of a strategic interaction between domestic governments, rebels, and third parties.

What most studies of intervention omit, however, is an explicit theory of the rebels' calculus. This is puzzling, because intervention comes after rebellion, and we should expect opposition groups to condition decisions about fighting on expectations of intervention. Third parties prefer to support strong rebels, but strong rebels prefer to go it alone because they can win on their own (Salehyan et al. 2011, p. 711). Rebels might be wary of receiving external support, because it often means giving up autonomy in return (Salehyan 2010, p. 507). If rebels have preferences and expectations over external support, both factors should affect their decision to fight, which in turn affects conflict onset and intervention. For instance, the contagion effect of civil wars depends on whether or not the rebels are secessionist or center-seeking (Buhaug and Gleditsch 2008, p. 229), which suggests that rebel preferences over intervention define what domestic bargains are possible and what the outside options are, be it civil war or some international conflict.

¹Cetinyan shows that under complete information, the presence of a third party intervener does not affect the likelihood of rebellion, only the demands made in equilibrium (Cetinyan 2002, pp. 647-8).

Even if a third party can find a willing recipient, these interventions are not without risks. Support can empower a rebel group so much so that the third party can no longer control it (Salehyan 2010, Bapat 2012). Furthermore, there are numerous ways a civil war can become an interstate conflict. There might be unintended consequences, such as refugee flows (Salehyan and Gleditsch 2006, pp. 344-7), but the most severe risk for a third party is that a domestic government retaliates against it for supporting rebels. This threat could ostensibly deter intervention, if the third party is unwilling to fight an interstate war. Gartner and Siverson (1996, p. 5) argue that few interstate wars expand beyond their original participants because initiators pick targets unlikely to receive external support. Their logic suggests that the interventions we observe should be due to deterrence failure. A credible threat of intervention can deter governments from starting civil wars, while a credible threat of retaliation can deter intervention.

Yet we still observe both intervention and retaliation. Work on civil war intervention and escalation offers some explanations. Maoz and San-Akca (2012, pp. 720-5) argue that retaliation might deter intervention, particularly in the context of interstate rivalries. However, their theory does not specify rebel preferences over conflict expansion, so it does not distinguish between deterring intervention and deterring civil war onset. Furthermore, by having private information about the threat of retaliation, rather than the threat of intervention, the model does not explain the breakdown of domestic bargaining. As such, it is a model of interstate conflict, rather than the internationalization of civil war.

Other theories focus on secrecy as the mechanism of escalation. Carson argues that the ability to intervene covertly allows states to manage unintended escalation (Carson 2016, pp. 111-4). Retaliation happens because of overt intervention, when the intervener is not interested in managing escalation. But because his theory seeks to explain variation in secrecy, rather than

retaliation, it is not clear how a target state can deter intervention in the first place.² Overt intervention, and thus a risk of escalation, is most likely in the context of "low technological sophistication, local conflicts with no or one-sided outside interest, and if intervening powers are domestically insulated and lack alliance considerations" (Carson 2016, p. 115). None of these factors can be influenced by the target state within the scope of the theory, so it only explains cases where the domestic government is restrained from retaliating, except when subjected to domestic political pressures. Similarly, Schultz (2010, p. 284) shows how rival states' ability to intervene in civil wars covertly can cause war expansion because they cannot credibly commit not to intervene against each other. However, the model assumes that expansion is suboptimal (Schultz 2010, p. 285). While this assumption helps explain how secrecy fuels conflict expansion, it does not explain cases where expansion of a conflict can be beneficial for some or all involved parties.

To understand why actors choose conflict escalation and expansion, we have to think of domestic conflicts nested inside an international context. Models of intervention and civil war onset both imply that war is driven by a third party's or the rebels' wish to remake political order, and we should also consider what war expansion entails for the domestic government. Conflicts between three actors mean different stakes (Gartner and Siverson 1996, Werner 2000), depending on the level of conflict and participation. With civil wars, retaliation can mean increasing the stakes of a conflict. Rather than fighting for the status quo against the rebels and an intervener, the government forces the third party's territory or resources into the conflict by launching an interstate war. Without accounting for the domestic government's preferences

²Carson suggests that leaders "may feel trapped into escalating their involvement in a particular conflict to avoid damaging their reputation for support of partners and allies" (Carson 2016, p. 113).

over varying stakes, we cannot explain the variation in the internationalization of civil war, because the threat of retaliation conditions the decisions of both rebels and third parties.

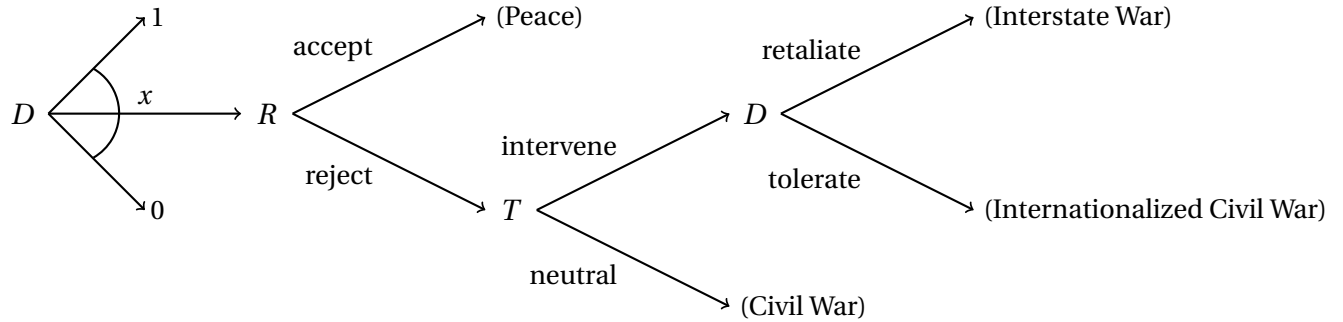
We have two parts of the explanation for why some civil wars become interstate wars. First, we have to consider the rebels' preferences, because they affect domestic bargaining and determine when fighting starts. Second, we have to consider the domestic government's preferences for war expansion, and how the threat of retaliation affects the rebels' and the intervener's subsequent decisions.

3 Modeling onset, intervention, and retaliation

In this section I describe a finite game of civil war onset in Country A, intervention, and war expansion with three actors: the domestic government D , a dissatisfied group R , and a third-party state T that may support R . First, I assume that the domestic government is uncertain about the third party's cost of intervening, but the rebels are fully informed. Second, the actors can fight over two sets of stakes; either they fight over a local set of stakes, or they fight over the local stakes plus an international set of stakes (combined, I refer to them as the total stakes). The local stakes entail control over Country, represented by $\pi \in (0, 1)$, and the total stakes include $1 - \pi$, which are the international stakes that T controls.³ D decides which set of stakes is being fought over by either retaliating against T , which prompts an interstate war, or tolerating intervention, which keeps the fighting contained to its own territory. Third, I assume that intervention increases the likelihood of rebel victory, but it also imposes some costs in the form of a loss of autonomy.

³An alternative choice would be to give each country their own parameter for their worth, but I use one parameter to capture the relative size of the local stakes to the international stakes without loss of generality.

Figure 1: Domestic bargaining, intervention, and expansion



The game starts with nature drawing T 's type, defined by its cost of intervening in a civil war in country A ($c_T > 0$). These costs can represent arms or troops sent across the border. I assume that D does not know c_T , so it does not know whether T will intervene.⁴ I also assume that T 's type is uniformly distributed, without loss of generality.

D is the only actor uncertain about the intervener's type.⁵ I make this assumption because opposition groups often communicate with third parties before the start of a civil war. They might ask for help, and a third party might offer support in exchange for influence in a new regime. For instance, the Palestine Liberation Organization had extensive political and military connections with other Arab countries before the start of the First Intifada. While rebels might not be perfectly informed about the intervener's war costs, they are typically better informed than the domestic government.

Once nature draws T 's type, D makes some take-it-or-leave-it offer, $x \in [0, 1]$, to R . The offer can be a power-sharing agreement or part of the territory of Country A. Because the two actors

⁴It might be quite costly for T to intervene because of internal problems unknown to other actors. In those settings, T has an incentive to keep this information private, since it might reveal weakness if intervention costs are high, which implies that a lower-cost T might lack a cheap or credible way to separate itself from a high-cost T .

⁵This assumption is different from the private information posited by Thyne, who argues that governments should be better informed than opposition groups "because interstate relations happen almost exclusively between the governments of states due to internationally recognized norms of sovereignty" (Thyne 2006, p. 942). Since my model focuses on rebel-sided interventions, the rebels should be better informed than the target.

are only bargaining over the local stakes, R gets $x\pi$ and D gets $(1-x)\pi$ in the event of a peaceful settlement.⁶ The value of the local stakes can depend on several factors. The American Civil War was valuable particularly to Great Britain because of its dependence on cotton industry in the South, which raised the prospects of intervention (Poast 2015). Other times, military concerns determine the value of a civil war. Pakistan intervened in Afghanistan because a friendly regime in Kabul would give it strategic depth in the conflict with India (Rubin 2002, pp. 247-248).

T 's payoff for peace is a function of what R accepts and T 's affinity for R ($b \in (0, 1)$). I distinguish between the two because third parties like some rebels more than others, and the value of these relationships depend on factors such as ethnicity, religion, and ideology. For instance, the Soviet Union supported various socialist movements, including the South-West Africa People's Organisation (SWAPO) fighting for Namibian independence from South Africa. We can think of b as representing some influence T achieves with R sharing power or territory, and so the better R does in bargaining or the more T likes R , the better off the third party is. The payoffs for peace are:

$$U_i(\text{Peace}) = \begin{cases} (1-x)\pi, & \text{if } i = D \\ x\pi, & \text{if } i = R \\ (1-\pi) + xb\pi, & \text{if } i = T \end{cases}$$

If the rebels reject, a civil war starts.⁷ T must then decide whether to intervene on the side of

⁶An alternative modeling choice would be to allow D to make an offer to T as well, in the hopes of buying off the third party and removing the threat of intervention. However, it is unlikely that a third party could credibly commit not to intervene once a civil war breaks out. Furthermore, it would not change why interstate war happens, because war expansion hinges on D 's willingness to retaliate once intervention has already taken place.

⁷I assume that fighting starts immediately, and there is no endogenous arming in the model. While arming can affect the outcome and duration of conflict, I treat the military strengths of the actors as exogenous, because the primary focus of the model is to explain when we interstate war occurs as opposed to internationalized civil war or

the rebels or stay out. If T stays out, D and R continue fighting over π . D 's chances of winning are based on the two sides' military capabilities ($m_D > 0$ and $m_R > 0$), defined as $p_{CW} = \frac{m_D}{m_D+m_R}$, with the complementary probability of rebel victory. Both sides pay some cost for fighting that is unique to each of them ($c_D > 0$ and $c_R > 0$). T 's payoff depends on R 's probability of winning and T 's affinity for the rebels, but it pays no costs. In the event of a local-only civil war, the actors' payoffs are:

$$U_i(\text{Civil War}) = \begin{cases} (p_{CW})\pi - c_D, & \text{if } i = D \\ (1 - p_{CW})\pi - c_R, & \text{if } i = R \\ (1 - \pi) + (1 - p_{CW})b\pi, & \text{if } i = T \end{cases}$$

If T intervenes, the level of intervention is a portion ($w \in (0, 1)$) of its military capabilities m_T . For instance, geography or other factors might put constraints on how much T can intervene in a given conflict. Following intervention, D must fight both R and T in its territory, reducing its chances of victory, such that $p_{ICW} = \frac{m_D}{m_D+m_R+wm_T}$. R is aided in its civil war effort commensurately, but T gains influence over the rebels when it intervenes, resulting in R losing autonomy ($a > 0$). Autonomy costs vary across conflicts. UNITA in Angola retained its organizational structure despite significant support from South Africa (Minter 1994, p. 31), while the Pakistani military dictated which Afghan rebels group received support in the fight against the Soviet Union (for numerous examples of groups losing autonomy, see: Salehyan (2010, p. 501)). A group's level of institutionalization or the degree of local support affect its autonomy costs, and the extent of these costs depends on the affinity between the two actors, so R pays

simply civil war. While existing models of asymmetric information with endogenous military strength change the relationships between the parameters, arming does not change why fighting breaks out. See: Slantchev (2005).

$\frac{a}{b}$ when intervention happens. For instance, when rebels and interveners share the same ideology or policy preferences, the latter is less likely to dominate the former in the event of military victory. While intervention improves R 's chances of winning, T must pay intervention costs (c_T), and its utility of victory is still a product of its affinity for the rebels. Once intervention has taken place, D must decide whether to retaliate against T . If it does not retaliate, the conflict continues as an internationalized civil war, and we get the following payoffs:

$$U_i(\text{Internationalized Civil War}) = \begin{cases} (p_{ICW})\pi - c_D, & \text{if } i = D \\ (1 - p_{ICW})\pi - c_R - \frac{a}{b}, & \text{if } i = R \\ (1 - \pi) + (1 - p_{ICW})b\pi - c_T, & \text{if } i = T \end{cases}$$

If D chooses to retaliate, the conflict expands, either into the third-party territory or some other object of interest, such as a client state of T . In effect, D raises the stakes of the fighting to include what T otherwise controls ($1 - \pi$), so that all the actors are fighting over the total stakes. D 's payoff is potentially greater since victory means defeating both adversaries. However, fighting two wars at once comes with an additional escalation cost ($e_D > 0$). T might have a particularly large reserve army or the ability to wage guerrilla warfare against D 's troops. Furthermore, because the conflict is now an interstate war, all of T 's resources are mobilized, so the domestic government must fight against the full military strength of the intervener, with $p_{IW} = \frac{m_D}{m_D + m_R + m_T}$.

War expansion affects the other two actors differently. For the rebels, interstate war is beneficial when compared to fighting an internationalized civil war. It does not pay any additional costs of fighting, because it is still fighting in Country A, and whatever escalatory capabilities

D has, those costs are borne by *T*. Furthermore, *R* gets the full military support of *T*. Thus, *R* may or may not prefer fighting alone to receiving support (with or without retaliation), but they always prefer an interstate war to fighting an internationalized civil war. For the third party, however, expansion may or may not be beneficial. *T* must pay some escalatory costs ($e_T > 0$) on top of the intervention costs, which represent what destruction the domestic government can cause in the intervener's territory or against its interests. For instance, *D* might be able to use proxy forces, such as rebel groups in *T*'s territory. I assume that *D* is fully informed about *T*'s escalation costs.

T might also benefit from fighting an interstate war rather than fighting an internationalized civil war. In addition to mobilizing its entire military against *D*, when *T* is fighting over the entire set of stakes, its utility for the local stakes is no longer moderated by the influence it would have in the event of rebel victory. This shift captures the changing nature of the conflict. By going from an internationalized civil war to an interstate war, the two states become the dominant actors, as *T* is no longer reliant on its relationship with *R* to make gains in Country A. We therefore get the following payoffs for the actors in the event of an interstate war:

$$U_i(\text{Interstate War}) = \begin{cases} p_{IW} - c_D - e_D, & \text{if } i = D \\ (1 - p_{IW}) - c_R - \frac{a}{b}, & \text{if } i = R \\ (1 - p_{IW}) - c_T - e_T, & \text{if } i = T \end{cases}$$

4 Analysis

The model produces four Perfect Bayesian Equilibria with a positive probability of war: one for interstate war, one for internationalized civil war, and two for civil war without intervention. In addition, there are four peaceful equilibria where the domestic government makes an offer to the rebels that they are sure to accept.⁸ Before discussing the war equilibria in detail, I will sketch the core characteristics shared by them all.

First, private information provides a mechanism for the breakdown of domestic bargaining. While D does not know T 's (continuous) type, it does know what R will accept with or without intervention. Therefore it only makes one of two offers in equilibrium: a large offer that buys off R for every type T , and a smaller offer that buys off R for some but not all types T . The latter is a risky move, as it carries some probability of war, but also means giving up less of the domestic pie.

Without private information, the only war outcome that occurs in equilibrium is interstate war. Bargaining breaks down under complete information because for some low levels of π , D is simply undeterrable and prefers fighting an interstate war to any deal R would accept. Under this assumption, war is a consumption good for D . D embarks on a war of conquest because T is constrained not to bargain with it, so it is a just-because explanation for interstate war. Furthermore, the complete information model does not produce any other types of war, so it cannot explain why some civil wars become interstate wars while others do not. I discuss this result at length in the appendix.

Second, D determines the stakes of the conflict, because it can retaliate against T or not if

⁸The peaceful equilibria exist when the rebels' autonomy costs are in an intermediary range.

intervention happens, and the credibility of D 's threat of retaliation in turn affects T 's and R 's choices over war. D prefers an interstate war over an internationalized civil war when $p_{IW} - c_D - e_D \geq (p_{ICW})\pi - c_D$, which can be rewritten as $\pi \leq \frac{p_{IW} - e_D}{p_{ICW}} = \pi_D$. The local stakes have to be small enough relative to the international stakes to make war expansion worth it to the domestic government, given the additional costs of fighting an interstate war.

Lemma 4.1 *When $\pi \leq \pi_D$, D either offers R $x_{IW} = \frac{(1-p_{IW})-\frac{a}{b}-c_R}{\pi}$ or $x_{CW} = 1 - p_{CW} - \frac{c_R}{\pi}$. If $x_{IW} \geq x_{CW}$, or $a \leq b((1 - p_{IW}) - \pi(1 - p_{CW})) = \bar{a}_R$, R prefers interstate war to civil war.*

Lemma 4.2 *When $\pi > \pi_D$, D either offers R $x_{ICW} = \frac{b\pi - b\pi p_{ICW} - a - bc_R}{b\pi}$ or x_{CW} . If $x_{ICW} \geq x_{CW}$, or $a \leq b\pi(p_{CW} - p_{ICW}) = \underline{a}_R$, R prefers internationalized civil war to civil war.*

Third, R decides whether it fights or not, which depends on whether T is intervening or not and whether R wants support. When the autonomy costs are low, the rebels prefer external support to fighting alone. It will accept a low offer, equivalent to what it gets in a civil war, when intervention will not occur, but reject otherwise. But when the autonomy costs are high, R prefers fighting alone. In that case, it will reject a low offer (equivalent to fighting an interstate or internationalized civil war) when T is *not* intervening.

Fourth, whether D risks war or not depends on the rebels' autonomy costs (a), and each war equilibrium has its own condition for D risking war. When the rebels prefer external support to fighting alone, lower autonomy costs induces D to risk war by making the large offer relatively more expensive, and vice-versa. Taken together, these characteristics produce the following proposition:

Proposition 1 *The model produces the following four Perfect Bayesian Equilibria with a positive*

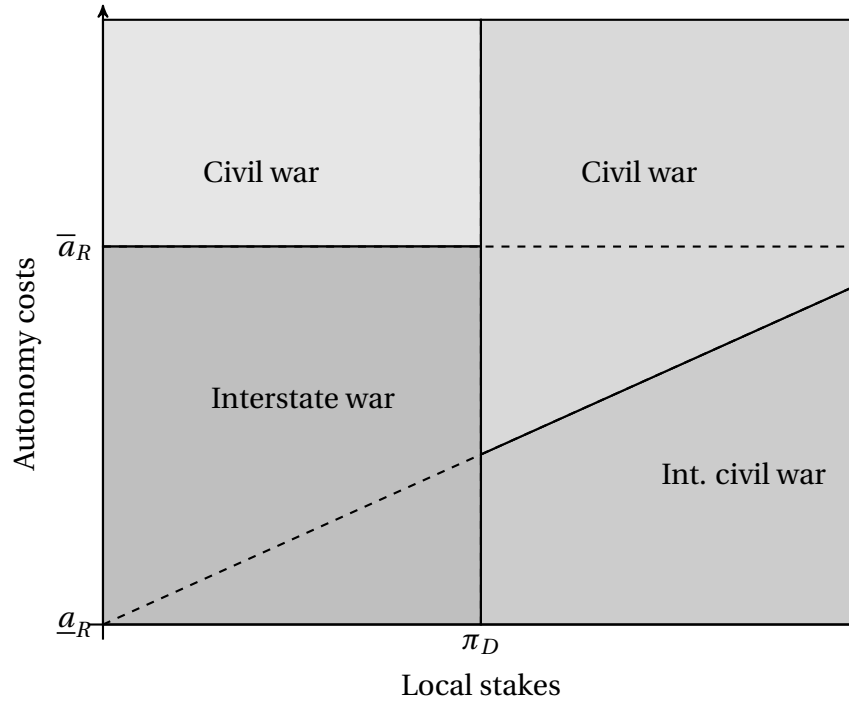
probability of war (D 's payoffs do not depend on T 's type, so updated beliefs at the final node are trivial and left for the appendix):

- **PBE1 (Interstate war):** When $\pi \leq \pi_D$ and $a \leq \min(\overline{a}_R, \overline{a}_D)$: D proposes x_{CW} , retaliates; R accepts iff $x \geq x_{CW}$ when $c_T^* > \hat{c}_T$, accepts iff $x > x_{IW}$ when $c_T^* \leq \hat{c}_T$, where $x_{CW} \leq x_{IW}$; T intervenes iff $c_T^* \leq \hat{c}_T$.
- **PBE2 (Internationalized civil war):** When $\pi > \pi_D$ and $a \leq \min(\underline{a}_R, \underline{a}_D)$: D proposes x_{CW} , tolerates intervention; R accepts iff $x \geq x_{CW}$ when $c_T^* > \hat{c}_T^*$, accepts iff $x > x_{ICW}$ when $c_T^* \leq \hat{c}_T^*$, where $x_{CW} \leq x_{ICW}$; T intervenes iff $c_T^* \leq \hat{c}_T^*$.
- **PBE3 (Civil war):** When $\pi < \pi_D$ and $a > \max(\overline{a}_R, \overline{a}_D^\dagger)$: D proposes x_{IW} , retaliates; R accepts iff x_{CW} when $c_T^* > \hat{c}_T$, accepts iff $x > x_{IW}$ when $c_T^* \leq \hat{c}_T$, where $x_{CW} > x_{IW}$; T intervenes iff $c_T^* \leq \hat{c}_T$.
- **PBE4 (Civil war):** When $\pi > \pi_D$ and $a > \max(\underline{a}_R, \underline{a}_D^\dagger)$: D proposes x_{ICW} , tolerates intervention; R accepts iff $x \geq x_{CW}$ when $c_T^* > \hat{c}_T^*$, accepts iff $x > x_{ICW}$ when $c_T^* \leq \hat{c}_T^*$, where $x_{CW} > x_{ICW}$; T intervenes iff $c_T^* \leq \hat{c}_T^*$.

The relative size of the local stakes (π) and the rebels' autonomy costs (a) determine which type of war occurs in equilibrium (**Figure 2**).⁹ When π is relatively low, D is willing to retaliate, because the raised stakes make up for the additional costs of fighting an interstate war. But as π increases, retaliation becomes less and less desirable to D , because there is less to gain by expanding the war. When $\pi > \pi_D$, D is not willing to fight an interstate war because of the added escalation costs and because T mobilizes its entire force, thus reducing D 's chances of winning.

⁹Regarding notation, overline indicates a cut-point where the actors are fighting over the total stakes, while underline indicates a cut-point where they are fighting over the local stakes. However, this does not imply that the cut-points for the former are necessarily higher than the latter cut-points.

Figure 2: The equilibrium space and possible types of war by the relative size of the local stakes (π) and the rebels' autonomy costs (a).



The size of the rebels' autonomy costs determines whether an international or local conflict starts. When a is sufficiently low ($a \leq \bar{a}_R$ and $a \leq \underline{a}_R$ for $\pi \leq \pi_D$ and $\pi > \pi_D$, respectively), R prefers assistance to fighting alone, and so they only reject a low offer from D when intervention is coming. But as a increases, R prefers fighting alone. If so, it only rejects a low offer from D when intervention is not coming, resulting in a local-only civil war.

4.1 Explaining war expansion

For interstate war to occur in equilibrium, the local stakes have to be sufficiently low for D to prefer retaliation to tolerating intervention. Furthermore, the rebels' autonomy costs have to be sufficiently low for them to prefer external support to fighting alone. Under these conditions, D makes one of two offers in equilibrium: a large offer x_{IW} , which R will accept for all types T

because it is the best it can do regardless of whether T intervenes or not; or a smaller offer x_{CW} , which R will accept if T is not a type that intervenes, but will reject if T is a type that intervenes. D therefore has to choose: make a small offer that carries a positive probability of interstate war, or buy off R with a costly offer.

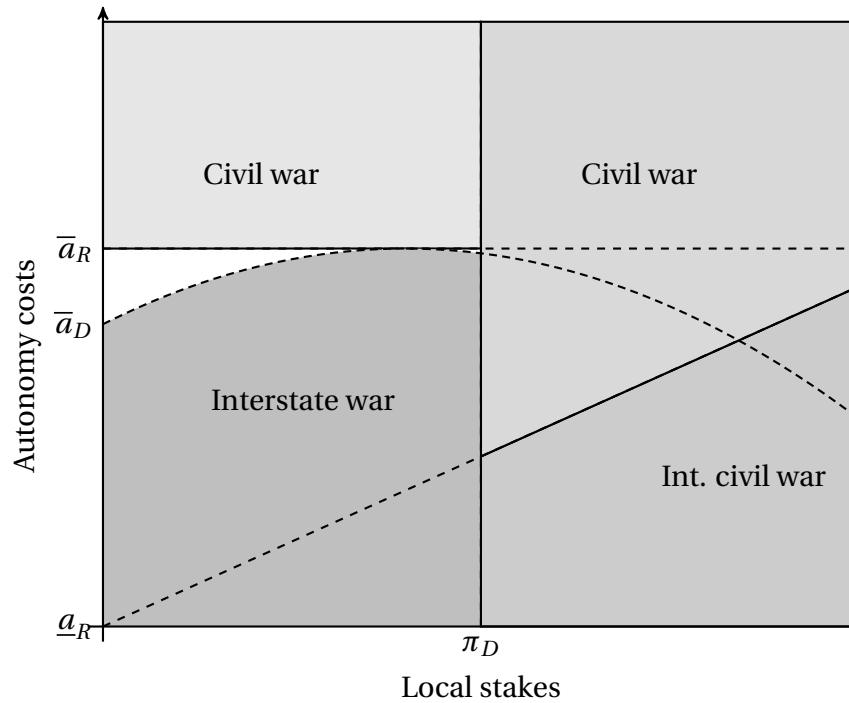
Because D does not know T 's type (c_T^*), its utility for risking war is a function of the likelihood that T will intervene. T is indifferent between fighting an interstate war and staying out when $(1 - p_{IW}) - c_T - e_T \geq (1 - \pi) + (1 - p_{CW})b\pi$, which we can rewrite as $\hat{c}_T = \pi(1 + b(p_{CW} - 1)) - e_T - p_{IW}$. Because T 's type is uniformly distributed, the probability of intervention is $\frac{\hat{c}_T}{\bar{c}_T}$ with the complementary of non-intervention being $\frac{\bar{c}_T - \hat{c}_T}{\bar{c}_T}$. Formally, D then risks interstate war when $a \leq \bar{a}_D$, so D is more likely to risk war the smaller R 's autonomy costs are. The reasoning is straightforward: as the rebels' autonomy costs decrease, so does D 's utility for making a large offer. It can no longer leverage R 's vulnerability to external domination to get a better deal domestically. So for decreasing values of a , the rebels become increasingly willing to accept assistance, and the domestic government becomes increasingly willing to risk interstate war.

Result 4.3 *Countries with low-autonomy cost rebels are more likely to experience interstate war than countries with high-autonomy cost rebels.*

While D 's decision to risk war is a function of the likelihood of intervention, D may or may not want T to intervene. As Figure 3 shows, \bar{a}_D is a concave function of π , which implies that for particularly low values of π , D prefers intervention to non-intervention. When π is particularly low, the gains from expanding are so large that D is unwilling to offer anything that R will accept.

Result 4.4 *When D has much to gain from war expansion, it wants T to intervene and is willing to risk interstate war by making a low offer to R .*

Figure 3: The equilibrium space with \bar{a}_D as the upper bound of R 's autonomy costs (a) for D risking interstate war.



Despite this, D never makes an offer to R in equilibrium that it knows will be rejected, because D is uncertain about T 's intervention costs. The reason is straightforward. While D might, under some circumstances, prefer an interstate war to offering x_{CW} or x_{IW} , it cannot guarantee T intervening. There will always be some probability T will sit out the conflict, and D prefers having R accept x_{CW} to fighting a civil war because fighting is costly, so it will never offer less than x_{CW} . Therefore, when the local stakes are particularly low, an otherwise undeterrable domestic government is deterred from trying to start an interstate war because the third party might *not* intervene.

Corollary 4.5 *When D has much to gain from war expansion, uncertainty over intervention induces peace.*

At some inflection point, D no longer prefers an interstate war to any offer R will accept.

Then D 's willingness to risk interstate war decreases in π , so D 's and T 's incentives diverge. As the local stakes increase relative to the international stakes, the third party becomes more willing to intervene, but the domestic government becomes less willing to risk civil war in the first place.

Corollary 4.6 *When the stakes of a potential civil war are sufficiently high, $\pi > \phi_1$, increases in the relative size of the local stakes make intervention and retaliation more likely, but the outbreak of civil war less likely.*

When the local stakes are relatively high ($\pi > \pi_D$) and the rebels' autonomy costs are low ($a \leq \min(\underline{a}_R, \underline{a}_D)$), there exists an internationalized civil war PBE, where D risks internationalized civil war by offering x_{CW} .¹⁰ The interstate war and internationalized civil war equilibria cannot exist simultaneously. Internationalized civil war occurs for higher values of π than interstate war, which implies that when the local stakes of a potential conflict increase (decrease), they make internationalized civil war more (less) likely while making interstate war less (more) likely.¹¹

Result 4.7 *Increases in the relative size of the local stakes make internationalized civil war more likely relative to interstate war, and vice-versa.*

The separation of the two PBE suggest that exogenous shocks to the relative size of the local stakes increase the risk of intervention while decreasing the risk of retaliation. One example of

¹⁰As with the interstate war PBE, D 's decision to risk internationalized civil war is a concave function of π , but the reason why is slightly different, as I discuss in the appendix.

¹¹Note that these are relative changes in likelihood. The likelihood of interstate war is not strictly decreasing in the size of π because at some point the stakes are so low that T would never intervene (lower bound of π), and therefore R would never reject a low offer. Similarly, D 's decision to risk interstate or internationalized civil war is a concave function of π .

this could be the discovery of oil reserves in D 's territory. While such a discovery would not impact the distribution of power immediately, it would affect the distribution of benefits between the two states.¹² D would then be less willing to fight an interstate war than before because the local stakes have become relatively more valuable, but this change would also make T more willing to intervene as it has more resources to gain.

4.2 Extension: Fighting without coalition benefits

A necessary condition for the interstate war PBE to exist is that the rebels' and the third party's incentives are sufficiently aligned. In the above model, the incentives for R and T to fight are interdependent because in the event of an interstate war, they fight in a coalition together against D . An alternative assumption could be that instead of fighting together, an interstate war becomes a free-for-all, where all three fight alone for their share of the larger stakes. Instead of fighting over the political order of one country, the actors are now remaking the political order of both countries. We can think of this reordering as warring parties carving out territory. With this change, however, interstate war cannot happen in equilibrium, because the size of π is never high enough to satisfy the third party while also low enough to make the rebels fight.¹³ Put differently, interstate war is too costly for the third party, while fighting a civil war is not expensive enough for the rebels to want to fight for the larger stakes.

Result 4.8 *When the rebels and the third party do not fight in a coalition together, interstate war does not happen in equilibrium because the rebels' ($\pi \leq \pi_R^*$) and the third party's threshold*

¹²Bell and Wolford (2015) show that oil discoveries have a lagged effect on the balance of power between political actors, and such future power shifts can cause the onset of war.

¹³As I show in the proofs, once military power no longer accumulates, the rebels' preference for fighting an interstate war is constrained for values of π .

($\pi \geq \pi_T^*$) for fighting cannot be met simultaneously ($\pi_R^* > \pi_T^*$).

4.3 Explaining civil war

The model also has implications for civil wars. There exists two PBE where uncertainty over rebel-sided intervention causes local-only civil war, and these cannot exist simultaneously with the interstate or internationalized civil war PBE. To understand why, we have to consider how uncertainty over intervention interacts with the rebels' endogenous preferences over external support.¹⁴ While R cannot directly prevent T from intervening, R 's preferences determine the relative size of D 's offers in equilibrium. When $a > \bar{a}_R$ (and $\pi \leq \pi_D$), R prefers fighting alone to fighting alongside T . x_{CW} is the safe offer that buys off R for every type T , while x_{IW} is the smaller, risky offer. Rebels with high autonomy costs will accept x_{IW} if intervention is coming, thus avoiding an interstate war, but reject the same offer if intervention is not coming, prompting a local-only civil war. The model therefore offers an international and informational explanation for civil war.

When $a > \bar{a}_R$, higher autonomy costs also make D more likely to risk civil war, because it increases the utility of R accepting x_{IW} , and thus risking rejection. Uncertain third-party intervention makes civil war more likely in countries where rebel groups are vulnerable to being dominated by external supporters because rebels are skeptical of outside help and this incentivizes the government to low-ball them during bargaining. This equilibrium might explain why some poorly organized or supported opposition groups start fighting.

Result 4.9 *When the rebels have high autonomy costs, the domestic government risks civil war if it believes intervention is sufficiently likely, but the rebels reject and a civil war breaks out if the*

¹⁴I focus here on the PBE where $\pi \leq \pi_D$, but another PBE exists for $\pi > \pi_D$, which is governed by similar logic.

third party is not intervening.

5 Empirical implications

The model shows that the onset of civil war is contingent on expectations about intervention and retaliation, because the breakdown of domestic bargaining depends on what happens after the fighting begins. In this section I focus on two decisions to predict the onset of civil war (with or without subsequent intervention and retaliation): *D*'s decision to risk war with a low offer; and *T*'s decision to intervene or not, because *R* rejects or accepts based on its knowledge of *T*'s type.¹⁵ These decisions are interdependent and produce some unexpected results, because *D*'s willingness to risk war is a non-linear function of *T*'s probability of intervening. To find the probability of war, I therefore calculate the comparative statics of the probabilities of *D* making a low offer and *R* rejecting one.

While the relative size of the local stakes is not a consistent predictor of civil war onset, as discussed above, the rebels' autonomy costs consistently predict both the onset of war and the types of war we are likely to see in equilibrium. Because *D*'s willingness to risk war depends on whether it can exploit rebel vulnerability to third-party domination and get a better domestic bargain, its incentives for risking war follow *R*'s preferences over external support. When the autonomy costs are low, the rebels want external support, but the domestic government cannot use rebel vulnerability to extract a better peaceful bargain. Interstate and internationalized civil war are therefore most likely when the rebels' autonomy costs are low. High autonomy costs, on the other hand, make the rebels want to fight alone and the domestic government more willing

¹⁵Because intervention and retaliation follow the onset of a civil war, when I refer to the probability of war, I mean the likelihood of civil war breaking out following a low offer from the domestic government, regardless of what happens afterwards.

to risk civil war because they make the low offer relatively larger. Therefore, the risk of civil war onset is a convex function of a , and whether we see a local-only or international conflict depend on whether the autonomy costs are high or low.

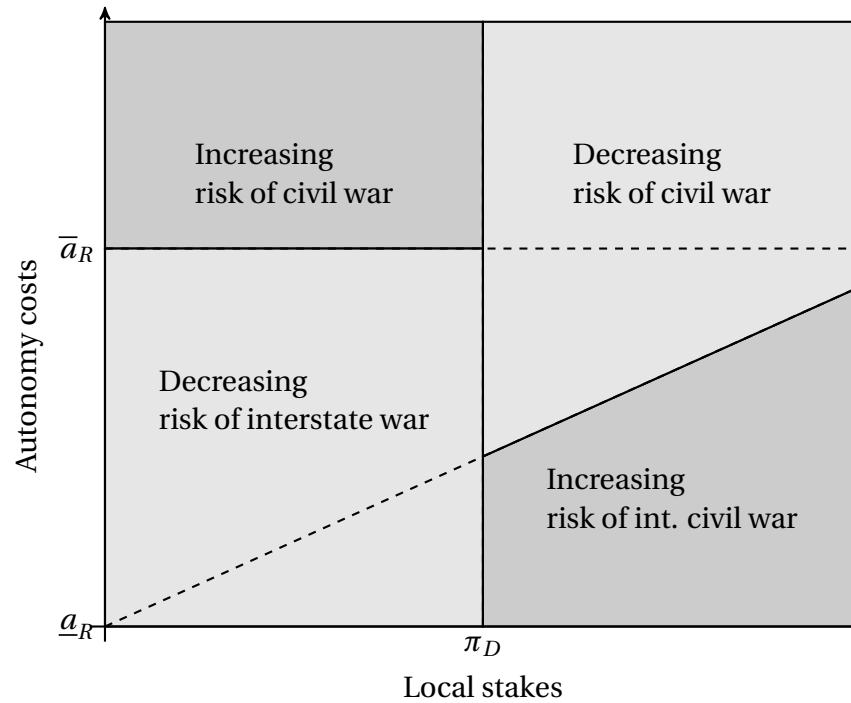
Result 5.1 *Smaller rebel autonomy costs make interstate war and internationalized civil war more likely, while higher rebel autonomy costs make local-only civil war more likely.*

Other parameters affect the decision to intervene. Contrary to existing studies (e.g. Gleditsch 2007, p. 298), the relationship between the rebels and the third party is not a consistent predictor of intervention. When $\pi \leq \pi_D$, stronger affinity makes interstate war less likely, but civil war more likely (Figure 4). The intuition is as follows: the less the third party likes the rebels, the larger the marginal benefit of fighting over a large set of stakes than staying out and holding some influence in the event of a rebel victory. Therefore, stronger affinity makes the third party less likely to intervene.¹⁶ One way of interpreting this result is that the domestic government's ability to raise the stakes drives a wedge between the rebels and the third party by putting the latter's territory at risk. The expectations are reversed when $\pi > \pi_D$. Greater affinity makes internationalized civil war more likely, but civil war less likely. Because fighting is exclusively in Country A's territory, T only cares about whether R wins the local conflict. Therefore, the third party's and rebels' goals align as affinity increases. However, when the autonomy costs are high, their goals diverge.

Result 5.2 *If a civil war breaks out, higher affinity between a third party and rebels makes internationalized civil war more likely, but interstate less likely.*

¹⁶When $a > \bar{a}_R$, stronger affinity makes civil war more likely, because they prefer fighting alone.

Figure 4: T 's affinity (b) for R as a predictor of war, conditional on a low offer, depends on the size of the local stakes (π) and R 's autonomy costs (a).



The distribution of power is important for predicting the onset of war, because it determines the likelihood of winning. For T , the willingness to intervene is strictly increasing in the probability of D winning in a civil war against R . However, it is strictly decreasing in the probability of D winning either an internationalized civil war or an interstate war. The role of the third party in tipping the distribution of power is key to understanding these results. If the rebels are too weak, sitting out the conflict becomes untenable. But the third party also wants to win, because otherwise intervening is potentially disastrous.

Looking at the role of rebel strength, I find some surprising results. When $\pi > \pi_D$, weaker (stronger) rebels make T more (less) likely to intervene, because the third party wants rebel victory, but is better off sitting out the conflict if the rebels can win on their own. When $a > \underline{a}_R$, R does not want external support, and only fights when intervention is not coming. Therefore,

internationalized civil war is more likely when the rebels are militarily weak but have low autonomy costs, and civil war is more likely when the rebels are strong but have high autonomy costs. Intuitively, these results show that the supply-and-demand dynamic of rebel-sided intervention depends both on the costs and benefits of external support.

When $\pi \leq \pi_D$, T has to weigh fighting an interstate war against sitting out the conflict and hoping for the best. T 's willingness to fight with stronger rebels depend on how much it values a civil war victory. When π or b are sufficiently high ($b > \frac{(m_D+m_R)^2}{\pi(m_D+m_R+m_T)^2}$), the value of a civil war victory is relatively high compared to fighting an interstate war. T becomes less willing to intervene as the rebels grow stronger, because T would rather R fight alone for the valuable local conflict than suffer the costs of a interstate war with D . But when the value of a civil war victory is relatively low, T wants to intervene on the side of increasingly strong rebels because they are worth relatively more in an interstate war than in a low-value civil war. We therefore see interstate war is increasingly likely when the rebels are strong and not easily dominated by the third party ($a > \bar{a}_R$), but they do not have too strong an affinity (b) for each other.

These predictions have implications for existing research. For instance, Salehyan et al. (2011, p. 711) argue that medium-strength rebels are more likely to get external support. By incorporating the threat of retaliation, I show that third parties do not strictly prefer supporting stronger rebels. They want to help rebels, but only if necessary. Furthermore, by relaxing the assumption that rebels prefer external support to fighting alone, I show how varying stakes affect the alignment of rebel and third-party preferences, which helps predict both the onset of civil war and intervention.

The results also imply selection bias in our observational data. Civil war might not break out because the opposition has no interest in picking up arms, or because the government has

successfully deterred a third party from intervening and the opposition prefers fighting an interstate war to fighting over the local stakes. Similarly, civil war might break out, but without intervention, for at least two reasons: the third party might simply not have an interest in the conflict; or the rebels prefer fighting on their own and the third party is successfully deterred from intervening. Thus, modeling dyadic relations alone does not capture the strategic interaction.

6 Cases of war expansion

I now turn to cases of expansion and non-expansion to illustrate what this strategic interaction looks like in practice. The relative size of the local stakes (π) plays a crucial part in determining the actors' preferences, and in particular when we get interstate war and when the domestic government tolerates intervention. During the American Civil War, Great Britain considered intervening on the side of the Confederacy. It was militarily stronger than the United States, particularly with its large navy, but it remained neutral in large part because intervention would have prompted an interstate war.¹⁷ While the British government was ultimately willing to go to war with the United States, they recognized that Canada was particularly vulnerable to a U.S. invasion and that escalation would entail war at sea, potentially even against British colonies (Bourne 1961, pp. 621-8). My model suggests that we have to consider what it already controlled and whether it was willing to risk it ($1 - \pi$). In this particular case, the United States did not threaten Britain's home territory, but because it could raise the stakes of the conflict, it deterred intervention.

¹⁷In fall 1861, Prime Minister Palmerston declared that British policy should be to "keep quite clear of the conflict" to avoid war (Carroll 2012, p. 94).

Escalation costs also help explain war expansion. During the U.S. occupation of Iraq, Iran armed and trained Shiite militias. Both the Bush and Obama administrations considered retaliating at several points, but always decided against striking Iran directly, because of the escalation costs Iran could impose.¹⁸ The restraining effect of escalation costs become apparent when we compare the Iraq case to the situation the United States found itself during the Vietnam War. There, the United States was also fighting a counter-insurgency, with insurgent forces using both Laos and Cambodia as sanctuaries from which they launched attacks. While President Richard Nixon was hesitant about expanding the conflict, several rebel offensives starting in February 1969 prompted Nixon to approve a military response against Cambodia, including extensive bombing campaigns and an invasion.¹⁹ One explanation for the difference in these two cases, and supported by the model, is that Cambodia, unlike Iran, did not have the ability to impose significant escalation costs on the United States if it retaliated.²⁰

In some cases, both the relative size of the local stakes and escalation costs play a significant role in the expansion of civil war. Similar to the United States in Iraq, South Africa in the 1970s and 1980s enjoyed military superiority relative to its neighbors, while fighting a rebellion. Its response to other African countries' support for the African National Congress (ANC), however, was drastically different. South Africa engaged in a wide range of military operations against Angola and Mozambique, to compel them to stop supporting the ANC. It did so because the rise of African nationalism threatened the apartheid government, so it had much to gain from stemming the revolutionary tide in Southern Africa. Furthermore, South Africa re-

¹⁸For an account of the the Bush administration's deliberations see: (Filkins 2013).

¹⁹For details on Johnson's decision-making, see Herring (2002, ch. 6). For discussions of Nixon's change of course, starting with the "Madman theory," see: Dallek (2007, pp. 104-109).

²⁰Isaacs et al. (1987, p. 89) suggest that the Cambodian King did not have extensive control of the country's territory and could not evict the communist forces.

taliated against the two countries because it could delegate fighting to groups like UNITA and RENAMO, so its escalation costs were moderated. Other countries supported the ANC too, but the white nationalist government saw Angola and Mozambique as good targets to coerce other states too, including members of the British Commonwealth, without additional risks (Minter 1994, pp. 117-120).

Sometimes a country at war experiences significant changes in intervention or retaliation. If such shifts are due to exogenous shocks, we can use them to evaluate the model.²¹ This is useful for parameters such as π that are not easily compared across different conflicts. Temporal variation, if exogenous, allows us to partition one conflict into multiple cases to be compared. The Afghan Civil War, which started in 1978 as a peasant rebellion (Gibbs 1986), suffered at least one major shock: the Soviet invasion in December 1979.²² Before the invasion, various neighbors, including Pakistan and Iran, supported the rebels, but there is little evidence of the Kabul government conducting retaliation against them. Following the Soviet invasion, we would expect to see less intervention, if the distribution of power is a key determinant, and retaliation if intervention happened. Instead, the invasion prompted the United States, Pakistan, and Saudi Arabia to form an intervention coalition that resulted in billions of dollars in arms and money

²¹Spaniel and Poznansky (2018) show how one can leverage exogenous shocks to parameters in a single case to evaluate a formal model.

²²Soviet documents indicate that the decision to invade was quick and cloaked in secrecy. For details, see: "Alexander Lyakhovskiy's Account of the Decision of the CC CPSU Decision to Send Troops to Afghanistan," December, 1979, History and Public Policy Program Digital Archive, A. A. Lyakhovskiy's "Plamya Afgana" (The Tragedy and Valor of Afghan) (Moscow, 1995), p. 109-112. Translated by Svetlana Savranskaya for the National Security Archive. <http://digitalarchive.wilsoncenter.org/document/115531>. On U.S. expectations and surprise, see Coll (2004, pp. 44-50). Evidence suggest that political developments in Kabul triggered the hasty invasion. The Politburo decided to remove Afghan President Hafizulla Amin because he weakened the central government through extensive purges, and Soviet leaders feared he was turning to the West. See: "Personal memorandum Andropov to Brezhnev," December 01, 1979, History and Public Policy Program Digital Archive, APRE, from notes taken by A. F. Dobrynin and provided to Norwegian Nobel Institute; provided to CWIHP by Odd Arne Westad, Director of Research, Nobel Institute; trans. for CWIHP by Daniel Rozas. <http://digitalarchive.wilsoncenter.org/document/113254>.

flooding into the conflict over the next decade or so, despite concerns about Soviet retaliation against Pakistan.²³ Furthermore, there was only limited retaliation, which included the shelling of Pakistani border posts and covert operations inside Pakistan.²⁴

Why was a stronger domestic government unable to deter intervention? My model suggests that the Soviet invasion increased the local stakes relative to the international stakes. With the Soviets in charge, intervention became more attractive to third parties, despite increased escalation costs from Soviet military attacks against Pakistan. Furthermore, this increase in π commensurately reduced the benefit of defeating the interveners, especially Pakistan. This shows that government-sided intervention can actually encourage rebellion and rebel-sided intervention, while reducing the risk of war expansion.

These contrasting cases illustrate the utility of the theory. The relative size of the local stakes and the escalation costs associated with retaliation provide a more intuitive explanation for war expansion than the military balance of power between the actors. We should understand the decision to expand a conflict as weighing the potential benefits against the potential costs, and these parameters are not strictly defined by the characteristics of the civil war.

²³Despite initial concerns about the Mujahideen's chances of winning, the Reagan administration eventually decided to escalate its involvement in the conflict. Primary documents from the period suggest that the White House increasingly came to see the Kremlin as weak on Afghanistan and concerned about the war's effect on efforts to renew detente. See: Memo, C. Hill to Robert C. McFarlane, November 29, 1983, folder "Soviet Project," RAC box 14, Donald Fortier Subject File, Ronald Reagan Library; Memo, Herbert E. Meyer to William J. Casey, June 21, 1984, folder "Soviet Union - US Policy Toward the Soviet Policy," RAC box 15, Donald Fortier Subject File, Ronald Reagan Library.

²⁴Early discussions of cross-border intimidation can be found in: "An Intelligence Assessment, July 1982," 1982. "Pakistan: Tough Choices on Afghanistan," NESA 82-10366. Central Intelligence Agency Electronic Reading Room. http://www.foia.cia.gov/sites/default/files/document_conversions/89801/DOC_0000534961.pdf; "Special National Intelligence Assessment, 14 August 1984," 1982. "Soviet Policy Toward the United States in 1984," SNIE 11-9-84. Central Intelligence Agency Electronic Reading Room. https://www.cia.gov/library/readingroom/docs/DOC_0000518055.pdf. For more information about Afghan and Soviet covert operations and support for rebels in Pakistan, see: (Andrew and Mitrokhin 2005, pp. 355-67).

7 Conclusion

This paper presented an asymmetric information model of civil war onset, intervention, and retaliation with varying stakes for fighting to explain why some civil wars expand while others do not. I found that private information about intervention explains the breakdown of domestic bargaining, but the type of war that follows depends on how much there is to gain from war expansion and the rebels' preferences over external support.

Some of the key results are:

- Domestic governments risk interstate war when the local stakes are small relative to the international stakes and the rebels' autonomy costs are low.
- For interstate war to occur, the rebels' and the third party's incentives to fight have to be sufficiently aligned.
- Higher local stakes make internationalized civil war more likely relative to interstate war, and vice-versa.
- Civil wars without intervention are most likely in countries where the rebels have high autonomy costs.

This nested model of conflict helps explain several cases of expansion and non-expansion, and how the costs and benefits of war expansion affect decision-making. Furthermore, if we extend the logic of the model, we can see how exogenous shocks to a domestic conflict can have unanticipated effects. By raising the local stakes in Afghanistan, the 1979 Soviet invasion both made rebel-sided intervention more appealing and the threat of retaliation less credible.

Today, we observe a similar dynamic in Syria, where regime supporters, such as Russia and Iran, have encouraged external support for rebels.

Empirical work suggests that treating interstate and intrastate wars separately is analytically problematic (Cunningham and Lemke 2013, p. 617), and my model provides a link between the two. For instance, my model offers an international and information explanation for local-only civil war. Furthermore, it shows how uncertainty can work in unexpected ways. When war expansion is highly attractive, uncertainty actually induces peace when it otherwise would not under complete information, because there is always some positive possibility that the third party will not intervene.

Another insight provided by the model is that there is no consistent relationship between many common predictors of civil war and the onset of fighting. I show that the effect of rebel-intervener ties on the probability of war depends on the stakes and the rebels' autonomy costs. These results imply that there is selection bias in the observational data we use, and failing to account for the strategic interaction may lead to biased estimates when predicting conflict outcomes.

Future research should focus on the specific characteristics of expansion. I assumed that escalation means interstate war, but retaliation might be of less severity. Variation in expansion should affect outcomes of interest, such as duration. Sudden expansion might have different effects on civil war termination than gradual escalation, but the choices of intervention strategy and retaliation can interact in ways not captured by my model. The civil wars in Afghanistan and Syria show how strategies change over time, in response to both changes on the ground and external factors.

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Appendix for "Intervention, War Expansion, and the International Sources of Civil War"

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1 Appendix

Proposition 1 *The model produces the following four Perfect Bayesian Equilibria with a positive probability of war. D's payoffs do not depend on T's type, so updated beliefs at the final node are trivial:*

- **PBE1 (Interstate war):** *When $\pi \leq \pi_D$ and $a \leq \min(\bar{a}_R, \bar{a}_D)$: D proposes x_{CW} , retaliates; R accepts iff $x \geq x_{CW}$ when $c_T^* > \hat{c}_T$, accepts iff $x > x_{IW}$ when $c_T^* \leq \hat{c}_T$, where $x_{CW} \leq x_{IW}$; T intervenes iff $c_T^* \leq \hat{c}_T$.*
- **PBE2 (Internationalized civil war):** *When $\pi > \pi_D$ and $a \leq \min(\underline{a}_R, \underline{a}_D)$: D proposes x_{CW} , tolerates intervention; R accepts iff $x \geq x_{CW}$ when $c_T^* > \hat{c}_T^*$, accepts iff $x > x_{ICW}$ when $c_T^* \leq \hat{c}_T^*$, where $x_{CW} \leq x_{ICW}$; T intervenes iff $c_T^* \leq \hat{c}_T^*$.*
- **PBE3 (Civil war):** *When $\pi < \pi_D$ and $a > \max(\bar{a}_R, \bar{a}_D^\dagger)$: D proposes x_{IW} , retaliates; R accepts iff x_{CW} when $c_T^* > \hat{c}_T$, accepts iff $x > x_{IW}$ when $c_T^* \leq \hat{c}_T$, where $x_{CW} > x_{IW}$; T inter-*

venes iff $c_T^* \leq \hat{c}_T$.

- **PBE4 (Civil war):** When $\pi > \pi_D$ and $a > \max(\underline{a}_R, \underline{a}_D^\dagger)$: D proposes x_{ICW} , tolerates intervention; R accepts iff $x \geq x_{CW}$ when $c_T^* > \hat{c}_T^\bullet$, accepts iff $x > x_{ICW}$ when $c_T^* \leq \hat{c}_T^\bullet$, where $x_{CW} > x_{ICW}$; T intervenes iff $c_T^* \leq \hat{c}_T^\bullet$.

Because D is uncertain about T 's cost of intervention, the appropriate solution concept for the model is Perfect Bayesian Equilibria. But because D 's decision to retaliate or not defines the outside options for R and T , I start solving the model with backwards induction.

1.1 Interstate war

Interstate war occurs in equilibrium when D prefers retaliating to tolerating intervention and D makes an offer to R that R rejects when T is intervening. D prefers retaliation to tolerating intervention when $p_{IW} - c_D - e_D \geq (p_{ICW})\pi - c_D$, or $\pi \leq \frac{p_{IW} - e_D}{p_{ICW}} = \pi_D$. This constraint holds for lower values of D 's escalation costs (e_D).

Though T is of a continuous type, R only cares about whether intervention happens or not. If $\pi \leq \pi_D$, R either fights in a civil war alone or an interstate war. When intervention is coming, R gets $(1 - p_{IW}) - c_R - \frac{a}{b}$, so it will not accept anything less than $x_{IW} = \frac{(1 - p_{IW}) - \frac{a}{b} - c_R}{\pi}$. When intervention is not coming, R gets $(1 - p_{CW})\pi - c_R$ fighting a civil war alone, so R will not accept anything less than $x_{CW} = 1 - p_{CW} - \frac{c_R}{\pi}$.

R will reject an offer x_{CW} when T is intervening and R prefers fighting with support to fighting alone. The latter is true when $x_{IW} \geq x_{CW}$, or $a \leq b((1 - p_{IW}) - \pi(1 - p_{CW})) = \bar{a}_R$.¹ If so, R will only accept x_{CW} when intervention is not coming, but will always accept x_{IW} , because it satisfies R for all types T .

While D is uncertain of T 's type, it knows R 's decision rules, so it only makes one of two offers in equilibrium: x_{IW} or x_{CW} . Offering $x_{CW} < x^* < x_{IW}$ is inefficient, because it does not satisfy R for more types T and offering less than x_{CW} provokes war with certainty (see below). Offering more than x_{IW} is inefficient. D makes the risky offer based on the probability of T intervening. While D does not know T 's type, it knows that T is indifferent at cut point $\hat{c}_T = \pi(1 + b(p_{CW} - 1)) - e_T - p_{IW}$, and because the types are uniformly distributed, the probability of intervention is $\frac{\hat{c}_T}{\bar{c}_T}$ with the complementary of non-intervention being $\frac{\bar{c}_T - \hat{c}_T}{\bar{c}_T}$. Thus, D risks war with a small offer when:

$$\frac{\hat{c}_T}{\bar{c}_T} * (p_{IW} - c_D - e_D) + \frac{(\bar{c}_T - \hat{c}_T)}{\bar{c}_T} * ((1 - x_{CW})\pi) \geq (1 - x_{IW})\pi, \quad (1)$$

which simplifies to $a \leq -b(\pi - 1 - \pi p_{CW} + p_{IW} + \frac{\pi p_{CW} - p_{IW} + c_D + c_R + e_D}{\bar{c}_T}(\pi - b\pi + b\pi p_{CW} - p_{IW} - e_T)) = \bar{a}_D$.

This condition implies that risking war becomes increasingly attractive the smaller R 's autonomy costs become because it makes the larger offer less attractive relative to risking war with a smaller offer.

I solve D 's decision to risk interstate war for a , because the probability of T intervening is not a linear predictor of D 's choice. The endogenous stakes explain why. While T 's preference for intervening is strictly increasing in π , D 's preference for risking war can be increasing or decreasing in π .²

Lemma 1.1 \bar{a}_D is a concave function of π , where the constraint holds for increasing values of a as

$$\pi \text{ increases until the inflection point } \phi_1 = \frac{(p_{CW} - 1)\bar{c}_T - b(p_{CW} - 1)(c_R + e_D) + (b(-p_{CW}) + b - 1)c_D + p_{IW}(b(p_{CW} - 1) + p_{CW} + 1)}{2p_{CW}(b(p_{CW} - 1) + 1)} + \frac{p_{CW}e_T - c_R - e_D}{2p_{CW}(b(p_{CW} - 1) + 1)}.$$

D will never offer anything less than x_{CW} because it will never knowingly provoke war. When

D offers x_{CW} , which is the smaller offer, interstate war occurs with some probability while R accepts with complementary probability. If it offers less than that, interstate war happens with the same probability, but instead of R accepting with complementary probability, civil war breaks out. Therefore, provoking war in equilibrium would imply:

$$\frac{\hat{c}_T (p_{IW} - c_D - e_D)}{\bar{c}_T} + \frac{(\bar{c}_T - \hat{c}_T) ((1 - x_{CW})\pi)}{\bar{c}_T} < \frac{\hat{c}_T (p_{IW} - c_D - e_D)}{\bar{c}_T} + \frac{(\bar{c}_T - \hat{c}_T) ((p_{CW})\pi - c_D)}{\bar{c}_T}, \quad (2)$$

which can be simplified as $(1 - x_{CW})\pi \leq (p_{CW})\pi - c_D$, or $(p_{CW})\pi + c_R \leq (p_{CW})\pi - c_D$, which is by assumption never true. Once D has made the low offer, R rejects if T is intervening. If so, D updates its beliefs accordingly, but this is trivial because T 's type is irrelevant to D 's payoffs.

Lastly, interstate war can occur in equilibrium, because there is some combination of parameter values where D wants to retaliate while T is also willing to intervene and fight an interstate war. T prefers fighting an interstate war to staying neutral when $(1 - p_{IW}) - c_T - e_T \geq (1 - \pi) + (1 - p_{CW})b\pi$, which can be simplified as $\pi \geq \frac{p_{IW} + c_T + e_T}{1 + b(p_{CW} - 1)} = \bar{\pi}_T$. This constrain is more likely to hold the lower T 's costs of fighting (c_T and e_T) are and the lower its affinity for R . When $\pi_D \geq \pi \geq \bar{\pi}_T$, D and T are both willing to fight over the larger stakes and fight an interstate war. Because the lower and upper bounds of π do not share c_T , e_T , and c_D , the inequality holds when one or more of these parameters are sufficiently low.

1.2 Internationalized civil war

Internationalized civil war occurs in equilibrium when D prefers tolerating intervention to retaliation and makes an offer to R that R rejects if T is intervening. The PBE holds for increas-

ingly high values of π . When $\pi > \pi_D$, D prefers tolerating intervention to starting an interstate war. If so, D will either offer R x_{CW} or the minimum the rebels will get fighting an internationalized civil war, $\pi x = (1 - p_{ICW})\pi - \frac{a}{b} - c_R$, which simplifies to $x_{ICW} = \frac{b\pi - b\pi p_{ICW} - a - bc_R}{b\pi}$. For internationalized civil war to occur, $x_{ICW} \geq x_{CW}$, or $a \leq b\pi(p_{CW} - p_{ICW}) = \underline{a}_R$. Note here that this constraint holds for higher values of π . As the local stakes become larger, the autonomy costs become a smaller portion of those stakes, so R increasingly prefers assistance. Therefore, non-retaliation, intervention, and rebels preferring assistance become increasingly likely as π increases.

D decides which offer to make based on the probability of intervention. T is indifferent when $(1 - \pi) + (1 - p_{ICW})b\pi - c_T = (1 - \pi) + (1 - p_{CW})b\pi$, which can be rewritten in terms of c_T as $\hat{c}_T = b\pi(p_{CW} - p_{ICW})$. D risks internationalized civil war when:

$$\frac{\hat{c}_T^*}{\bar{c}_T} * ((p_{ICW})\pi - c_D) + \frac{(\bar{c}_T - \hat{c}_T^*)}{\bar{c}_T} * ((1 - x_{CW})\pi) \geq (1 - x_{ICW})\pi, \quad (3)$$

which simplifies to $a \leq -\frac{b\pi(p_{CW} - p_{ICW})(b(c_D + c_R + \pi p_{CW} - \pi p_{ICW}) - \bar{c}_T)}{\bar{c}_T} = \underline{a}_D$. As with the interstate PBE, I solve for a because the cut-point for risking internationalized civil war is a concave function of π .³

Lemma 1.2 \underline{a}_D is a concave function of π , where the constraint holds for increasing values of a as π increases until the inflection point $\phi_2 = \frac{\bar{c}_T - b(c_D + c_R)}{b(p_{CW} - p_{ICW})}$.

For the PBE to exist then, $a < \min(\underline{a}_D, \underline{a}_R)$ has to be true. As with the above equilibria, D will not knowingly provoke a war because it prefers R accepting x_{ICW} to fighting an internationalized civil war.

For internationalized civil war to occur in equilibrium, there has to be some range of parameter values where T intervenes and D tolerates intervention. T prefers fighting an internationalized civil war to staying out when $(1 - \pi) + (1 - p_{ICW})b\pi - c_T \geq (1 - \pi) + (1 - p_{CW})b\pi$, which I rewrite as $\pi \geq \frac{c_T}{bp_{CW} - bp_{ICW}} = \underline{\pi}_T$. As such, π has to be sufficiently large.

1.3 Civil war

There exists two PBE that result in local-only civil wars. When the rebels' autonomy costs are high, they prefer fighting alone to receiving assistance, and so they will accept a low offer when intervention is coming, but reject when it is not coming. When $\pi \leq \pi_D$, D will either offer x_{CW} or x_{IW} . If $x_{IW} < x_{CW}$, which simplifies to $a > b((1 - p_{IW}) - \pi(1 - p_{CW})) = \bar{a}_R$, R prefers fighting a civil war alone to fighting an interstate war with T . Therefore, R will reject the smaller offer x_{IW} if intervention is not coming, but accept it if intervention is coming. Because x_{CW} is its best outcome fighting, it will always accept this larger offer.

Because the risk of R rejecting the smaller offer is inversely proportionate to the likelihood of T intervening, D makes a low offer when:

$$\frac{\hat{c}_T((1 - x_{IW})\pi)}{\bar{c}_T} + \frac{(\bar{c}_T - \hat{c}_T)((p_{CW})\pi - c_D)}{\bar{c}_T} \geq (1 - x_{CW})\pi, \quad (4)$$

which simplifies to $a \geq b\left(1 - p_{IW} + (p_{CW} - 1)\pi - \frac{\bar{c}_T(c_D + c_R)}{(b - bp_{CW} - 1)\pi + p_{IW} + e_T} - c_D - c_R\right) = \bar{a}_D^\dagger$. As above, D never purposefully provokes war because it by assumption prefers R accepting x_{CW} to fighting a civil war. Furthermore, D 's incentives for risking war follow R 's preferences over external support, so that this equilibrium holds when $a \geq \max(\bar{a}_D^\dagger, \bar{a}_R)$. Regarding D 's willingness to risk civil war and the probability of intervention, \bar{a}_D^\dagger is a strictly decreasing function of π . This im-

plies that as T becomes increasingly likely to intervene, D is more likely to make a low offer because R is more likely to accept it.

When $\pi > \pi_D$ and D , there exists another PBE where D risks local-only civil war by offering x_{ICW} . The logic is similar to the previous PBE. When $x_{ICW} < x_{CW}$, or $a > b\pi(p_{CW} - p_{ICW}) = \underline{a}_R$, R rejects the low offer when T is not intervening because it can do better fighting a civil war. D risks war when the following inequality holds:

$$\frac{\hat{c}_T^*((1 - x_{IW})\pi)}{\bar{c}_T} + \frac{(\bar{c}_T - \hat{c}_T^*)((p_{CW})\pi - c_D)}{\bar{c}_T} \geq (1 - x_{ICW})\pi, \quad (5)$$

which simplifies to $a \geq \frac{b\pi^2(p_{CW} - p_{ICW})^2 - (c_D + c_R)(b\pi(p_{CW} - p_{ICW}) - \bar{c}_T)}{\pi(p_{CW} - p_{ICW})} = \underline{a}_D^\dagger$. D never purposefully provokes war under these conditions either because it by assumption prefers R accepting x_{CW} to fighting a civil war. The equilibrium exists then when $a > \max(\underline{a}_D^\dagger, \underline{a}_R)$, because the higher the autonomy costs are, the costlier external support is for R and the less attractive the safe offer x_{ICW} is to D .

1.4 Peaceful equilibria

The model produces four peaceful equilibria. While every war equilibrium has some positive probability of peace, peace is the equilibrium outcome when D decides not to risk war. It does so when a is in an intermediary range.

When $\pi \leq \pi_D$, there exists two peaceful PBE. First, when $\bar{a}_D < a \leq \bar{a}_R$, the rebels' autonomy costs are low enough that R prefers external assistance to fighting alone, but not so low that D is willing to risk interstate war, so D makes the large offer x_{IW} instead, which R always accepts. Second, when $\bar{a}_R < a \leq \bar{a}_D^\dagger$, R prefers fighting alone to fighting an interstate war, but the auton-

omy costs are not so high as to induce D into risking civil war. So it offers x_{CW} , which R always accepts.

When $\pi > \pi_D$, there also exists two peaceful PBE with similar logic. First, when $\underline{a}_D < a \leq \underline{a}_R$, R prefers external support to fighting alone, but D would rather offer the larger offer x_{ICW} than risk internationalized civil war. Second, when $\underline{a}_R < a \leq \underline{a}_D^\dagger$, R prefers fighting alone in a civil war to fighting an internationalized civil war, but D would rather make the large offer x_{CW} than risk civil war.

1.5 Extension: Fighting without coalition benefits

Because I assume that R and T fight together in an interstate war, I examine whether this is a necessary condition for interstate war to occur in equilibrium. An alternative assumption would be for all the actors to fight in a free-for-all in the event of an interstate war, so that R 's and T 's military strengths do not accumulate. In other words, R 's payoff for an interstate war alone would be $\frac{m_R}{m_D+m_R+m_T} - c_R - \frac{a}{b}$, while T 's payoff for fighting alone is $\frac{m_T}{m_D+m_R+m_T} - c_T - e_T$.

If so, then interstate war does not occur in equilibrium, because T 's minimum value of π for fighting is always greater than R 's maximum level of π for preferring an interstate war to fighting a civil war alone. T intervenes and fights an interstate war when $\frac{m_T}{m_D+m_R+m_T} - c_T - e_T \geq (1 - \pi) + \left(\frac{m_R}{m_D+m_R}\right)\pi b$, which simplifies to $\pi \geq \frac{\frac{m_D+m_R}{m_D+m_R+m_T} + c_T + e_T}{1 - \frac{bm_R}{m_D+m_R}}$.

R will fight an interstate war when it prefers fighting over a larger set of stakes to fighting a civil war, which determines the relative worth of the offers made by D in equilibrium. Under this assumption, an offer that equals R 's payoff for fighting is $x_{IW}^* = -\frac{\frac{a}{b} + c_R - \frac{m_R}{m_D+m_R+m_T}}{\pi}$. R will prefer interstate war to civil war when $x_{IW}^* \geq x_{CW}$, or $(m_D + m_R) \left(\frac{1}{m_D+m_R+m_T} - \frac{a}{bm_R} \right) \geq \pi$. We therefore

have T defining a lower bound of π and R defining an upper bound of π , so that for the equilibrium to exist, the following must be true: $(m_D + m_R) \left(\frac{1}{m_D + m_R + m_T} - \frac{a}{bm_R} \right) \geq \pi \geq \frac{\frac{m_D + m_R}{m_D + m_R + m_T} + c_T + e_T}{1 - \frac{bm_R}{m_D + m_R}}$. However, these two constraints can never be simultaneously true by assumption. This result implies that under this model set-up it is a necessary condition for interstate war to occur that R 's and T 's incentives for fighting must be sufficiently aligned. Furthermore, when fighting results in a free-for-all, the costs of fighting an interstate war are prohibitively high for T since they are no longer offset by an increased probability of winning the war, and R 's costs of fighting a civil war are not high enough to make fighting over the larger set of stakes alone worth it. Lastly, if I remove the autonomy-loss term from R 's utility function, given that they should not incur any such cost under free-for-all (though perhaps some other escalation cost), the inequalities still do not hold simultaneously.

1.6 Complete information

If D knows T 's cost of intervention (c_T), there exists one Subgame Perfect Equilibrium (SPE) that results in interstate war.

Proposition 2 *The following sets of strategies constitute a Subgame Perfect Equilibrium:*

- D offers $x = 0$ iff $\pi \leq \frac{b - a - b(c_D + c_R + e_D)}{b}$
- R accepts iff $x \geq x_{IW}$; otherwise rejects
- T intervenes iff R rejects and $\pi \geq \bar{\pi}_T$; otherwise stays neutral
- D retaliates iff T intervenes and $\pi \leq \pi_D$; otherwise tolerates intervention

This equilibrium differs from the interstate war PBE of the main model in that D knows T 's type, and so provokes war with R , knowing that T will intervene. This SPE exists for an intermediary range of π , where the upper bound is defined by whether D is willing to retaliate against T ($\pi \leq \pi_D$) and whether it will make an offer to R it knows will be rejected. The latter happens when D would rather fight an interstate war than offer R x_{IW} , which is the minimum R will accept when T is intervening. Formally, D is undeterrable when $p_{IW} - c_D - e_D \geq (1 - x_{IW})\pi$, which I simplify to $\pi \leq \frac{b - b(c_D + c_R + e_D) - a}{b} = \hat{\pi}_D$. If so, then D will offer $x = 0$, because offering more is inefficient. T intervenes when $\pi \geq \bar{\pi}_T$ and R will reject such an offer when $(1 - p_{IW}) - c_R - \frac{a}{b} \geq 0$, which simplifies to $a \leq -b(c_R + p_{IW} - 1) = \hat{a}_R$. In other words, as long as R 's autonomy costs are not prohibitively large, R will rather fight than accept nothing. The lower bound of π is defined by T 's willingness to intervene ($\pi \geq \bar{\pi}_T$), so the equilibrium exists for when $\bar{\pi}_T \leq \pi \leq \min(\pi_D, \hat{\pi}_D)$. These constraints jointly hold when the actors' costs of fighting are sufficiently low.

However, under complete information, no other type of war occurs in equilibrium. To explain why, we have to consider the offers that are made and accepted in equilibrium. When $\pi \geq \pi_D$ and $a \leq \bar{a}_R$, will always offer x_{ICW} , because fighting is costly, or $(p_{ICW})\pi + c_R + \frac{a}{b} \geq (p_{ICW})\pi - c_D$, which is true by assumption. The same holds for the two civil war PBE, as $(p_{CW})\pi + c_R \geq (p_{CW})\pi - c_D$ is true by assumption.

Notes

¹Note that this constraint holds for all values of π , because by assumption $p_{CW} \geq p_{IW}$.

²One way of interpreting this result is that lower values of π , D prefers fighting an interstate war to peace, or specifically having R accept x_{IW} . As π increases, intervention, and thus the likelihood of D 's favored outcome of interstate war, increases. The inflection point represents the turning point when the preference ordering changes,

making D less likely to risk war the more likely intervention becomes.

³The function's maximum suggests that D is increasingly likely to risk rejection when T is unlikely to intervene, as represented by \bar{c}_T , the upper bound of c_T . But as intervention becomes more and more likely, D 's willingness to risk internationalized civil war is decreasing in π . The reason for this shift is different than under the interstate war PBE. Here, D is never undeterrable, because there are no larger stakes to make D prefer war to peace. Instead, x_{CW} increases in π at a higher rate than x_{ICW} does, so when intervention is particularly unlikely, risking war is increasingly attractive until intervention becomes too likely.