

ABSTRACT

Title of Dissertation: CIVIL WAR SETTLEMENTS AND
COMBATANTS' BEHAVIORS: STRATEGY,
PERCEPTION, AND REPUTATION

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Three projects in my dissertation focus on the termination of internal conflicts based on three critical factors: a combatant's bargaining strategy, perceptions of relative capabilities, and reputation for toughness. My dissertation aims to provide the relevant theoretical framework to understand war termination beyond the simple two-party bargaining context.

The first project focuses on the government's strategic use of peace agreements. The first project suggests that peace can also be designed strategically to create a better bargain in the near future by changing the current power balance, and thus the timing and nature of peace is not solely a function of overcoming current barriers to successful bargaining. As long as the government has no overwhelming capability to defeat all rebel groups simultaneously, it needs to keep multiple rebel groups as divided as possible. This strategic partial peace helps to deter multiple rebel groups from collaborating in the battlefield and increases the chances of victory against non-signatories.

The second project deals with combatants' perceptions of relative capabilities. While bargaining theories of war suggest that war ends when combatants share a similar perception about their relative capabilities, combatants' perceptions about relative capabilities are not often homogeneous. While focusing on information problems, this paper examines when a rebel group underestimates the government's supremacy in relative capabilities and how this heterogeneous perception about the power gap influences negotiated settlements.

The third project deals with the tension between different types of reputations in the context of civil wars: 1) a reputation for resolve and 2) a

reputation for keeping human rights standards. In the context of civil wars, the use of indiscriminate violence by the government is costly, and as such, it signals the government's toughness (or resolve) to rebel groups. I argue that the rebels are more likely to accept the government's offer when the government recently engaged in indiscriminate violence against civilians during the conflict. This effect, however, is conditional on the government's international human rights reputation; suggesting that rebel groups interpret this violence as a signal particularly when the government does not have a penchant for attacking civilians in general.

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PERCEPTION, AND REPUTATION

by

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Preface

This dissertation contains three parts—three papers. The three projects in my dissertation focus on the termination of internal conflicts based on three critical factors: a combatant's bargaining strategy, perceptions of relative capabilities, and reputation for toughness.

Part 1: In many civil wars, the rebel side often consists of multiple rebel groups. As long as the government has no overwhelming capability to defeat all rebel groups simultaneously, it needs to keep the multiple rebel groups as divided as possible. The government sometimes attempts to divide multiple rebel groups by rewarding only a few rebel groups. This strategic partial peace helps to deter multiple rebel groups from collaborating in the battlefield and even to play some rebels off of others. I argue that such a partial peace is the government's rational strategy to weaken the rebels' relative capabilities and increases the chance of victory against non-signatories. Employing a quantitative analysis using data for all multi-party civil wars since 1975, I find that the government seeks strategic partial peace when rebel groups are in a more competitive environment and that strategic peace increases the probability of government victory against the remaining rebel groups.

Part 2: Bargaining theories of war suggest that war ends when combatants share a similar perception about their relative capabilities. However, combatants' perceptions about relative capabilities are not often homogeneous. This paper

examines under what conditions combatants either overestimate or underestimate relative capabilities in the context of civil wars. A rebel group underestimates the government's supremacy in power when external support is offered or when other rebel groups are also actively fighting. My empirical findings suggest that unlike interstate wars, power parity increases the mean predicted probability of negotiated settlements in civil wars. Using the heteroscedastic choice model, however, I find that a rebel group underestimates the government's advantage in relative capabilities when the rebel group receives external support (weapon and material/logistic support) and when the number of other rebel groups increases. More importantly, the effect of combatants' power perceptions on the likelihood of negotiated settlements varies according to the level of dyadic relative capabilities. External support to the rebels and other rebel groups' active fighting are beneficial to bargaining only as long as a rebel group is weak. When the government and a rebel group approach power parity, on the other hand, the same contextual factors make it hard for both combatants to find the overlapping bargaining range.

Part 3: During civil wars, a government's strong resolve creates an incentive for a rebel group to accept the government's peace offer. A government's reputation for toughness may influence rebel groups' behaviors when the government signals strong resolve despite high political costs. Given that attacking civilians is costly at either domestic or international levels, the government's indiscriminate violence against civilians may signal its toughness to rebel groups. My empirical

findings suggest that rebel groups are more likely to accept the government's offer when the government engages in one-sided violence against civilians. The effect of the government's indiscriminate violence on the likelihood of negotiated settlements is stronger when the government has a good reputation for keeping human rights standards because it is perceived to be harder for those states to invest more heavily in a reputation for toughness. The case analysis on Israel's indiscriminate violence against Palestinian civilians also shows that rebel groups are more likely to perceive Israel's strong resolve when it targets civilians in the face of heightened international pressure.

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Part 1: Partial Peace as a Trojan Horse: Why Governments Negotiate Peace with Some Rebels but Not Others

In many civil wars, the rebel side consists of multiple rebel groups. Conventional wisdom suggests that civil wars with multiple actors tend to last longer due to fewer acceptable agreements, acute information asymmetries, and shifting alliances and incentives (D. Cunningham, Gleditsch and Salehyan 2009; D. Cunningham 2006). Although it is hard to find a zone of agreement among multiple actors, scholars have argued that peace agreements should include all warring parties because spoilers can threaten peace (Licklider 2001; Stedman 1997). Spoilers may emerge because rebel factions within a rebel movement often differ in the radicalness of their goals (Stedman 1997). Given that excluded rebel factions may still threaten peace, when do governments make some concessions to only a few rebel groups? How can such a partial peace agreement influence conflict outcomes?

Rationalist approaches often argue that negotiated settlements occur when some potential agreement exists and actors can overcome information and commitment problems (Fearon 1995; Powell 2006). Just as the terrorist act can be designed to shift the balance of power between combatants (Lake 2002, 17), however, peace can also be designed strategically to create a better bargain at some point in the near future by changing the current power balance, and thus the timing and nature of peace is not solely a function of overcoming the current

barrier to successful bargaining. Recently, scholars have begun to point out that the government may construct the bargaining process to divide the rebel side (Zartman 1995; Johnston 2007; K. Cunningham 2011). The literature suggests that governments sometimes have strong incentives to divide multiple rebel groups through such a strategic partial peace.

In this paper, strategic partial peace refers to the government's rational strategy to create disunity among rebel groups using a predesigned partial peace. While this paper is not the first to claim that the government may construct the bargaining process to divide the rebel side, there are three key contributions to the existing literature on multiparty civil wars. First, this paper examines when the government attempts to shift relative capabilities through the bargaining process by focusing on the structure of the competitive environment in which multiple rebel groups fight.¹ Second, this study also explores how the government's strategic peace can influence the duration and outcome of the conflict. Third, it suggests one reason why negotiated settlements are more prone to recur than civil wars ended by military victories (Wagner 1993; Luttwark 1999; Toft 2006, 2010; Johnston 2007).² If negotiated settlements result from the government's strategic intention, recurring conflicts are endogenous to strategic peace.

This study seeks to expand our understanding of the government's strategic use of the peace process in a multiparty context by moving beyond the

¹ I employ this theoretical concept from Walter (2015).

² The most common explanation is that the winning group may destroy the organizational identity of all other warring groups in order to deter future conflicts.

assumption that negotiated settlements are the ideal means of ending civil wars. To examine the government's incentive for strategic partial peace and its impact on conflict outcomes, I use the UCDP/PRIO Armed Conflict Data (ACD), UCDP Conflict Termination data and UCDP database. Employing a quantitative analysis using data for all multiparty civil wars since 1975, I find that the government seeks strategic partial peace when rebels groups are in a more competitive environment and that strategic peace increases the probability of government victory against rebel groups.

This paper proceeds as follows. First, I assess existing studies on negotiated settlements in the context of multiparty civil wars. In the next section, I develop a formal model that shows when the government has an incentive to offer strategic partial peace and how this partial peace affects the crisis outcome. The following section builds on arguments from recent civil war literature to advance a theoretical account explaining how the government attempts to shift relative capabilities and end conflicts through the strategic use of partial peace agreements in multiparty civil wars. The fourth section presents the results of the statistical models and a discussion of the empirical results. Finally, I conclude with implications for theory and questions for future research.

Multiparty Civil Wars and Negotiated Settlements

In many civil wars, the rebel side often consists of multiple rebel groups. Many recent studies on internal conflicts have examined how an increase in the

number of actors or connections between non-state actors may affect the crisis process and outcome (Atlas and Licklider 1999; D. Cunningham 2006; Nilsson 2008, 2010; K. Cunningham 2011, 2013; K. Cunningham et al. 2012; Bakke, Cunningham, and Seymour 2012; Bapat and Bond 2012; Christia 2012, Findley and Rudloff 2012; Seymour 2014; Findley and Young 2015; Rudloff and Findley 2015).

Scholars have argued that there are more severe bargaining problems in civil wars with multiple actors. For example, according to K. Cunningham (2013), more divided movements are much more likely to experience civil war onset because multiple factions not only create acute information problems about relative capabilities and preferences, but also because multiple factions make it hard for each faction to make credible promises about the future behavior of other factions. Many studies on civil war termination also suggest that civil wars with multiple actors tend to last longer due to fewer acceptable agreements, acute information asymmetries, and shifting alliances and incentives (D. Cunningham, Gleditsch and Salehyan 2009; D. Cunningham 2006). On the other hand, according to Findley and Rudolf (2012), multiparty civil wars do not always last longer because such wars often end in negotiated settlements rather than decisive victory.

Despite severe bargaining problems, many studies tend to regard a negotiated settlement as an ideal means to end civil war. One of the possible reasons is that a negotiated settlement is a less costly means of stopping the killing than waiting for one side to achieve military victory (Hartzell and Hoddie

2007, 8). Thus, researchers have explored the issue of how to end civil wars and increase durable peace by means of negotiated settlements (Fortna 2004; Walter 2002, 2004; Hartzell and Hoddie 2007, 2015; Mattes and Savun 2009).

Nilsson (2008) argues that the signatories anticipate the actions of rebel groups outside of the peace agreement when making the decision to sign a deal. Since the risk of violent challenges from outside actors is already factored into the signatories' calculations, Nilsson claims that the spoilers' violence will not affect the signatories' commitment to peace. Her findings suggest that partial peace agreements can be a realistic solution to ending multiparty civil wars. As Morrow (1999, 101) argues, one possible solution for a settlement is to reduce the number of actors in the context of multilateral negotiations; fractious actors might be dropped from negotiations and excluded from the final deal.

Even if both the government and some rebel groups negotiate peace, however, it is pointed out that other combatants may block an agreement in a multiparty civil war (D. Cunningham, Gleditsch and Salehyan 2009; D. Cunningham 2006; Rudloff and Findley 2015). Scholars have argued that the existence of competing rebel groups increases violence against the government or other rebel groups. Several studies of terrorism suggest that "outbidding" among rebel factions may increase violence against the government (Bloom 2004; Kydd and Walter 2006). Cunningham, Bakke and Seymour (2012) also argue that more competing factions are associated with higher instances of violence against the government as well as attacks on co-ethnic civilians.

Thus, although it is hard to find a zone of agreement among multiple actors, some scholars argue that peace agreements should include all warring parties because spoilers can threaten peace (Licklider 2001; Stedman 1997). Rebel groups left out of the peace process often become spoilers “who believe that peace emerging from negotiations threatens their power, worldview, and interests, and use violence to undermine attempts to achieve it” (Stedman 1997, 5). Kydd and Walter (2002) also argue that extremist violence intentionally plays on the uncertainty that exists between the more moderate groups who are attempting to negotiate a peace agreement.

While many studies on civil war settlements primarily focus on the necessity of eliminating, managing or controlling spoilers (Nilsson 2008; Kydd and Walter 2002; Doyle and Sambanis 2000; Stedman 1997), they largely ignore the possibility that the government may use the bargaining process to create spoilers for strategic purposes. Recently, however, scholars have argued that the government may construct the bargaining process to divide the rebel side. Peace negotiations with a few rebel groups may turn moderate rebel groups into allies defending agreements against radical holdouts (Stedman 1997; Kydd and Walter 2002; Bueno de Mesquita 2005; Nilsson and Kovacs 2011).

Zartman (1995, 33) pointed out that the government can play politics at the negotiating table in a multiparty civil war. He argued that the government may divide the rebel side and make a separate peace with rebel factions or seek out a powerful third force. Johnston’s (2007) case study of Darfur shows how the Sudanese government has used peace processes to advance its political interests.

K. Cunningham (2011) also claims that the government may use concessions not only as a tool to resolve conflicts, but also as part of the bargaining process. According to K. Cunningham (2011), governments may use their limited concessions to co-opt ideologically moderate factions through a policy of “divide and concede.” She finds that while concessions to unitary movements may work better to settle conflicts, “internally divided movements receive concessions at a much higher rate than unitary ones and that the more divided the movement is the more likely it is to receive concessions” (275).

Likewise, recent studies on civil war settlements also suggest that governments may attempt to strike a bargain with one or a few rebel groups to divide the rebel side. However, little attention is paid to when governments attempt to divide the rebel side through the bargaining process and how such a partial peace agreement influences conflict outcomes.

Model

In this section, the game theoretical model illustrates how the government seeks a partial peace agreement during conflicts. Suppose there is an ongoing dispute between the government and multiple rebel groups. To deal with multiple threats, the government may decide to offer concessions to a specific rebel group. The game in Figure 1.1 involves three actors: nature, the government (G) and the rebel group (R). At the beginning of the game, nature decides the type of rebel group and the political shock sequentially. The rebel group is one of two types,

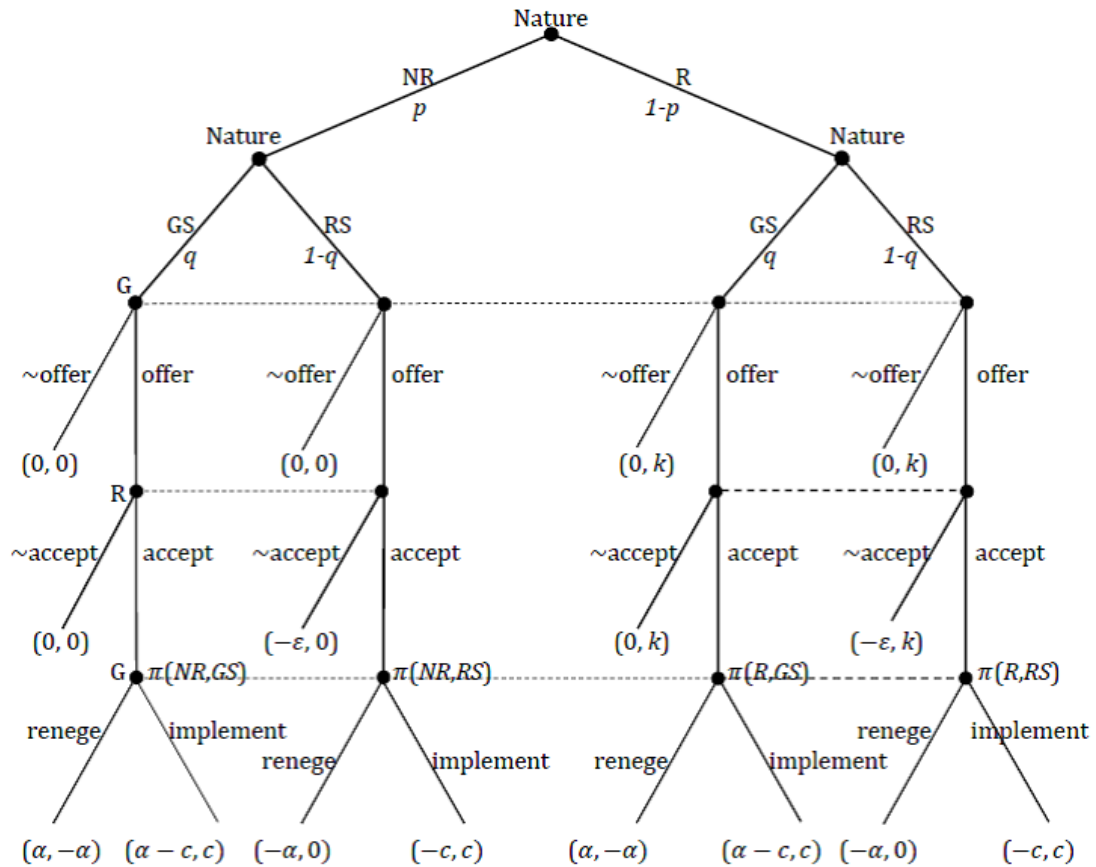
non-revolutionary (NR) and revolutionary (R). The distinction between the two types is the rebel group's perception about the status quo. The non-revolutionary type NR 's demands can be satisfied by the government's concessions. On the other hand, the revolutionary type R is not lured into concessions offered by the government. Thus, R prefers the status quo than the peace-settlement. The government's prior beliefs about the rebel group's types are given by $p(NR) = p$ and $p(R) = 1 - p$. If the status quo is maintained, the revolutionary type (R) would get a benefit of $k > 0$, but both the government (G) and the non-revolutionary type (NR) would get 0 in that they prefer the peace-settlement than the status quo.

Given that both players have incomplete information about the type of political shock, the common prior belief about each political shock is given by $p(GS) = q$ and $p(RS) = 1 - q$, respectively. Under the pro-government shock, the government may expect conflicts between signatory rebel groups and non-signatory rebel groups through its strategic partial peace. Under this favorable condition, the government has more incentive to renege on a peace agreement. In this case, the "divide and conquer" strategy is more beneficial than a "divide and concede" one.³ Given a pro-rebel shock, on the other hand, the government's strategic use of peace may be counter-productive. This strategy is not only ineffective in weakening the rebels but also gives a wrong signal that the

³ According to K. Cunningham (2011), the divide and conquer logic suggests that the government may see an opportunity to defeat more divided movements without making any concessions. On the other hand, by divide and concede logic, divided movements are an attractive target for concessions. I assume that the rebel group can receive the government's concessions after the government implements a peace agreement.

government is conciliatory. In this case, the government may face political backlashes.

Figure 1.1 A Government's Strategic Partial Peace Game



In this game, the rebel group has two options about the government's offered peace: *reject* or *accept*. The government, however, makes a choice at two stages in the game. Initially, the government decides whether to offer a peace agreement. If the rebel group accepts it, the government also needs to decide whether to renege on or implement the agreement. Under the pro-government shock (GS) condition, the government achieves some benefits of $\alpha > 0$ through strategic partial peace, but the rebel group pays a cost of α when the government

reneges on an agreement. When the government implements a peace agreement, it achieves benefits of α through strategic peace but pays a cost of $c > 0$ to the rebel group. In this case, the rebel group would receive the government's concession c . Under the pro-rebel shock (RS) condition, the government pays a cost of α if it reneges and pays a cost of c if it keeps an agreement. Even if the government breaks its promise, the rebel group would not pay a cost under such a favorable condition for the rebels. When the government implements an agreement, the rebel group receives the offered concession of c . Thus, the government's use of peace becomes counter-productive in either case. Lastly, when the rebel group refuses the government's offer, the government pays a reputational cost of $\varepsilon > 0$. To find the Perfect Bayesian Equilibrium (PBE) of the game in Figure 1.1, I assume that each player's payoffs satisfy $0 < \varepsilon < c < k < \alpha$. These equilibria are shown in the Appendix.

Empirically, we can test one PBE where for $q \leq q^*$ and $p \geq p^*$ the government chooses the strategy $S_G = \{offer, implement\}$ and the rebel group chooses the strategy $S_R = \{accept|NR, \sim accept|R\}$. Along the path of play, the government offers peace that the non-revolutionary type will accept but the revolutionary type will reject. Lastly, the government implements a peace agreement. Given that more moderate groups tend to be non-revolutionary, the PBE equilibrium suggests that the government will offer peace with more moderate groups. This equilibrium also implies that the government is more likely to implement a peace agreement under some level of future uncertainty.

Since the rebel group can receive some concessions, this equilibrium clearly supports the “divide and concede” logic rather than the “divide and conquer” one.

The Argument

Governments’ Threats and Rebel Groups’ Collaboration

Not all rebel groups share similar policy preferences and war strategies. In 2006, while fighting the Sudanese government, two of the main rebel groups turned on each other because of ethnic tensions and territory conflicts. Internal conflicts among rebel groups not only make coordination in the battlefield difficult but also decrease their capabilities. For this reason, conflicts between different rebel groups may provide the government with a better bargaining position. On the other hand, enhanced cohesion means an increased possibility of collaboration among rebel groups in the battlefield.⁴ Thus, the degree of unity among rebel groups is often a critical factor in shifting the existing power balance between the government and the rebel side and in affecting the outcome of the civil war.

Given no overwhelming capability, the government needs to keep multiple rebel groups as divided as possible.⁵ In a multiparty civil war, however, the government’s continuing threat can help multiple rebel groups overcome their differences and take up a common cause against the government. As long

⁴ The rebels’ collaboration includes not only logistical support for providing shelter or materials and sharing military information, but also operational cooperation in fighting with the government. Going one step further, rebel groups sometimes build a united front or alliances.

⁵ If the government has overwhelming capability, it would not consider the total capability of multiple rebel groups seriously. In this case, the rebels’ cohesion would not be regarded as a critical factor.

as its threat fails to inflict serious damage on rebel capabilities, the government's high level of threat can be counterproductive. In other words, if rebel groups have the capability to survive and fight back in the face of the government's threat, the government needs to consider that its threat can possibly enhance cohesion among the rebel groups.⁶

Ironically, the government's increased threat may provoke greatly strengthened collective capacities among multiple rebel groups (Lake and Rothchild 1996; Lake 2002). This threat sparks common feelings of insecurity among multiple rebel groups. As external threat tends to increase cohesion within the in-group (Simmel 1955; Coser 1956; Levy 1989), a shared perception of the government's threat may consolidate us-versus-them dynamics between the rebels and the government, simplifying the diversity among rebel groups (Atlas and Licklider 1999).⁷

Moreover, given that the government continues to take an unyielding stand, each rebel group is sensitive to the government's relative capability. Other groups' defeat would increase the government's relative capability and inevitably threaten its own future status. According to Kalyvas and Kocher (2007), when free riding is costly, rebels do not necessarily face a collective action problem. Akcinaroglu (2012) also claims that rebels have the means to avoid government defeat and continue conflict when there are multiple rebel groups or when these groups collaborate with each other to fight against the

⁶ If rebel capabilities become too weak to protect their members from the government's coercion, the government would resort to a high level of repression (Lyal 2009, 336; Kalyvas 2006, 167).

⁷ Atlas and Licklider also argue that once a settlement is reached, us-versus-them dynamics begin to break down.

government. If the government's attack creates negative externalities to non-targeted groups, multiple rebel groups have an incentive to collaborate with each other regardless of whether or not they are currently targeted.⁸

Despite the government's threat, not every rebel group wants to collaborate with other groups. Some rebel groups may have the capability to fight with the government without any collaboration with other groups.⁹ If a rebel group has the capability to continue the conflict unilaterally, it has less incentive to fight with other groups against the government. Moreover, not every rebel group has the same objectives in a civil war. If each rebel group updates its expectations during the conflict, the demands of each rebel group differ according to the capabilities of the rebel (Buhaug 2006, 694). Lastly, there may be a significant difference in the relative capabilities of rebel groups. Collaboration with the stronger group offers a higher probability of prevailing but a less favorable distribution of power. On the other hand, cooperation with the weaker group may not be strategically helpful (Powell 1999, 195). Thus, the government's threat may not always induce collaboration among rebel groups.

In a multiparty civil war, the government should balance the security benefits from increasing threat against the backlash costs from increased cohesion among the rebel groups. This argument becomes more reasonable when allocating the government's resources is critically important to stay in power. Given that fighting is a costly action, consistent warfare against all rebel

⁸ These rebels' incentives make it hard for the government to attack each rebel group one by one.

⁹ D. Cunningham (2006, 884) uses six criteria to identify the rebel group's capability to continue the conflict unilaterally.

groups would deplete the government's resources. Depleted resources would make supporters turn their backs on the government.¹⁰ The assumption of limited resources and an unstable regime explain why the government cannot always increase the threat level. Moreover, the government's increased threat may adversely affect economic conditions, and the economically deprived may become potential rebels. For these reasons, the government should find a way to weaken the rebel power while manipulating its threat level.

A Government's Incentive for Strategic Partial Peace

The government needs to weigh the costs and benefits of strategic partial peace. For the strategic partial peace, the government needs to make some concessions to a few rebel groups. In the context of multiparty civil wars, in particular, strategic partial peace not only saves the government's resources but also deters multiple rebel groups from collaborating in the battlefield. As a result, the government's strategic peace shifts relative capabilities or the bargaining range significantly in favor of the government.¹¹

¹⁰ If there are no apparent achievements even after spending many resources on fighting, government supporters would estimate their leader's quality too poorly. Supporters may take protracted conflicts as a signal of their leader's poor competence.

¹¹ In fact, the concept of strategic peace is neither novel nor confined to the context of recent civil wars. Many historical records show that when fighting multiple enemies, a conflict actor often uses peace processes to simply reduce the number of war fronts or cause disunity among enemy groups. For example, during the period of the Warring States (476 BCE – 221 BCE) in China, Qin defeated the six states one by one by pursuing a *lianheng* or divide-and-conquer strategy. Qin's *lianheng* strategy forestalled and broke up *hezong* alliances by playing the targeted states off of one another with threats and concessions. Qin's strategic peace made anti-Qin alliances disintegrate and finally Qin could conquer them seriatim (Tin-bor Hui 2004). In the 1930s, Hitler also offered a non-aggression pact with Russia because he did not want a two-front war. When a non-aggression pact was no longer convenient, however, he abandoned it and invaded Russia.

Treisman (2004) argues that when states with limited resources face multiple challengers, it is less costly to appease in one arena because they can conserve sufficient deterrent resources in others. In a multiparty civil war, the government also has a strong incentive to divide multiple rebel groups by rewarding only a few rebel groups. The government's strategic partial peace not only saves its resources but also fosters conflict among different rebel groups.¹² If the government offered concessions to as many rebel groups as possible, it would be inundated with requests. In this case, the government's concession may give the wrong signal to other rebel groups that the government is conciliatory and the government may have a bad reputation for toughness (Walter 2006, 2009). For these reasons, the government has an incentive to reward only one or a few rebel groups.

When there are multiple rebel groups, however, the government may select a bargaining partner with relative ease. As the government has more than one potential partners for strategic partial peace, those multiple available options offer bargaining leverage to the government in order to overcome some constraints in pursuing this strategy.¹³ Given multiple rebel groups, the government does not need to make great concessions to the signatory rebel group. Thus, the government can reduce the cost for seeking a strategic peace agreement.

¹² Collier (1998, 11) also argues that one of the prime strategies that the government would take is fostering conflicts on the rebel side.

¹³ For details, see Shaked (1994) and Osborne and Rubinstein (1990).

However, increasingly high numbers of rebel groups would create less incentives for the government to make concessions to a few rebel groups. Given that many other rebel groups are still fighting, the government's partial peace might give the wrong signal to other rebel groups that the government is conciliatory (Walter 2006, 2009). In this case, other rebel groups may update their beliefs about the government's resolve based on its concession to a few rebel groups and the government may acquire a poor reputation for toughness.

Another issue is whether or not a rebel group has an incentive to accept concessions offered by the government. The existence of many rebel groups might mean that the government does not have enough capability to deter additional rebel groups. According to Walter (2015), the number of rebel groups in a civil war depends on how costly it is to build a rebel group capable of challenging the government. Given that the government would not have the effective capacity to deter the potential rebel group, the costs of organizing a new rebel group would be low. When the government fails to deter a new rebel group's challenge, rebel groups would keep fighting rather than accept the government's concessions. Taken together, the government may not seek strategic partial peace when there are only a few rebel groups or too many rebel groups.

Hypothesis 1: The relationship between the number of rebel groups and the government's strategic partial peace agreement is curvilinear (inverse U-shaped), with the higher likelihood occurring at an intermediate number of rebel groups.

In addition to the number of rebel groups, the size of conflict-affected area also influences the government's incentive to seek partial peace. In a more competitive environment, strategic interaction between rebel groups becomes a critical factor (Walter 2015). When fighting with the government in a more competitive environment, a rebel group's declining capabilities increase resource needs. As Fjelde and Nilsson (2012) argue, rebel groups often fight with each other to secure material resources or political leverage. If there are many active rebel groups in a small-sized conflict area, one rebel group's access to resources may be conditioned by other groups' resource mobilizations. Given that conflicts are the result of both cooperation and competition among multiple rebel groups, one group's conflict behavior is inherently associated with other groups' military capabilities. Thus, the government's strategic partial peace is more successful when there are multiple active rebel groups in a small-sized conflict area. The government may easily foment more competition among rebel groups through a strategic partial peace agreement when the conflict area is under the control of multiple rebel groups.

Given multiple rebel groups in a large-sized area, on the other hand, rebel groups have less incentive to compete with each other to secure material resources or public support. In this case, the government has less incentive to divide the rebel side through strategic partial peace. For example, if one rebel group fights within a single city and the other group fights near an international border, the government does not need to make concessions in order to deter the two rebel groups from collaborating in the battlefield. In Colombia, the FARC is

primarily a rural organization while the ELN's supporters tend to be in urban areas. While the FARC operated in the jungles of the south and east, the ELN operated in northeastern Colombia in 2000s. During 2000s, there was no strategic partial peace agreement between the government and any rebel group.

Hypothesis 2: When the size of actual conflict-affected area is large, the government is less likely to pursue strategic partial peace.

Lastly, geographic factors such as location and terrain may affect both the government and rebel groups' incentives to negotiate a peace. According to Buhaug et al. (2009), geographic factors such as location and terrain may interact with rebel fighting capacity and together play a crucial role in determining the duration of conflict. They also find that conflicts that occur far away from the state center last longer. Given that geographical factors make it easier for those groups to keep surviving, a rebel group may not accept concessions offered by the government. At the same time, the government has no reason to make concessions to rebel groups that fight far away from the state center because those rebel groups' challenges or threats are less threatening. Thus, I assume that rebel groups operating in mountainous terrain or near an international border are more revolutionary types because those groups' demands are not easily satisfied by the government's concessions.

Hypothesis 3: When conflicts occur in rough terrain, the government is less likely to seek strategic partial peace.

Hypothesis 4: When conflicts occur near an international border, the government is less likely to seek strategic partial peace.

Strategic Partial Peace and Government Victory against Rebel Groups

Given limited resources and simultaneous multiple threats, strategic partial peace is the government's rational strategy to weaken the rebels' relative capabilities. This predesigned partial peace helps to deter multiple rebel groups from collaborating in the battlefield and even to play some rebels off one another. As argued above, strategic partial peace is the government's strategy to create disunity among rebel groups. As successful strategic peace weakens rebel groups' cohesion, it finally increases the chances of victory for the government.

According to Werner (1999), the post settlement period is not stable because any agreement terms tend to reflect the relative power balance at the time of a peace agreement. Disunity among rebel groups alter this balance in favor of the government. In a multiparty civil war, the forward-looking government pursues a strategic partial peace strategy when it expects peace will yield strategic benefits. In this case, conflicts among rebel groups are endogenous to the process of partial peace.¹⁴

The government's strategic partial peace creates conflicts either within the signatory rebel group or among different rebel groups. After partial peace settlements, some rebels might still believe their interests are best served by resuming conflicts within the signatory group (D. Cunningham 2006; Kydd and Walter 2002; Stedman 1997). If strategic partial peace cannot guarantee

¹⁴ Werner argues that negotiated settlements do not remain stable when they do not evolve to reflect societal changes to deter additional resistance. Here, however, this strategic negotiated settlement is designed to foster societal changes by sowing a seed of conflict among rebel groups.

economic benefits or peace to all rebel members, splinter factions may emerge inside the signatory group. In this case, the government's concessions can be made to win over rebel leaders without far-reaching concessions. When negotiated settlements do not satisfy all rebel members' expectations, splinter factions may emerge. In Chad in 2006, when Front Uni pour le Changement Démocratique (FUCD), one out of three rebel groups that formed the Union des Forces pour la Démocratie et le Développement (UFDD), started negotiations and signed an agreement with the government, this led FUCD to depart from the UFDD alliance.

Moreover, non-signatory rebel groups may have conflicts with signatory groups. Non-signatory groups are intrinsically sensitive to the outcome of existing settlements. These groups fear that an established partial peace may shrink the size of future bargaining or exclude them from any opportunity to share power or profits with the government. For these reasons, the rebel side suffers from internal conflicts due to partial peace offered by the government. For example, when the Sudanese Liberation Army (SLA) and the Justice and Equality Movement (JEM) in Darfur launched their rebellion in 2003, the government of Sudan, which had no capability to defeat all rebel groups militarily, used the Darfur Peace Agreement (DPA) to divide multiple rebel groups and make them fight among themselves (Johnston 2007). Taken together, the government's strategic partial peace increases the likelihood of its victory against rebel groups. My argument thus yields the following hypothesis about the effect of the government's strategic peace.

Hypothesis 5: When the government seeks strategic partial peace, government victory is more likely against the remaining rebel groups.

Data and Method

My theoretical arguments lead to predictions about two dependent variables: strategic partial peace agreements and the outcome of strategic peace agreements. To test hypotheses about the incentive for strategic partial peace and its effect on conflict outcomes, this empirical analysis mainly depends on information from the UCDP/PRIO Armed Conflict Data (ACD), UCDP Conflict Termination data and UCDP database. I examine the above two sets of predictions in turn.

First, I test Hypotheses 1 through 4 about the likelihood of the government's strategic partial peace agreements. My theoretical argument suggests that the government has incentives to divide rebel groups by rewarding only a few rebel groups. Given the government's strategy to exclude some rebel groups from the bargaining table, a dyadic approach may not capture such a strategic consideration. Thus, my empirical analysis uses the conflict-year as the unit of analysis. As the outcome of interest here is a multiparty civil war, my analysis is limited to cases where the rebel side consists of more than one active group between 1975 and 2013.

The dependent variable is the government's strategic partial peace. Partial peace as an outcome is not sufficient to anticipate internal conflicts on

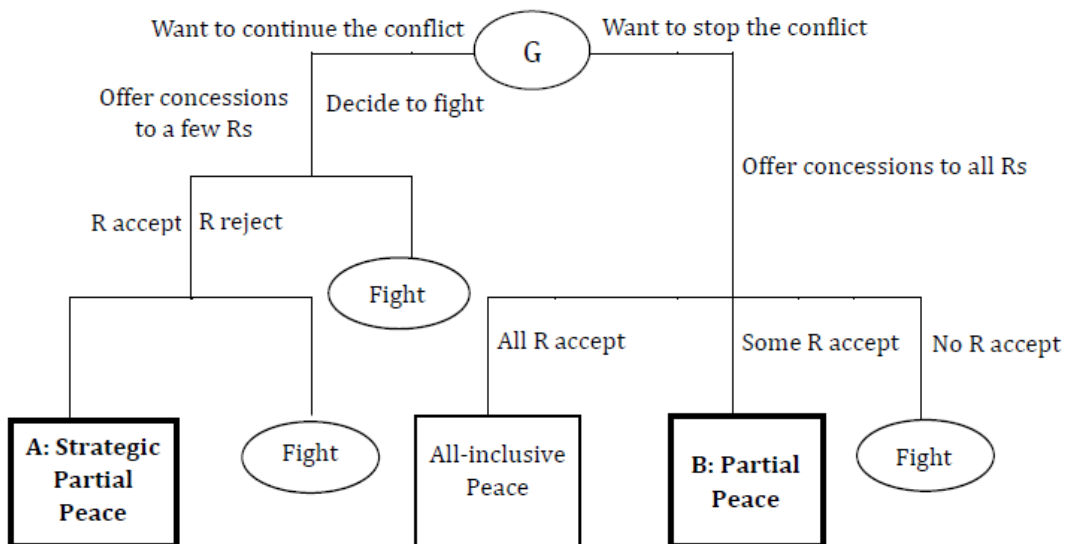
the rebel side. Some partial peace agreements may have nothing to do with the government's strategic consideration of the bargaining process. Even if the government wants to make peace with all rebel groups, only some groups might be interested in negotiated settlements with the government. What is critical is that the government's intention to continue the conflict is a necessary precondition for strategic partial peace.

Thus, I code whether or not the government pursues strategic partial peace in a given year by the following criteria. The UCDP provides a comprehensive dataset of all peace agreements signed between 1975 and 2013. The dataset from the UCDP distinguishes all-inclusive peace agreements from partial peace agreements. First, strategic partial peace includes peace agreements with only certain rebel groups. Second, the government should have no intention to include all rebel groups in the peace process. Third, temporary ceasefire agreements are included because they may also reflect the government's strategic considerations.

What is critical is that the government's intention to continue the conflict is a necessary precondition for strategic partial peace. Figure 1.2 shows a decision process where the government first chooses whether to continue the conflict and then chooses whether to seek peace. In Figure 1.2, (A) indicates strategic partial peace in that peace processes are considered to form a part of the government's strategy. On the other hand, (B) merely signifies the lack of an all-inclusive peace deal. Even if the government wants to make peace with all rebel groups, only some groups might be interested in negotiated settlements

with the government. The government finds itself locked in a conflict in which it cannot be victorious, and this deadlock is painful to the government and only some rebel groups (Zartman 2008, 22). In this case, partial peace comes out as a result but this partial peace has nothing to do with the government's strategic use of peace. For example, on April 24, 1992, the leaders in Preshawar agreed on and signed the Preshawa Accord establishing the post-communist Islamic State of Afghanistan. The Prime Ministership was given to Hekmatyar in Hezb-e Islami, but Hekmatyar refused to sign. Thus, all groups except Hekmatyar's Hezb-e Islami signed an agreement in April 1992. The presumption here is that partial peace as an outcome is not sufficient to anticipate internal conflicts on the rebel side.

Figure 1.2. Strategic Partial Peace vs. Partial Peace as an Outcome



To test Hypotheses 1 to 4, I use the UCDP data to measure the number of active rebel groups. I also use the PRIO Conflict Site dataset to measure the size of actual conflict-affected area. The conflict site dataset is an extension of the UCDP/PRIO Armed Conflict Dataset and it provides coordinates for the conflict zones and lists of countries where civil wars were located (Dittrich 2012). The absolute area of the conflict zone is log-transformed and coded as a proportion of total land area.¹⁵ To test Hypotheses 3 and 4, I also use Buhaug et al.'s (2009) data to measure mountainous terrain and whether or not conflicts occur around an international border.

Second, I use UCDP Conflict Termination dataset and Akcinaroglu's (2012) data in order to test Hypothesis 5 regarding the effect of strategic peace on conflict outcome. I use Uppsala Dyadic data and include all the rebel dyads in the civil war country between 1975 and 2008. In line with my theoretical argument, I use the overall conflict duration to test Hypothesis 5. My empirical analysis is focused on exploring the impact of strategic partial peace on conflict termination by government victory. Thus, the dependent variable is time to an event of government victory. For this analysis, I use competing risks regression as recommended by Fine and Gray (1999). Based on Akcinaroglu's (2012) data, I treat the occurrence of a peace agreement, government victory, rebel victory, and attrition as competing events for the termination of conflict.

¹⁵ In this dataset, conflicts that took place within a single city are assigned a 50-km radius.

Table 1.1 Summary Statistics

Variable	Mean	Sta. Dev.	Min	Max	N
Strategic Partial Peace	0.130	0.336	0	1	324
No. of Rebel Groups	2.444	0.986	2	8	324
Conflict Area	12.096	1.744	8.252	14.655	184
Democracy	0.426	0.495	0	1	324
Conflict Intensity _{t-1}	1.367	0.483	1	2	286
Territorial Conflict	0.315	0.465	0	1	324
Internationalized Internal Conflict	0.204	0.403	0	1	324
Mountains in Conflict Zone (%)	31.355	25.482	0	90.931	255
Conflict at Border	0.859	0.349	0	1	255

Lastly, as shown in the regression tables, I use conflict intensity, democracy, and conflict types as control variables for the first regression analysis. I also add external support to the rebels and formal alliances among rebel groups for the competing risks model. I use Akcinaroglu's (2012) data for these two control variables. Table 1.1 describes the key variables and control variables in the empirical models.

Empirical Analysis

In this section, each empirical result is reported by employing two specific methods. First, I show the results of tests designed to examine when the government seeks strategic partial agreements in the context of multiparty civil wars. Next, I estimate whether or not the government's strategic partial peace increases the likelihood of its victory against rebel groups.

The Government's Incentives for a Strategic Partial Peace Agreement

Given that the dependent variable is a government's strategic partial peace agreement, I use logit models and robust standard errors clustered on each conflict to account for within-group correlation. To deal with temporal dependence of recurrent peace agreements, I include a measure of the number of years since the last partial peace agreement with cubic splines (Beck, Katz, and Tucker 1998). The results of the empirical analyses are reported in Table 1.2.

My argument suggests that there is a curvilinear relationship between the number of rebel groups and the likelihood of partial peace agreements. In Models 1, 2, 3, and 6, I use both the number of rebel groups and the number of rebel groups-squared as covariates. While all coefficients for the number of rebel groups variable are positive and significant at the 0.05 level in Models 1 to 3, all coefficients for the number of rebel groups squared are negative and significant ($p < 0.05$) in Models 1, 2, 3 and 6. These results are consistent with the argument that the number of rebel groups and the government's strategic partial peace is an inverse U-shaped relationship. Given multiple rebel groups (more than two groups), the government can reduce the cost of seeking a strategic peace agreement. However, too many rebel groups would rather create less incentives for the government's strategic partial peace due to the government's reputational concern.

In Models 3 and 6, on the other hand, the conflict area variable is negative but an interaction term between the number of rebel groups-squared and conflict area is positive. The results suggest that the government has more incentive to make concessions to a few rebel groups when one group's conflict

behavior is inherently associated with other groups' military capabilities. At the same time, the government's strategic partial peace is more successful when there is an intermediate number of rebel groups in a small-sized conflict area. The government may easily foment more competition among rebel groups through a strategic partial peace agreement when the conflict area is under the control of multiple rebel groups.

Table 1.2 A Government's Incentives for Strategic Partial Peace Agreements

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
No. of Rebel Groups	2.140* (0.960)	2.177* (0.896)	6.374** (2.154)			5.834 (3.651)
No. of Rebel Groups ²	-0.259* (0.118)	-0.261* (0.114)	-2.744* (1.141)			-4.707* (2.772)
Conflict Area			-0.662+ (0.383)			-1.538* (0.725)
No. of Rebel Groups ² × Conflict Area			0.134+ (0.074)			0.290+ (0.153)
Democracy		-0.473 (0.500)			0.008 (0.539)	0.700 (0.525)
Conflict Intensity _{t-1}		0.041 (0.461)			0.613 (0.599)	0.761 (0.791)
Territorial Conflict		-0.032 (0.601)			-1.261+ (0.738)	-1.370+ (0.757)
Internationalized Internal Conflict		-0.577 (0.505)			-0.726 (0.613)	0.214 (0.949)
Mountains in Conflict Zone (%)				-0.023+ (0.013)	-0.029** (0.011)	-0.022* (0.009)
Conflict at Border				-0.268 (0.610)	-1.126+ (0.641)	-0.573 (0.663)
Years Since Last Partial Agreement	-0.668** (0.201)	-0.911** (0.265)	-0.623** (0.238)	-0.715** (0.236)	-0.930** (0.327)	-0.585+ (0.342)
Constant	-4.239** (1.458)	-3.652** (1.302)	-0.829 (4.474)	-0.111 (0.482)	0.586 (1.202)	11.242 (8.983)
Log-likelihood	-115.051	-97.797	-75.173	-84.877	-67.726	-49.229
N	324	286	184	255	223	129

Note: Results are from a logit model. Clustered standard errors by conflict id in parentheses. * $p < 0.05$, ** $p < 0.01$ (two-tailed).

Lastly, in Models 4 to 6, I add two variables: conflict at border and conflict in mountainous terrain. Conflict in mountainous terrain decreases the likelihood of the government's strategic partial peace agreement in Models 4 to 6, but conflict at border is only weakly significant ($p < 0.10$) in Model 5. As expected, the government has no incentive to make concessions to rebel groups that fight far away from the state center. When rebel groups are located in mountainous terrain, in particular, the government is less likely to use the bargaining process strategically. Those rebel groups' challenges are less threatening to the government.

The Impact of Strategic Partial Peace Agreements

I report the results of my competing risks analysis for government victory in Table 1.3. The coefficients show the impact of the independent variables on the cumulative incidence of government victory. A positive (or negative) coefficient suggests that the independent variable increases (or decreases) the likelihood of a conflict dyad terminating in government victory in the following time period.

The results in Table 1.3 show a positive and significant relationship between a government's strategic partial peace and the probability of its victory against the remaining rebel groups. The coefficients for strategic partial peace is highly significant when controlling for the number of rebel groups, conflict intensity, a country's regime type, and conflict types, etc. in Models 7 to 9. In Model 10, this coefficient is still significant at 90% level, even after controlling for external support to the rebels and formal alliances among rebel groups.

These results suggest that strategic peace agreements may weaken the rebels' capabilities and finally increase the chances of victory for the government.

Table 1.3 The Impact of Strategic Partial Peace on Government Victory

Independent Variables	Model 7	Model 8	Model 9	Model 10
Strategic Partial Peace Agreements	1.590* (0.729)	1.608* (0.738)	1.838* (0.862)	1.545+ (0.915)
No. of Rebel Groups		-16.151** (0.383)	-21.299** (0.624)	-16.874** (0.763)
Conflict Intensity			-0.808 (0.859)	-0.538 (0.759)
Democracy			-1.661 (1.316)	-2.270 (1.400)
Mountains in Conflict Zone (%)			0.024 (0.016)	0.015 (0.018)
Conflict at Border			-0.735 (0.938)	-0.650 (0.983)
Territorial Conflict			0.269 (0.954)	0.823 (0.929)
Internationalized Internal Conflict			1.465+ (0.831)	1.486+ (0.822)
External Support to Rebels				-19.241** (0.528)
Formal Alliance (Rebels)				-1.157+ (0.637)
Log-pseudo likelihood	-47.459	-43.251	-37.168	-30.834
<i>N</i>	658	658	572	572

Note: Results are from a competing risks model. Robust standard errors in parentheses. * $p < 0.1$ * $p < 0.05$, ** $p < 0.01$ (two-tailed).

In all Models, coefficients for the number of rebel groups are negative and significant. This means that it is hard for the government to defeat rebel groups when there are many rebel groups. As Walter (2015) points out, the number of rebel groups may depend on how costly it is to build a rebel group capable of challenging the government. The existence of many rebel groups might mean

that the government has failed to deter new rebel groups' challenges. Thus, the number of rebel groups decreases the likelihood of the government's victory. In Model 10, external support to the rebels and formal alliances among rebel groups are significant at 90% level. The existence of credible alliances among rebel groups turn the tide in favor of the rebels. At least, these two factors provide the means to avoid government victory.

Conclusion

While fighting with multiple rebel groups, the government may use the bargaining process to divide the rebel side. In this paper, I have examined when the government attempts to shift relative capabilities and end civil wars through the strategic use of partial peace. In particular, governments sometimes have strong incentives to divide multiple rebel groups through strategic partial peace when rebels groups are in a competitive environment. When one rebel group's conflict behavior may influence other groups' military capabilities, the government is more likely to seek strategic partial peace.

My empirical analyses have shown that while low to intermediate numbers of rebel groups increase the likelihood of strategic partial peace agreements, increasingly high numbers of rebels groups reduce the probability of partial peace agreements. In addition, this relationship is also conditional on the size of conflict zone. The government pursues strategic peace when a small-sized conflict area is under the control of multiple rebel groups. When rebel

groups fight in a mountainous terrain, on the other hand, the government has less incentive to offer concessions to some rebel groups.

Finally, I find that the government's strategic peace may turn the tide in favor of the government during multi-party civil wars. Successful strategic peace weakens the remaining rebel groups' capabilities and increases the probability of government victory. Future study should delve further into understanding how the government's strategic partial peace influences the cohesion among remaining rebel groups or the remaining rebel groups' conflict behaviors.

Appendix

Equilibrium Analysis

Given two information sets, both players have four pure strategies. As the revolutionary type R prefers the status quo ($-\alpha < 0 < c < k$), however, it always chooses $\sim accept$. Thus, we can consider the following two conditions:

1. The rebel group's strategy is ($accept|NR; \sim accept|R$)

In this case, G 's posterior beliefs about the rebel group and the political shock are as follows:

$$\pi(NR, GS) = q \quad \pi(NR, RS) = 1 - q \quad \pi(R, GS) = 0 \quad \pi(R, RS) = 0$$

G 's expected utility of renegeing an agreement is

$$EU_G(R) = q \times \alpha + (1 - q)(-\alpha) = 2\alpha q - \alpha$$

G 's expected utility of implementing an agreement is

$$EU_G(I) = q \times (\alpha - c) + (1 - q)(-c) = \alpha q - c$$

Thus, G chooses *renege* if $2\alpha q - \alpha > \alpha q - c$

$$q > \frac{\alpha - c}{\alpha} \equiv q^*$$

G chooses *implement* if $2\alpha q - \alpha \leq \alpha q - c$

$$q \leq \frac{\alpha - c}{\alpha} \equiv q^*$$

- (i) When $q > q^*$, NR chooses $\sim accept$ because $EU_{NR}(accept) = -\alpha q < EU_{NR}(\sim accept) = 0$. Thus, this cannot be a PBE.

- (ii) When $q \leq q^*$, NR chooses *accept* because $EU_{NR}(accept) = qc + (1 - q)c = c > EU_{NR}(\sim accept) = 0$. In this case, G 's expected utilities are as follows:

$$EU_G(\sim offer) = 0$$

$$\begin{aligned} EU_G(offer) &= pq \times \alpha + p(1 - q)(-\alpha) + (1 - p)q \times 0 \\ &\quad + (1 - p)(1 - q) \times (-\varepsilon) \\ &= pq(2\alpha - \varepsilon) + p(\varepsilon - \alpha) + \varepsilon(q - 1) \end{aligned}$$

Thus, G offers peace if $pq(2\alpha - \varepsilon) + p(\varepsilon - \alpha) + \varepsilon(q - 1) \geq 0$

$$p \geq \frac{\varepsilon(1 - q)}{q(2\alpha - \varepsilon) + 1} \equiv p^*$$

On the other hand, G does not offer peace if $pq(2\alpha - \varepsilon) + p(\varepsilon - \alpha) + \varepsilon(q - 1) < 0$

$$p < \frac{\varepsilon(1 - q)}{q(2\alpha - \varepsilon) + 1} \equiv p^*$$

Taken together, we can find two PBEs. First, for $q \leq q^*$ and $p \geq p^*$ the government chooses the strategy $S_G = \{offer, implement\}$ and the rebel group chooses the strategy $S_R = \{accept|NR, \sim accept|R\}$. Second, for $q \leq q^*$ and $p < p^*$ the government chooses the strategy $S_G = \{\sim offer, implement\}$ and the rebel group chooses the strategy $S_R = \{accept|NR, \sim accept|R\}$.

2. The rebel group's strategy is ($\sim accept|NR; \sim accept|R$)

G 's last information set is reached with probability zero along the equilibrium path of play. G 's beliefs at this information set are therefore simply the priors:

$$\begin{aligned} \pi(NR, GS) &= pq \quad \pi(NR, RS) = p(1 - q) \quad \pi(R, GS) = (1 - p)q \quad \pi(R, RS) \\ &= (1 - p)(1 - q) \end{aligned}$$

In this condition, there is one PBE. For $q \geq q^*$, the government selects the strategy $S_G = \{\sim offer, renege\}$ and the rebel group selects the strategy $S_R = \{\sim accept|NR, \sim accept|R\}$.

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Part 2: Is Power in the Eye of the Beholder? Heterogeneous Perceptions of Relative Capabilities and Negotiated Settlements

War ends when combatants come to share a similar perception about their relative capabilities (Blainey 1988). Scholars have argued that uncertainty about an adversary's military capability is critical to both the onset and termination of conflicts. In the literature on civil war, however, actor-level variations in the level of uncertainty have been widely ignored. When do combatants have different perceptions of relative capabilities? How do those perceptions affect the likelihood of negotiated settlements in civil wars?

Even after prolonged conflicts, combatants' subjective perceptions of relative capabilities may not be shared by each other. In the early 1950s, the CIA sent paramilitary teams to train and lead Tibetan resistance fighters against China. According to Fravel (2008, 81), "Although the CIA's support never came close to altering the balance of power between the rebels and the PLA in Tibet, the Chinese leaders' knowledge of external support, especially from the United States, no doubt had a strong psychological impact on their sense of China's internal vulnerability to external influence." Likewise, combatants' subjective perceptions of relative capabilities may change depending on the context of the conflict.

This paper mainly deals with a rebel group's context-dependent perception about the government's advantage in relative capabilities. In many

cases, rebels may have a significant capability disadvantage. However, a rebel group's perception of relative capabilities can be different from the objective power gap. Thus, this study is particularly focused on exploring when a rebel group underestimates the government's supremacy in power. This is not well tested in many existing works on civil war settlements.

This study aims to make four primary contributions to the current scholarship on civil war settlements. First, while focusing on information problems, this paper examines when a rebel group underestimates the government's supremacy in relative capabilities and how this perception about the power gap influences negotiated settlements. Second, this paper shows that the impact of relative capabilities on peace settlements is contextually bound. Third, it also demonstrates that there is a non-monotonic relationship between combatants' power perceptions and negotiated settlements. Lastly, this paper bridges the gap between the rationalist and psychological approaches to information failures as the cause of the lack of negotiated settlements by focusing on a rebel group's heterogeneous perception.

To capture a rebel group's heterogeneous perception of relative capabilities, we need a comparison between combatants' subjective perceptions of relative capabilities and the objective power gap. In this paper, I assume that the troop size gap represents the relative material capabilities of the government and each rebel group. For the empirical analysis, I apply the heteroscedastic choice model to capture the heterogeneous impact of relative capabilities on negotiated settlements in civil wars. My empirical analysis

suggests that a rebel group underestimates the government's supremacy in relative capabilities when the rebel group receives external weapons support/logistic support, when many other rebel groups are still fighting, when conflicts occur around the border area, or when lootable resources are in the conflict zone. On the other hand, a rebel group overestimates a government's power superiority as the state's polity score increases. More importantly, I find a non-monotonic relationship between combatants' perceived relative capabilities and negotiated settlements.

Relative Capabilities and Negotiated Settlements

One of the typical characteristics of civil wars is power asymmetry between the government and a rebel group (Zartman 1995). At the onset of a civil war, the government often has a larger army, more military allies, and greater access to resources than the rebel groups (Gent 2011). Thus, rebels may have a significant capability disadvantage while fighting with the government. Given the government's advantage in relative capabilities, many scholars have argued that the government's capability decisively influences the duration and outcome of civil wars.

Fearon and Laitin (2003) argued that the government's policy and military capabilities and the reach of government institutions into rural areas were most critical in deterring rebel challenges. Fearon and Laitin (2003) used GDP per capita as a proxy for the government's military, administrative, and

bureaucratic capacity to deter insurgency based on the assumption that the government's military, administrative, and bureaucratic capacity are highly correlated with GDP per capita. They find that GDP per capita is negatively associated with conflict onset.

On the other hand, DeRouen and Sobek (2004) argue that the government's bureaucratic quality accounts for civil war duration and outcome. Using the Political Risk Services Group's (PRSG) International Country Risk Guide, DeRouen and Sobek (2004) find that governments with higher quality bureaucracies may better avoid rebel victory. Based on the PRSG's Risk of Expropriation and Repudiation of Government Contracts measure, Fearon (2005) also claims that states with higher primary commodity exports would have a greater risk of expropriation and repudiation of government contracts, and face more rebel challenges.

Lastly, the government's capability to access societal resources may influence the civil war outcome. For example, Thies (2010) focuses on state extractive capacity to examine the impact of those variables on the likelihood of conflict onset. Using several different measures of the government's extractive capacity (total revenue/GDP ratio, total tax/GDP ratio, and relative political capacity), Thies (2010) finds that state capacity is not associated with civil war onset.

Recently, scholars have begun to point out that the absolute measure of government capability is inappropriate because civil war outcomes may also be affected by the size of the rebel group (Hartzell and Hoddie 2007). Based on the

new measure of relative capabilities between the government and rebel groups, scholars have examined how the power gap between the government and the rebels may affect the civil war duration and outcome.

In the context of interstate wars, wars are more likely to occur under power parity (Kugler and Lemke 1996; Moul 2003; Reed 2003; Hegre 2008). For example, Reed (2003) claims that information asymmetries are greatest when states approach power parity, thereby enhancing the probability of militarized conflict. Slanchev (2004, 816) also asserts that parity in observable capabilities makes informational problems more severe by reducing states' abilities to infer their chances in war correctly.

Unlike interstate wars, however, recent works on civil wars suggest that the negotiated settlement often occurs under power parity (Clayton 2013; Hultquist 2013). Unlike interstate wars, a rebel group may enter negotiation with the government when a rebel group has proven its ability to challenge the government militarily (Clayton 2013). As long as the government views weak rebels as minor threats (Hultquist 2013), the government will seek a military tactic rather than a diplomatic solution against those weak rebel groups. While using terror or guerrilla strategies, weak rebels tend to avoid direct battle with the more powerful governments (Buhaug, Gates, and Lujala 2009; Butler and Gates 2009; Cunningham, Gleditsch, and Salehyan 2009). As long as a rebel group seeks either terror or guerrilla strategies, it is harder for a weak group to achieve concessions through negotiated settlements.

Moreover, weak rebel groups may have a higher marginal utility of fighting (Gent 2011; Walter 2009; Buhaug, Gates, and Lujala 2009; Butler and Gates 2009; Hirshleifer 1991) because those rebel groups have nothing left to lose on the battlefield. In this case, it is also difficult for the government to reach agreements with weaker groups. Taken together, civil wars may last longer when rebels are weak (Buhaug, Gates, and Lujala 2009; Cunningham, Gleditsch, and Salehyan 2009) and combatants are more likely to negotiate peace under power parity. This means that rebel groups should have some strength in order to receive concessions from the government. Thus, strong rebel groups may have more opportunities to negotiate peace with the government.

However, the existing literature on civil war settlements has paid less attention to the fact that combatants' perceptions about relative capabilities may vary according to the conflict context. Given that many bargaining theories of war focus on combatants' beliefs about current or future relative capabilities, in particular, we need to examine when combatants either overestimate or underestimate relative capabilities.

Multiple Actors and Heterogeneous Perceptions of Relative Capabilities

Uncertainty over Relative Capabilities

Many bargaining theories of civil war settlements suggest that commitment problems are critical barriers to negotiated settlements (Fearon 1998; Hartzell

and Hoddie 2003, 2007; Walter 1997, 2002). Given large power asymmetries between a government and the rebel groups, the rebels have great concerns that the government may exploit the situation once they disarm after a peace settlement. Thus, rebel groups have less incentive to negotiate peace with the government due to their lack of capability to punish a government for renegeing on its promises.

Compared to the commitment perspective, the information explanation has received less attention in the study of prolonged civil wars. Fearon (1995) argued that combatants would prefer a settlement to the costs and risks of war if they had complete information about the outcome of a war. Given that prolonged civil wars reveal more information about combatants' capabilities or resolve, however, scholars argue that the longer a civil war has lasted, the more likely it is to end (Fearon 2004; Reagan 2002). According to Fearon (2004, 290), "fighters on both sides of an insurgency typically develop accurate understandings of the other side's capabilities, tactics, and resolve" after a few years of civil war. War itself may provide the information necessary for combatants to end the war (Wagner 2000; Filson and Werner 2002; Smith and Stam 2004; Reiter 2009).¹⁶

However, not all fighting may reveal credible information at the same rate. Recently scholars have claimed that significant uncertainty regarding military capabilities or resolve may still persist during prolonged conflicts or

¹⁶ For example, Wagner (2000) claims that warfare provides information about the relative strength of opponents and allows combatants to have more congruent estimates of their probability of success. This information enables each combatant to conclude bargains.

even after fighting ends (Mattes and Savun 2010; Slantchev 2003). According to Mattes and Savun (2010, 513-514), fighting in civil wars tends to reveal less information about relative capabilities because it can be hard to identify who the rebels are. Given that guerilla fighters often hide among civilians, civil wars may last longer because it is hard to accurately assess relative strength. Thus, informational problems may explain combatants' unwillingness or inability to agree to settlements during civil wars.

In the context of civil wars, there may be three types of uncertainty about one's adversaries: uncertainty over the adversaries' intention, uncertainty over the adversaries' military capabilities or resolve, and uncertainty over conflict outcomes (Bas and Schub 2014). In particular, however, uncertainty over capabilities is critical because combatants can make judgements about their adversaries' resolve or intentions partly based upon their demonstrated capabilities (Kaplow and Gartzke 2015).

According to Geoffrey Blainey (1988), crises are more likely to end in war when combatants have different perceptions about their relative capabilities. Conversely, war ends when combatants come to share a similar perception about their relative capabilities. It is often pointed out that uncertainty about relative capabilities may shrink the range of negotiated settlements between the government and the rebels.¹⁷ Given uncertainty over relative capabilities,

¹⁷ Given that uncertainty is one of the central topics in every major tradition in IR (Rathbun 2007), scholars have attempted to measure the belligerents' lack of information or misperception about their opponents. For example, to measure "system uncertainty" Huth, Bennett, and Gelpi (1992) use several indicators such as the number of major powers, the diffusion of military capabilities across states, and the number of competing blocs of states in the system. On the other hand, Reed (2003) uses parity in military capabilities as a proxy for

combatants' heterogeneous perceptions of relative power is a challenge to bargained settlement.

Multiple Actors and Heterogeneous Perceptions of Relative Capabilities

Combatants' heterogeneous perceptions may be a function of both combatants' lack of information (or perceptual biases) and different interpretations of the status quo. Combatants' subjective perceptions of relative capabilities may change depending on the context of the conflict. In the context of civil wars, combatants may either overestimate or underestimate their bargaining leverage or winning probabilities. Given that combatants' shared perceptions about relative power is critical to the termination of conflicts, it is important to examine when combatants may have more heterogeneous perceptions of relative power. To know whether or not combatants overestimate or underestimate relative power would ideally be possible through comparison to an objective level of relative capabilities (Renshon 2009, 119).

When civil wars are multilateral, multiple groups often create acute information problems about relative capabilities. The more actors there are, in particular, the more complicated the information problems during the war (Walter 2009). If multiple actors are incorporated in incomplete information settings, in particular, informational problems may become more severe. In civil

uncertainty. He argues that information asymmetries are greatest when states approach power parity, thereby enhancing the probability of militarized conflict. Slanchev (2004, 816) also argues that parity in observable capabilities makes informational problems more severe by reducing states' abilities to infer their chances in war correctly.

wars with multiple actors, the battlefield often reveals information less clearly than when there are only two combatants (D. Cunningham 2006, 2010).

Moreover, the government and each rebel group may not interact in isolated pairs in multi-party civil wars. This means that each rebel group's perception of relative capabilities can be influenced by other groups' fight. For example, some rebel groups' ceasefire with the government or defeat would increase the government's relative capability and inevitably threaten the remaining groups' future status. For example, there were multiple rebel groups in Cambodia's civil war in the 1970s and many outside actors in the war in Iraq in the 2000s. In this case, rebel groups' subjective perceptions of relative capabilities may be different from when only one rebel group fights with the government. Thus, combatants may have different perceptions of relative capabilities in multiparty civil wars.

Hypothesis 1: When other rebel groups are actively fighting with the government, a rebel group underestimates the government's advantage in relative capabilities.

In addition to the multiple rebel groups, external support changes the dynamics of civil wars, thereby influencing rebel groups' perceptions of relative power. When rebel groups seek to survive, in particular, external support makes it easier for those groups to keep surviving while fighting with the government. Given large power asymmetries between a government and the rebel groups, small rebel groups are often at a resource disadvantage and those groups need to mobilize a significant military capacity. In this case, external support can

provide an obvious source of funding for rebel groups to survive (Salehyan, Gleditsch, and Cunningham 2011, 716).

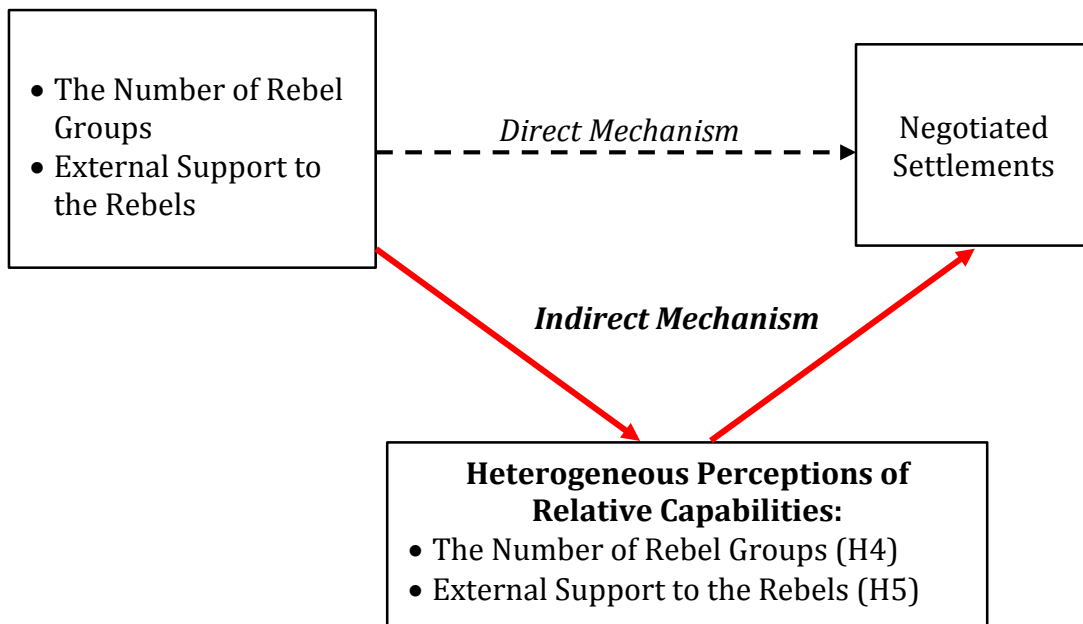
Existing literature demonstrates that direct external support to states and rebels plays a critical role in prolonging civil wars (Regan 2002). According to Aronson, Huth, Lichbach and Chang (2015), larger rebel forces and access to more secure shelter allow a rebel group to achieve more favorable conflict outcomes. Recently, Sawyer, Cunningham, and Reed (2015) also argued that direct financial support offered to rebels in civil wars creates uncertainty about rebel capability and exacerbates rebel commitment problems. When external support is offered to the rebels, in particular, the government will continue fighting rather than settle the dispute.

When the rebels receive external support, there are higher levels of uncertainty over relative capabilities. One reason might be that external support for rebels may be conducted in relative secrecy. In this case, reliable information about relative capabilities is difficult to obtain. The government has higher uncertainty about how the external support can be translated to a rebel group's fighting capacity (Sawyer, Cunningham, and Reed 2015). While the government is uncertain about its opponent's capabilities, rebel groups receiving external support may underestimate a government's advantage in relative capabilities and demand more than the government is willing to concede. Given that a rebel group may overestimate its bargaining leverage, it is harder to share a similar perception about their relative capabilities.

Hypothesis 2: When a rebel group received external support, it underestimates the government's advantage in relative capabilities.

Figure 2.1 plots two causal mechanisms through which contextual factors such as the number of rebel groups and external support to the rebels affect the likelihood of negotiated settlements. While the direct mechanism deals with the average effect of four contextual factors on the likelihood of negotiation settlements, the indirect causal mechanism shows under what condition a rebel group either overestimates or underestimates relative capabilities. My theoretical argument focuses on the indirect causal mechanism regarding the impact of combatants' heterogeneous perceptions of relative power on negotiated settlements.

Figure 2.1 A Rebel Group's Perception of Relative Capabilities and Negotiated Settlements



Data and Method

In this section, I test my hypotheses by evaluating the impact of the heterogeneous perceptions of relative capabilities on the likelihood of negotiated settlements. To test Hypotheses 1 to 6, I use data on civil wars included in the UCDP/PRIO Armed Conflict Dataset in which the unit of analysis is a dyad-year. The dataset consists of intrastate conflicts occurring between 1989 and 2009. The dependent variable is whether or not there is a negotiated settlement or ceasefire agreement between each rebel group and the government in a given year.

My empirical analysis is based on two assumptions: 1) the troop size gap represents relative material capabilities between the government and each rebel group, 2) the more severe the informational problems, the more likely combatants are to have heterogeneous perceptions about relative capabilities. To examine a rebel group's perception of the government's advantage in relative capabilities, I drop some observations where a rebel group is more powerful than the government.

Measuring Relative Capabilities

Given that it is hard to measure the military capability of rebel groups, some scholars have used the government's troop size or capacity to capture the government's likelihood of winning (Brandt et al. 2008; DeRouen and Sobek 2004; Mason and Fett 1996; Mason, Weingarten and Fett 1999). In other studies,

scholars have used ordinal coding such as asymmetry, parity, or superiority to measure the strength of the rebels compared to the government (Buhaug, Gates, and Lujala 2009; Cunningham, Gleditsch and Salehyan 2009). However, it is hard to capture temporal variation within dyads using those measurements (Hultquist 2013, 628).

Thus, this study uses each combatant's troop size from the UCDP. The UCDP reports these data starting from the year 1989 based on multiple data sources, such as *Military Balance*, *SIPRI Yearbook*, or reports from Human Rights NGO or the United Nations (Harbom and Högladh 2006). In this paper, the relative capability of the rebels is operationalized as the natural log of the ratio of the number of rebel troops to the number of government troops.

Key Independent Variables

To examine the effect of external support on the likelihood of negotiated settlements through the combatants' perceived power gap, I use the disaggregated UCDP coding of external support: troops as secondary warring party, access to territory, access to military or intelligence infrastructure, weapons, material/logistics, and training/expertise support. Given that weapons or material/logistic support is directly associated with uncertainty over relative capabilities, I include those two dummy variables of external support in both the mean and variance equations. I also use the UCDP data to measure the number of active rebel groups.

Control Variables

Existing literature also suggests the belligerents' perceptions of the power gap may vary according to geography and the combatants' religious claim. First, geographic factors such as location and terrain may affect combatants' perceptions of relative capabilities.¹⁸ Natural resources, as well as geographic considerations, may influence the local balance of power between the rebels and the government (Le Billon 2001). Thus, natural resources may also lead to rebel groups' heterogeneous perceptions of relative capabilities.¹⁹ Given that natural resources in the conflict zone provide an opportunity to finance a rebellion (Collier and Hoeffler 2004), natural resources may indirectly affect the likelihood of negotiated settlements by changing a rebel group's perception about relative power. Third, rebel groups' religious claims or demands may affect their perceptions about relative capabilities.²⁰ The religious identity of the rebel side may affect the rebels' perceptions of the power gap. Thus, when a rebel group's demands are explicitly anchored in a religious tradition, it might

¹⁸ Buhaug et al. (2009) argue that geographic factors such as location and terrain may interact with rebel fighting capacity and together play a crucial role in determining the duration of conflict. They also find that conflicts that occur far away from the state center last longer. Their findings imply that the belligerents' perceptions of relative capabilities can be different according to geographical factors. In this case, increased uncertainty about relative power inhibits bargained settlement through combatants' heterogeneous perceptions.

¹⁹ Due to the incentives and opportunities created by natural resources, conflicts in regions with rich natural resources may last longer (Fearon 2004; Lujala 2010). According to Lujala (2010), the duration of conflict is doubled when natural resources are located inside the actual conflict zone. Her findings support the claim that natural resources play a key role in armed conflicts due to the incentives and opportunities they provide for rebel group. On the other hand, Humphreys (2005) finds no evidence that natural resources are associated with particular difficulties in negotiating ends to conflicts, contrary to arguments that loot-seeking rebels tend to prolong wars.

²⁰ In some civil wars, the rebels fight over whether the state or a region of the state should be ruled according to a specific tradition, as in the cases of Afghanistan and Sudan. Some rebel groups may sacrifice their tangible benefits for their religious claims. In this case, the government finds it hard to coerce and deter the insurgency by the threat of physical destruction (Toft 2007, 101).

perceive the conflicting issues as indivisible (Toft 2007; Svensson 2007). Lastly, as shown in the regression table, two additional control variables are used for the empirical analysis. First, external support to the government is a dummy variable and I also use the disaggregated UCDP coding of external support to the government side. Second, polity scores are used as a control variable. Table 2.1 describes the key variables and control variables used in the empirical models.²¹

Table 2.1 Summary Statistics

Variable	Mean	Sta. Dev.	Min	Max	N
Negotiated Settlements	0.066	0.249	0	1	1,087
Relative Capability	-3.581	2.228	-9.492	2.590	792
Rebel External Support (Weapons)	0.429	0.495	0	1	566
Rebel External Support (Logistics)	0.334	0.472	0	1	566
Government External Support (Weapons)	0.631	0.483	0	1	591
Government External Support (Logistics)	0.680	0.468	0	1	591
Mountains in Conflict Zone (%)	34.920	29.219	0	99.588	799
Conflict at Border	0.793	0.405	0	1	799
Lootable Resources	0.259	0.438	0	1	799
No. of Rebel Groups	1.607	0.890	1	5	1,087
Polity Scores	1.481	6.356	-9	10	1,021
Religious Claim	0.297	0.457	0	1	861

Heteroscedastic Choice Model

To incorporate uncertainty over relative capabilities, Reed (2003, 67) once pointed out that we needed a richer model to model the heterogeneity explicitly.

²¹ I use Buhaug et al.'s (2009) data for several control variables. To measure mountainous terrain, Buhaug et al. used GIS to create a conflict-specific measure of mountainous terrain and included a dummy variable to mark off conflict zones that abut the border. Nature resources are coded 1 if natural resources such as oil, gas, or drugs are in the conflict zone. Lastly, I use Svensson's (2007) data to code whether or not a rebel group has a religious claim.

Thus, to explicitly incorporate combatants' heterogeneous perceptions of relative capabilities, I use Calvo, Chang, and Hellwig's (2014) heteroscedastic choice model in which the variance equation applies only to relative capabilities measure in (1). The mean and variance components are jointly estimated and the variance θ is modeled as a function of the combatants' geographical considerations, lootable resources, the number of rebel groups, and external support to rebel groups as in (2).

$$\Phi^{-1}(Y) = \beta_0 + \beta_1 \left(\frac{\text{power gap}}{\exp(\theta)} \right) + \beta_2 X_2 + \dots + \beta_k X_k \quad (1)$$

$$\theta = \gamma_1 T_{iK} + \gamma_2 V_{iK} + \dots + \gamma_k I_{iK} \quad \log(\theta_{iK}) \sim N(\mu_\theta, \sigma_\theta^2) \quad (2)$$

The goal here is to incorporate the combatants' perceptions about relative capabilities. Given that combatants either overestimate or underestimate their opponents' military capacity, this model allows us to capture the combatants' heterogeneous perceptions of relative capabilities. When all covariates T, V, or I have no effect in (2), (1) will be reduced to the standard probit model because $\exp(0)=1$. On the other hand, the model suggests that combatants underestimate (or overestimate) the government's advantage in relative capabilities when the estimate on each covariate is positively (or negatively) signed and statistically significant. In this heteroscedastic choice model, I estimate two equations, one for the mean equation and the other for the variance equation. While the mean equation includes the estimated effect of the covariates on the likelihood of negotiated settlements, the variance equation

accounts for variances around the power gap between the government and each rebel group.

Statistical Analysis

I test the hypotheses by fitting the heteroscedastic choice models. The results of the empirical analysis are reported in Table 2.2. In the Appendix, I also include a measure of the number of years since the last partial peace agreement with cubic splines to deal with temporal dependence of recurrent peace agreements (Beck, Katz, and Tucker 1998). My argument suggests that the number of rebel groups and external support to the rebels may affect a rebel group's heterogeneous perceptions of relative capabilities. In the heteroscedastic choice model, a positive and significant coefficient in the variance equation means that a rebel group underestimates the government's advantage in relative capabilities, thereby indirectly influencing the likelihood of negotiated settlements.

The mean equation in Table 2.2 shows the average effect of each variable on negotiated settlements. First, all models except Models 2 and 7 indicate a strong, statistically significant positive relationship between relative capabilities and negotiated settlements in the mean equation ($p < 0.05$). In Model 7, this relationship is also weakly significant ($p < 0.1$). This means that the condition of power parity increases the likelihood of negotiated settlements including ceasefire agreements.

Second, external support to the rebels (weapons support and logistic support) has a negative relationship with negotiated settlements in all models.

Both the coefficients of weapons support and logistic support to the rebels are significantly negative in the mean equation. Thus, fewer negotiated settlements would be signed when a rebel group receives either external weapon support or logistic support. On the other hand, external support to the government does not influence negotiated settlements in all models. Third, the number of rebel groups negatively affects negotiated settlements. Given that many other rebel groups are actively fighting with the government, a rebel group has less incentive to negotiate a peace with the government. Fourth, while mountains in the conflict zone decrease the likelihood of negotiated settlements, conflict at the border has no significant impact. Lastly, lootable resources are negatively associated with negotiated settlements only in Model 6 but a rebel group's religious claim is not significant.

In addition to the mean effect, Table 2.2 reports a rebel group's heterogeneous perceptions of relative capabilities under different contexts. In all models, external support to the rebels is positively signed in the variance equation. When the rebels receive either weapons or logistic support from the outside, combatants are more likely to underestimate the government's advantage in relative capabilities.²² The government may have uncertainty about how the external support can be translated to a rebel group's fighting capacity. Given external support, rebel groups may demand more than the government is willing to concede. Thus, it is harder for combatants to find the overlapping

²² My empirical analysis shows that a rebel group also underestimates the government's advantage when the rebels receive training/expertise support from other countries. The results of the empirical analysis are reported in the Appendix.

bargaining range and to share a similar perception about relative capabilities. As in the mean equation, on the other hand, external support to the government does not significantly affect combatants' perceptions of relative capabilities.

Second, the variable for the number of rebel groups is positively signed in the variance equation in all models. These results suggest that other rebel groups' active involvement in civil wars can be factored into a rebel group's perceptions of relative capabilities. Existing literature argues that multiple rebel groups may affect the duration of civil wars because it is harder to assess the relative balance of power across all veto players (Cunningham 2006, 2011). The results in Table 2.2 show that each rebel group in multiparty civil wars is more likely to underestimate the power gap.

Both external support to the rebels and the number of rebel groups are still significant even after controlling for the lootable resource, combatants' geographic considerations and a rebel group's religious claims. In Models 5 and 6, the lootable resources variable is positively signed in the variance equation. Rebel groups may engage in resource predation to fund costs necessary for their insurgency. Since abundant natural resources may increase the feasibility of continuing an insurgence (Buhaug, Gates, and Lujala 2009; Buhaug and Lujala 2005; Fearon 2004; Humphreys 2005; Lujala, 2010; Ross 2006), combatants may underestimate the current relative capabilities.

Regarding combatants' geographical considerations, in Models 7 and 8 conflict at border is only significant in the variance equation, whereas this variable does not affect the mean predicted probability of negotiated

settlements.²³ Lastly, the rebels' religious demands fail to meet my expectation. In Models 9 and 10, I add a rebel group's religious claim variable. The effect of a rebel group's religious claim is not significant in either the mean or the variance equation.²⁴

Taken together, the results in Table 2.2 suggest that combatants' perceptions about relative capabilities are not identical. Combatants may either overestimate or underestimate relative capabilities under the different contexts of civil wars. While power parity increases the mean predicted probability of negotiated settlements in civil wars, the effect of relative capabilities on the negotiated settlement becomes weaker when rebel groups receive external support (weapons and material/logistic support), when the number of rebel groups increases, when rebel groups fight around the border area, or when there are lootable resources in the conflict zone. On the other hand, a government's power superiority becomes more important when a state's polity score increases.

²³ Proximity to international boundaries exerts a significant impact on the underestimation of the government's advantage in relative capabilities. When conflicts occur around an international border, combatants tend to underestimate the current relative capabilities because it is easier for rebel groups to survive. On the other hand, conflicts in mountainous terrain decrease the mean predicted probability of negotiated settlements but this variable does not affect the variance.

²⁴ When a rebel group's demands are explicitly anchored in a religious tradition, the supremacy of the government in relative capabilities does not affect the likelihood of peace settlements. Moreover, this may not affect combatants' perceptions about power.

Table 2.2 Heteroscedastic Choice Models of Negotiated Settlements

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
Mean Equation										
Rebel External Support (Weapons)	-1.201** (0.450)		-1.247* (0.525)		-3.173** (0.845)		-2.648** (0.801)		-1.751** (0.539)	
Rebel External Support (Logistic)		-0.986* (0.423)		-1.010* (0.493)		-3.570** (1.114)		-3.612** (1.214)		-1.609** (0.547)
Gov. External Support (Weapons)			-0.349 (0.450)		0.199 (0.519)		0.193 (0.552)			
Gov. External Support (Logistic)				0.144 (0.487)		0.279 (0.625)		-0.107 (0.564)		
Mountains in Conflict Zone (%)					-0.026* (0.012)	-0.038** (0.014)	-0.022+ (0.012)	-0.034* (0.015)		
Conflict at Border							-1.509 (1.846)	-0.980 (1.472)		
Lootable Resources					-0.460 (0.593)	-1.426* (0.688)				
No. of Rebel Groups	-0.553* (0.281)	-0.422+ (0.248)	-0.716* (0.348)	-0.657* (0.330)	-1.667** (0.505)	-1.803** (0.539)	-1.779** (0.492)	-1.563** (0.465)	-0.809* (0.366)	-0.478 (0.324)
Polity Scores	0.156** (0.056)	0.145* (0.058)	0.171* (0.073)	0.195* (0.086)	0.378** (0.099)	0.454** (0.138)	0.409** (0.105)	0.391** (0.113)	0.183** (0.062)	0.165** (0.062)
Relative Capability	2.613* (1.067)	1.840** (0.661)	4.306* (2.186)	3.344* (1.522)	8.186* (4.103)	9.867* (4.485)	10.881+ (5.767)	12.081* (4.880)	3.817* (1.922)	2.216* (0.923)
Religious Claim									-0.674 (0.891)	-1.077 (0.878)
Constant	1.877** (0.698)	1.430* (0.597)	2.512* (0.919)	2.100* (0.857)	6.874** (1.766)	8.380** (2.108)	8.151** (2.418)	8.566** (2.404)	2.791** (0.879)	2.044** (0.711)
Variance Equation										
Rebel External Support (Weapons)	0.934** (0.329)		0.878* (0.364)		1.408** (0.376)		0.864** (0.256)		1.179** (0.409)	
Rebel External Support (Logistic)		0.705* (0.343)		0.644* (0.310)		1.154** (0.397)		1.180** (0.428)		1.109* (0.518)
Gov. External Support (Weapons)			0.661+ (0.360)		0.270 (0.273)		0.270 (0.284)			
Gov. External Support (Logistic)				0.480 (0.334)		0.361 (0.227)		0.324 (0.223)		
Mountains in Conflict Zone (%)					0.000 (0.006)	0.005 (0.004)	-0.003 (0.005)	0.001 (0.004)		
Conflict at Border							0.763* (0.366)	0.628* (0.291)		
Lootable Resources					0.496* (0.218)	0.504** (0.168)				
No. of Rebel Groups	0.557** (0.204)	0.429* (0.175)	0.601** (0.223)	0.493** (0.175)	0.628** (0.195)	0.514** (0.166)	0.582** (0.170)	1.563** (0.465)	0.765** (0.285)	0.488* (0.235)
Polity Scores	-0.072* (0.0357)	-0.066+ (0.038)	-0.096* (0.046)	-0.089+ (0.046)	-0.104** (0.030)	-0.092* (0.036)	-0.081* (0.033)	-0.043 (0.032)	-0.078* (0.038)	-0.061 (0.038)
Religious Claim									-0.329 (0.451)	-0.123 (0.505)
Log Likelihood	-67.224	-68.791	-51.048	-51.397	-35.259	-33.169	-33.746	-32.252	-57.237	-58.473
N	376	376	239	239	188	188	188	188	312	312

Note: Results are from a heteroscedastic choice model. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed).

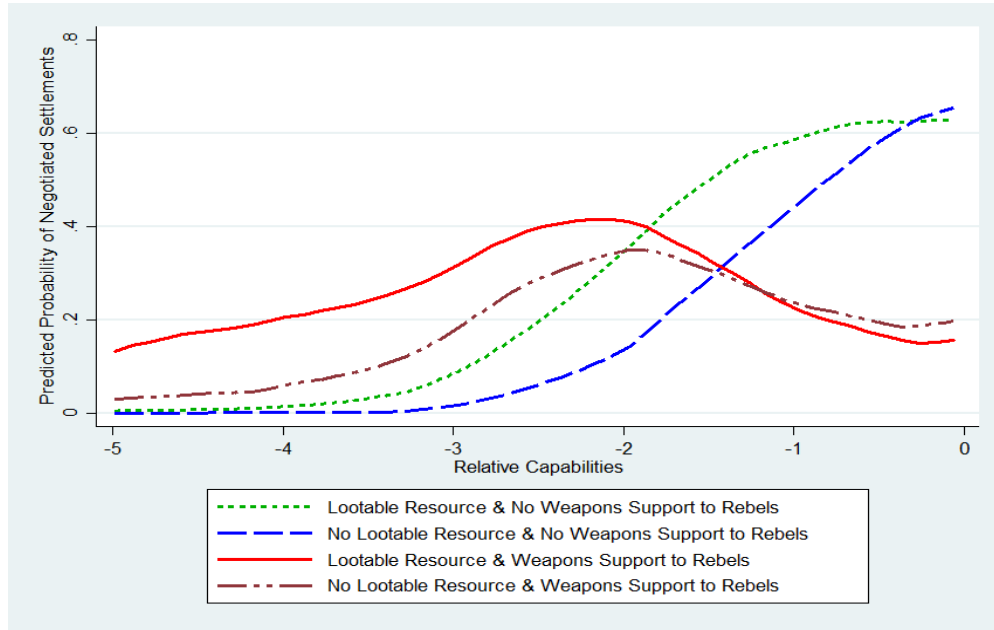
Underestimation of Relative Capabilities and Negotiated Settlements

In this section, I compare the impact of dyadic relative capabilities on the likelihood of negotiated settlements in different conditions. Figure 2.2 and 2.3 show the effect of combatants' perceptions of dyadic relative capabilities on the predicted probabilities of negotiated settlements. I use estimates from Models 5 and 6 in Table 2.2 to calculate the predicted probability of negotiated settlements over the range of dyadic relative capabilities.

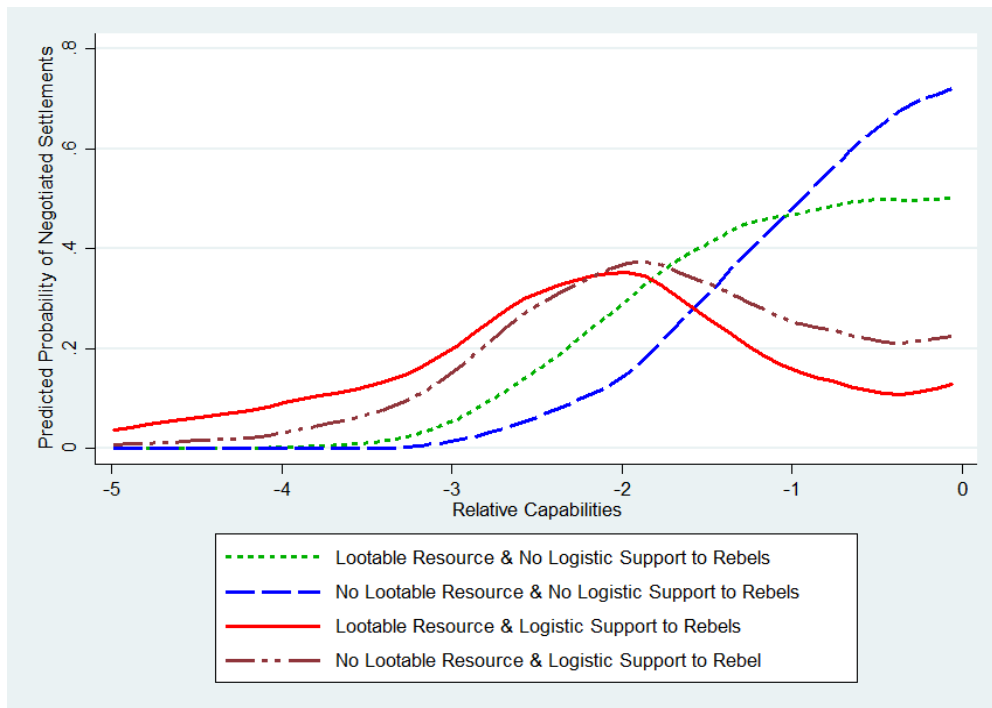
In Figure 2.2, there are four distinct probability distributions corresponding to the level of dyadic relative capabilities. In Figure 2.2, 0 in relative capabilities indicates power parity. Given both external support (weapons and logistic support) and lootable resources in the conflict zone, a rebel group has a greater opportunity to make a negotiated settlement with the government as long as the rebel group is weak. However, the effect of power perception on the likelihood of negotiated settlements varies at different values of a rebel group's relative capabilities. When a rebel group has a similar amount of power as the government, in particular, the effect of external support and lootable resources decreases the predicted probability of negotiated settlements. On the other hand, more negotiated settlements are signed under power parity when there is neither external support nor lootable resources.

Figure 2.2 Predicted Probability of Negotiated Settlements Conditional on Lootable Resources and External Support to the Rebels

(a) Lootable Resource and Weapons Support to Rebels (M5)

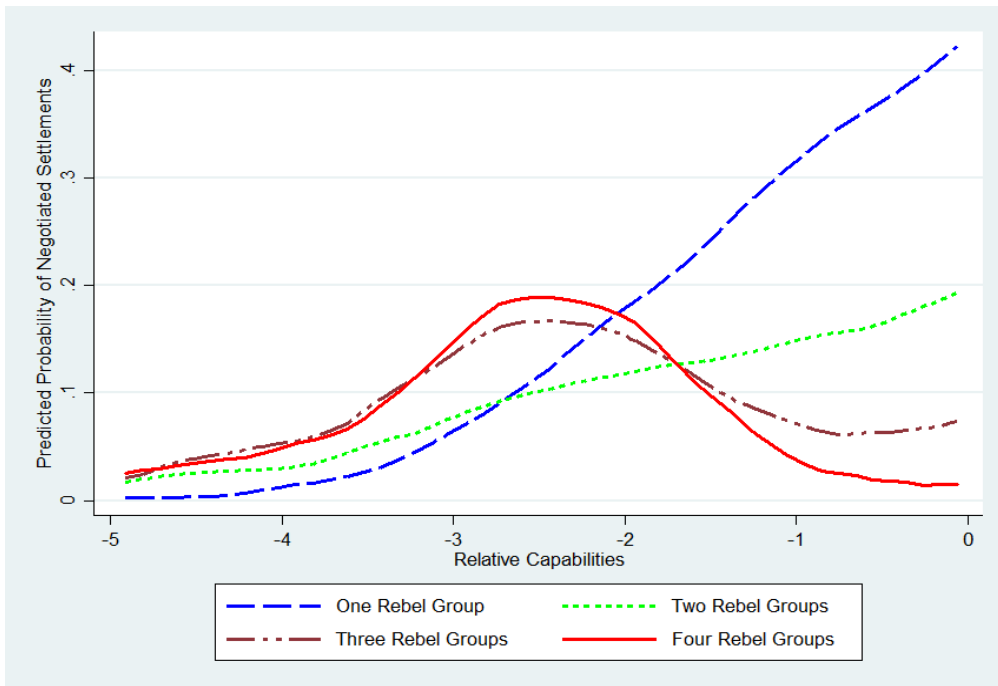


(b) Lootable Resource and Logistic Support to Rebels (M6)



In Figure 2.3, there are also four different probability distributions according to the number of rebel groups. Figure 2.3 illustrates that a rebel group has a greater opportunity to make a negotiated settlement with the government under power parity in civil wars with one or two rebel groups. When there are more than three active rebel groups, however, power parity does not lead to negotiated settlements because other rebel groups' military capabilities are also factored into a rebel group's perception of relative capabilities. As long as many other rebel groups are still fighting, it is hard to find the overlapping bargaining range under power parity.

Figure 2.3 Predicted Probability of Negotiated Settlements Conditional on the Number of Rebel Groups (M5)



Both Figure 2.2 and 2.3 suggest that there may be a non-monotonic relationship between combatants' perceived relative capabilities and negotiated settlements. External support to the rebels and other rebel groups' fight may create more uncertainties about rebel capability, but that uncertainty would be beneficial to bargaining only as long as a rebel group is weak. When the government and a rebel group approach power parity, on the other hand, uncertainty over relative capabilities due to external support makes it hard for both combatants to find the overlapping bargaining range.

Conclusion

According to Geoffrey Blainey (1988), war ends when combatants come to share a similar perception about their relative capabilities. Fighting might reduce uncertainty about relative military capabilities. However, combatants' perceptions about relative capabilities are not often homogeneous. In this paper, I have examined under what conditions a rebel group either overestimates or underestimates the government's advantage in relative capabilities. My empirical analysis suggests that negotiated settlements are more likely to occur under power parity, which is different from interstate wars. I also find that a rebel group underestimates the material power gap when it receives external support or when many rebel groups fight together.

The results also suggest that a focus on the mean effect of relative capabilities is insufficient given combatants' heterogeneous perceptions of

power. Instead, I demonstrate that it is also important to consider combatants' subjective perceptions of the objective power gap in the bargaining context. As an example, I illustrate that there is a non-monotonic relationship between some contextual factors (such as external support to the rebels and the number of rebel groups) and negotiated settlements. Uncertainty over relative capabilities might occur due to other rebel groups' conflict behaviors or external support. Given that a rebel group is sufficiently weak, those contextual factors cause combatants to underestimate the government's supremacy in relative capabilities, thereby indirectly increasing the likelihood of negotiated settlements. On the other hand, the same contextual factors may hinder bargaining when the government and a rebel group approach power parity.

Appendix

Table 2.3 Heteroscedastic Choice Models of Negotiated Settlements Using Splines

	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
Mean Equation										
Rebel External Support (Weapons)	-1.285** (0.451)		-1.446** (0.524)		-3.857** (1.110)	-3.465** (1.234)	-3.152** (0.979)	-3.574* (1.390)	-1.950** (0.569)	-1.620** (0.580)
Rebel External Support (Logistic)		-0.964* (0.424)		-1.027* (0.488)						
Gov. External Support (Weapons)			-0.226 (0.508)		-0.078 (0.571)	0.509 (0.708)	-0.025 (0.614)	0.084 (0.639)		
Gov. External Support (Logistic)				0.406 (0.542)						
Mountains in Conflict Zone (%)					-0.036* (0.015)	-0.038** (0.015)		-0.034** (0.016)		
Conflict at Border							-0.926 (1.684)	-0.882 (1.756)		
Lootable Resources					-0.920 (0.821)	-1.449* (0.795)				
No. of Rebel Groups	-0.645* (0.293)	-0.496+ (0.264)	-0.765* (0.353)	-0.683* (0.327)	-2.423** (0.789)	-1.738** (0.589)	-2.177*** (0.605)	-1.510** (0.460)	-0.928** (0.389)	-0.528 (0.337)
Polity Scores	0.183** (0.061)	0.168** (0.062)	0.173* (0.078)	0.200* (0.092)	0.461** (0.139)	0.428** (0.159)	0.452*** (0.125)	0.359** (0.116)	0.214** (0.068)	0.176** (0.064)
Relative Capability	3.017* (1.067)	2.104** (0.752)	3.937+ (2.062)	2.877* (1.522)	8.935+ (5.178)	8.120+ (4.270)	10.460 (6.449)	10.782* (4.730)	4.823* (2.157)	2.525* (1.044)
Religious Claim									-1.046 (0.929)	-1.189 (0.874)
Years since the Last Settlement	-0.050 (0.338)	0.029 (0.335)	0.223 (0.394)	0.431 (0.397)	-0.013 (0.568)	0.330 (0.619)	0.076 (0.561)	0.530 (0.613)	-0.318 (0.389)	-0.104 (0.376)
Spline 1	0.035 (0.070)	0.046 (0.069)	0.116 (0.085)	0.138+ (0.083)	0.127 (0.120)	0.119 (0.120)	0.133 (0.116)	0.150 (0.118)	-0.026 (0.080)	0.006 (0.077)
Spline 2	-0.018 (0.024)	-0.021 (0.024)	-0.048 (0.031)	-0.052+ (0.029)	-0.063 (0.045)	-0.047 (0.041)	-0.062 (0.043)	-0.056 (0.040)	0.003 (0.028)	-0.006 (0.027)
Spline 3	0.004 (0.004)	0.004 (0.004)	0.009+ (0.005)	0.008+ (0.005)	0.015+ (0.008)	0.008 (0.006)	0.014 (0.008)	0.009 (0.006)	0.002 (0.004)	0.002 (0.004)
Constant	2.315** (0.778)	1.697* (0.656)	2.681** (0.969)	1.948* (0.886)	9.395** (2.766)	7.899*** (2.214)	8.937** (2.579)	7.940 (2.443)	3.479** (1.002)	2.280** (0.773)
Variance Equation										
Rebel External Support (Weapons)	0.936** (0.300)		0.987** (0.368)		1.428** (0.389)	1.213** (0.561)	1.018** (0.318)	1.318** (0.586)	1.256** (0.386)	1.201** (0.550)
Rebel External Support (Logistic)		0.722* (0.311)		0.672* (0.301)						
Gov. External Support (Weapons)			0.376 (0.426)		0.096 (0.285)	0.257 (0.279)	0.114 (0.333)	0.241 (0.250)		

Gov. External Support (Logistic)				0.269 (0.421)						
Mountains in Conflict Zone (%)					0.001 (0.006)	0.005 (0.005)	-0.002 (0.006)	0.001 (0.005)		
Conflict at Border							0.650 (0.401)	0.675 (0.430)		
Lootable Resources					0.503* (0.249)	0.476** (0.218)				
No. of Rebel Groups	0.602** (0.191)	0.481** (0.170)	0.629** (0.214)	0.504** (0.171)	0.685** (0.234)	0.488** (0.171)	0.667** (0.220)	0.435** (0.157)	0.793** (0.252)	0.502** (0.228)
Polity Scores	-0.082* (0.034)	-0.075+ (0.036)	-0.089* (0.045)	-0.090+ (0.047)	-0.108** (0.029)	-0.087* (0.046)	-0.091** (0.932)	-0.033 (0.041)	-0.088* (0.034)	-0.065* (0.036)
Religious Claim									-0.062 (0.467)	0.426 (0.524)
Log Likelihood	-64.454	-66.707	-48.005	-48.693	-31.988	-31.973	-30.951	-31.016	-54.944	-57.415
<i>N</i>	376	376	239	239	188	188	188	188	312	312

Note: Results are from a heteroscedastic choice model. * $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed).

**Table 2.4 Heteroscedastic Choice Models of Negotiated Settlements
(Training Support to the Rebels)**

	M21	M22
<i>Mean Equation</i>		
Rebel External Support (Training)	-0.710* (0.411)	-0.800 (0.506)
Gov. External Support (Training)		0.650 (0.597)
No. of Rebel Groups	-0.612** (0.295)	-0.603 (0.379)
Polity Scores	0.154** (0.601)	0.155** (0.079)
Relative Capability	2.301* (0.938)	2.319 (1.496)
Years since the Last Settlement	-0.037 (0.332)	0.326 (0.389)
Spline 1	0.045 (0.069)	0.155 (0.083)
Spline 2	-0.022 (0.024)	-0.063 (0.030)
Spline 3	0.005 (0.004)	0.011 (0.005)
Constant	1.733** (0.716)	1.510 (0.998)
<i>Variance Equation</i>		
Rebel External Support (Training)	0.644** (0.307)	0.673** (0.338)
Gov. External Support (Training)		-0.103 (0.403)
No. of Rebel Groups	0.568** (0.208)	0.531** (0.258)
Polity Scores	-0.068* (0.035)	-0.059 (0.042)
Log Likelihood	-67.529	-49.780
<i>N</i>	312	239

Note: Results are from a heteroscedastic choice model.

* $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed).

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Part 3: Reputation for Toughness vs. Reputation for Human Rights Protection: When do Rebels Update Beliefs about the Government's Resolve?

Walter (2006, 2009a) once argued that reputational concerns for toughness influence governments to fight thoroughly against early challengers in order to deter other potential separatist groups. Likewise, rebel groups hold beliefs about the government's behavioral tendencies based on its past actions and the government has a reputation for those behavioral characteristics. However, a government has an incentive to build its reputation for toughness, but a reputation will not form if other actors placed in the same situation would do the same thing (Mercer 1996; Tomz 2007). If a government's resolve is not directly observable by rebel groups, under what conditions does a government's past behavior manifest its strong resolve?

In this paper, the government's reputation for toughness refers to rebel groups' beliefs about a government's resolve—"the extent to which a state will risk war to achieve its objectives" (Mercer 1996, 1-2). Given that reputation is a product of the observer's perception and interpretation of an actor's past behavior, many existing studies tend to downplay that the conflict context may affect rebel groups' beliefs about the government's resolve and that a reputation for one issue area can sometimes affect another reputation.

In the context of civil wars, this paper examines the impact of the government's indiscriminate violence on the likelihood of negotiated settlements. The so-called "tough" or "unexpected" event is more effective in signaling a government's strong resolve to rebel groups. A government's reputation for toughness may influence rebel groups' behaviors when the government signals strong resolve despite high political costs. Thus, the government's indiscriminate violence against civilians may signal its toughness more effectively to rebel groups when attacking civilians is costly at either the domestic or international level.

When the government considers indiscriminate violence against civilians, both the rebel groups and the international community may observe the government's conflict behavior.²⁵ To the best of my knowledge, this is the first study to demonstrate that a government's reputational concern for human rights protection may also influence a rebel group's belief about the government's resolve. In particular, I assume that there is a trade-off relationship between two different reputations: 1) a reputation for resolve and 2) a reputation for keeping human rights standards.

My empirical analysis suggests that the government's indiscriminate violence effectively signals its resolve to rebel groups. This signaling effect is stronger when the government has a good reputation for keeping human rights standards because it is perceived to be harder for those states to invest more

²⁵ In this case, the government's reputation for toughness is a function of signaling to two different audiences.

heavily in a reputation for toughness. My case study of Israel's indiscriminate violence against Palestinian civilians also shows that Israel could effectively signal its strong resolve when it targeted civilians in the face of heightened international pressure.

A Government's Reputation in IR

When other political actors hold beliefs about persistent behavioral tendencies or characteristics of the government, the government has a "reputation" for those characteristics or behaviors (Dafoe et al. 2014). The government's reputation depends on what it has done in the past. However, many IR scholars have acknowledged that governments may have multiple reputational concerns over a host of issue areas (Downs and Jones 2002; Goldsmith and Posner 2005).

In the context of conflicts, in particular, IR scholarship has focused on how a state's reputation affects the behavior of its adversaries. Scholars have claimed that governments invest in reputations for toughness and these reputations may influence other actors' behaviors. They have examined how a state's loss of its reputation for resolve by backing down in a previous crisis can influence its potential adversaries' willingness to make future challenges (Huth 1984; Huth and Russett 1988; Crescenzi 2007; Walter 2006, 2009a). During conflicts, governments are assumed to care about their coercive reputations.

In addition to coercive reputations, on the other hand, governments are also assumed to have reputations for cooperative behaviors (Dafoe et al. 2014, 374). For example, a state may have reputations for complying with treaties

(Simmons 2010), being a reliable ally (Miller 2012) or repaying debt (Tomz 2007). In the context of conflicts, some scholars have examined whether the government's reputation for honesty explains how bluffing in one crisis influences bargaining in the future (Guisinger and Smith 2002; Sartori 2002).

Given multiple reputational concerns, some scholars have argued that reputations do not influence a government's behavior (Snyder and Diesing 1977; Hopf 1994; Mercer 1996; Press 2005). For example, Mercer (1996) argues that leaders attribute decisions to back down in a crisis to situational characteristics of the crisis rather than to any dispositional feature of the opponent. Press (2005) also finds no evidence that either Nazi leaders or the U.S. leaders made predictions about the future behaviors of their adversary states based on those states' record of backing down in the past. Reputation critics such as Press claim that a government's power and interest are more critical than its reputation for resolve (Weisiger and Yarhi-Milo 2015, 479).

Despite the existence of multiple reputations, IR scholarship tends to consider a government's reputation in a more compartmentalized fashion. Unlike reputations merely shaped by consistent patterns of behavior, some governments have incentives to actively signal and construct their behavioral commitments to build their reputations (Dafoe et al. 2014, 378). In this case, different reputations are not always independent of each other and a reputation for one issue area can sometimes affect another reputation.

In the context of civil wars, scholars have examined two of the government's reputations separately: 1) a reputation for toughness and 2) a

reputation for human rights protection. For example, Walter (2006, 2009a) deals with the government's reputation for toughness. She simply claims that potential rebel groups infer the government's resolve from whether or not the government fights with early challengers based on chain store games. On the other hand, Salehyan et al. (2014) focus on the democratic state's reputation for keeping human rights standards during civil wars. They argue that when democracies are foreign sponsors for rebel groups, foreign sponsors not only support the less abusive rebel groups, but also sanction the more abusive ones.

Scholars have paid less attention to the government's reputation for human rights protection during civil wars. When the government targets civilians, however, the government's indiscriminate violence signals not only its resolve but also its lack of willingness to respect human rights to two different audiences: rebel groups and the international community. A good reputation might be useful to an audience in that it helps predict the government's future behavior. However, a government does not always want a good reputation for cooperativeness or compliance with international norms or treaties. Thus, during conflicts, governments may value reputations for toughness more than they value reputations for compliance with international norms.

A Government's Incentive to Manifest Toughness

A Government's Resolve as Private Information

There are numerous factors that may influence the government's resolve. According to Morrow (1985, 487), there are three sources of resolve: military

capabilities, willingness to take risks, and whether the status quo is objectively favorable or not. Walter (2009b, 250) also points out that the degree of domestic political support can be another source of the government's resolve. Given those multiple factors, incomplete information about any of these factors can create uncertainty about the government's resolve. In the context of civil wars, however, rebel groups often have limited information about how much a government values the stakes and how many resources it is willing to expend to fight with rebel groups. While information about the government's military capabilities are publicly acknowledged, rebel groups have less information about a government's willingness to fight (Walter 2009b, 245-246).

Given uncertainty about the government's resolve, the government's reputation for toughness is a function of a rebel group's belief about the government's resolve. Thus, whether or not the government is resolute is critical to rebel groups' behaviors. While a highly-resolved government may decrease the rebels' incentives to keep challenging, a weakly-resolved one would face continuous challenges from rebel groups. Walter (2006, 2009a) once argued that serious reputational concerns for toughness create governments' incentives to fight harshly against early challengers to deter additional ones in the future.

Governments have an incentive to display toughness to end conflicts regardless of their genuine resolve type. The highly resolved government needs to signal its resolve to rebel groups in order to avoid wasting resources that would be spent if a fight occurred. On the other hand, the weakly-resolved government also needs to overstate its resolve to deter those groups. Given

uncertainty about resolve, a weakly resolved government can also build its reputation for toughness by “mimicking” the behavior of a strongly resolved government.

A Government's Incentive to Manifest Toughness

Since the government's military capabilities are publicly acknowledged in civil wars (Walter 2009b, 245-246), whether or not the government is resolute is critical to rebel groups' decisions about continuing to fight. Table 3.1 shows different scenarios for rebel groups' beliefs about the government's resolve. In scenario (1), the government (G) is not highly resolved (L) and rebel groups (R) also believe it (l). In this case, R is more likely to keep fighting with G and G would make some concessions to R . If the government G will be involved in fighting with rebel groups R for some period of time, G should spend some extra resources besides its concessions. In both scenarios (2) and (4), as R believes G 's type is h , R does not want to keep fighting and so G may end the civil war. In scenario (3), even if G 's type is H , R believes that G 's type is l . In this case, R is more likely to keep fighting, but the highly resolved government G will also try to defeat R without any concessions. This means that the government should spend its resources to defeat the rebel groups.

Table 3.1 Four Scenarios for Rebel Groups' Beliefs about the Government's Resolve

		Rebel Groups (<i>R</i>) Believe the Government's (<i>G</i>) Resolve is:	
The Government's True Resolve is:	<i>Low Type (l)</i>		<i>High Type (h)</i>
<i>Low Type (L)</i>	<i>R</i> : More Incentives to Fight <i>G</i> : Make Concessions	→	<i>R</i> : Less Incentives to Fight <i>G</i> : Saving Resources
<i>High Type (H)</i>	<i>R</i> : More Incentives to Fight <i>G</i> : No Concession	→	<i>R</i> : Less Incentives to Fight <i>G</i> : Saving Resources

A rebel group's decision to fight with the government is conditioned on both a rebel group's type and its prior beliefs about the government's type (Fearon 1994; Walter 2006). As long as ending the civil war is the most favorable outcome to the government, the government has an incentive to demonstrate its strong resolve to rebel groups regardless of its type.²⁶ If the government is a low type, the government has an incentive to misrepresent its resolve to deter rebel groups' challenges. On the other hand, the highly resolved government also needs to signal its resolve to rebel groups in order to save resources since fighting requires some resources. As Table 3.1 shows, both the high and the low type government have an incentive to manifest toughness. The equilibrium analysis in the Appendix suggests that a weak type of government also has an incentive to expend resources for building reputation for toughness as long as a rebel group's prior belief about the government's resolve is high and the government's time horizon is long enough.

²⁶ If ending the conflict is not the preferred outcome, the strong government might not have this incentive. Recently, Slantchev (2010) has argued that strong actors can benefit from tactical surprise in a war when their opponent mistakenly believes that they are weak. In many cases, however, ending the conflict is the best outcome to the government in the context of civil war.

Context-dependent Reputation for Toughness

Reputations for toughness can shift payoffs in a direction that makes concession less attractive for oneself and more attractive for one's opponent (Ikenberry 2000, 98). The government's reputation for toughness forms when the audience views the government's actions as applying to its disposition rather than the particulars of the situation (Mercer 1996). The government's manifested toughness, however, cannot always signal its strong resolve to rebel groups.

A government's manifestation of resolve may be interpreted under the context in which its behavior is observed. Tomz (2007) claims that when creditors observe a default or payment, they must decide how much responsibility comes from external circumstances beyond the debtor's reach, and how much is due to the government's resolve. By the same logic, rebel groups' perceptions of a government's resolve also depend critically on the weight that rebel groups attach to situational factors versus the government's dispositional factors. Thus, rebel groups tend to perceive the government's strong resolve when a government manifests its resolve through the tough event.

Thus, a government's reputation for toughness (RT) is a function of the magnitude of the difficulty (δ) in manifesting its resolve as well as a government's observed conflict behavior (θ):

$$RT_{it} = \int_0^{t-1} f(\theta_{t-1}|\delta_{t-1}) \quad (1)$$

The government that shows a greater willingness to manifest its resolve (θ) in spite of a difficult situation (δ) has a greater reputation for toughness.

A Government's Manifested Toughness through Indiscriminate Violence

Multiple Audiences and Indiscriminate Violence as a Tough Event

Since a tough event is more effective in signaling a government's resolve to rebel groups, the government, as a signal sender, has an incentive to manifest its resolve through unexpected crisis behavior. A government's reputation for toughness may influence rebel groups' perceptions about its resolve when the government signals strong resolve despite high political costs. Thus, a government's reputation for toughness may influence rebel groups' behaviors when targeting the civilian population is perceived to be more difficult. As long as attacking civilians is a costly behavior, the government's indiscriminate violence may also signal its toughness to rebel groups.

Indiscriminate violence against civilians might be a government's effective military strategy.²⁷ In particular, the government may target civilians when the rebel group draws on a large base of civilian supporters (Valentino et al. 2004) or when the government has no capacity to defeat or appease the

²⁷ Scholars have also pointed out that rebel groups have incentives to use violence against civilians to inflict costs on governments in an effort to extract concessions (Hultman 2012). When rebel groups are too weak to fight the government (Valentino 2004; Pape 2005; Hultman 2007), in particular, they have incentives to attack civilians to coerce support from civilians (Wood 2010; Wood et al. 2012).

rebels in other ways (Valentino 2004; Downes 2008). Given the close relationship between civilians and the rebels in some civil wars, governments strategically target civilians during civil wars. In this case, the government may catch the fish by “draining the sea” (Valentino et al. 2004; Downes 2008).²⁸

According to Salehyan et al. (2014), however, violating human rights standards can be costly to a state’s reputation, both domestically and internationally, when a state is committed to human rights norms and standards. Given human rights norms protecting innocent civilians from being attacked, targeting civilians is politically costly. For example, when extrajudicial killings and forced disappearances were commonly used by all armed actors in 2006-2007, the UN Working Group on Enforced and Involuntary Disappearances recorded human rights violations in Sri Lanka (Human Rights Watch 2008) and Sri Lanka lost its seat on the UN Human Rights Council in 2008 (SIPRI Yearbook 2009).

Someone might argue that the government may target civilians privately. However, it is not easy for the government to hide its violation of human rights standards. Many works have also highlighted the role of international organizations, the media, non-governmental organizations, and human rights transnational advocacy networks in naming and shaming states who violate human rights. When both the Georgian and the Russian government targeted civilians in 2008, the international human rights organization could monitor

²⁸ Attacking civilians may also create logistical problems for rebel groups operating amongst the civilian population and drive a wedge between rebel groups and civilians (Lyll 2009). Downes (2007) also claims that the government’s indiscriminate violence can be effective in particular when the target population is geographically concentrated.

their human rights violations through the use of Geographic Information Systems (GIS) and satellite imagery. For example, the UN Institute for Training and Research Operational Satellite Applications Programme (UNOSAT) images reported that there was a high concentration of damage to buildings in clearly-defined residential areas in TaskhINVALI in Georgia (SIPRI Yearbook 2009).

Walter (2006, 2009a) once argued that potential rebel groups may be affected by the government's reputation for toughness and that serious reputational concerns for toughness created governments' incentives to fight harshly against early challengers. Given that attacking civilians is a costly behavior, the government's manifested resolve through indiscriminate violence may signal its toughness to rebel groups. In addition to the government's resolve, however, the government's indiscriminate violence may signal its lack of willingness to respect human rights to the international community at the same time.

During the Libyan Civil War, Libyan government forces were accused by international human rights organizations of shelling towns with heavy weapons and risking civilians indiscriminately. This example suggests that the international community as well as rebel groups may observe the government's indiscriminate violence against civilians. Thus, any attempts by the international community to stop targeting civilians would raise the political costs for the perpetrators (Krain 2005; Straus and Valentino 2007; DeMeritt 2015). Given that the international community tries to monitor and stop the government's

indiscriminate violence, the government's use of indiscriminate violence is perceived as costly by rebel groups.

Beyond the Trade-off Relationship between Two Reputations

The government's two different reputations will have competing effects on the rebel group's crisis behavior during civil wars. If rebel members would face more severe punishment by governments with extensive human rights abuses, the government's bad reputation for human rights may decrease a rebel group's incentive to fight. If states already have reputations for human rights abuses, those states are relatively free from naming and shaming. According to Haftner-Burton (2008), states such as Uganda and North Korea receive far less publicity from the international community despite horrible abuses.

On the other hand, a government's good reputation for human rights increases its incentive in that such a government should place human rights norms as one of its primary legal constraints. Although indiscriminate violence is considered to be effective, governments which have good reputations for human rights would find it hard to target civilians due to their concerns for keeping international humanitarian law. If the international community "names and shames" those states of human rights abuses, those states would lose a reputation for protecting human rights.

Thus, the government's reputation for human rights may also affect a rebel group's belief about the government's toughness. In the context of civil wars, it is much easier for governments with bad reputations for human rights to

invest more heavily in a reputation for toughness. On the other hand, governments with good human rights reputations may face some constraints in signaling toughness. Some states may actively develop reputations for keeping international humanitarian law that might be in conflict with a reputation for resolve. Others may prefer to build a reputation for toughness despite losing reputations for human rights. Given some tensions in building these two different reputations, rebel groups are more likely to fight in states that have good reputations for human rights.

A “tough” event is more effective in signaling a government’s strong resolve to rebel groups in that a reputation will not form if other actors placed in the same situation would do the same thing (Mercer 1996; Tomz 2007). Thus, given such a trade-off relationship between reputations for toughness and human rights, rebel groups are more likely to perceive the government’s strong resolve when governments with more reputational concerns for human rights would target civilians. Such an unexpected crisis behavior by a government increases rebel groups’ beliefs about the government’s resolve more effectively.

Empirical Analysis

Given that the empirical analysis focuses on an individual rebel group’s conflict behavior, a dyad-year version of the UCDP/PRIO Armed Conflict Dataset is used for the quantitative analysis. A dyad consists of two opposing actors in an internal conflict where at least one side is the government of a state. The use of

the dyadic data allows me to investigate the conflict behavior of each rebel group separately within the same country and conflict. The dependent variable is whether or not there is a negotiated settlement between each rebel group and the government given year. The dependent variable captures a rebel group's incentive to negotiate peace with the government. To test my hypotheses and argument, I use data on civil wars included in the UCDP/PRIO Armed Conflict Dataset.

There are two key independent variables for the empirical analysis. First, to measure a government's one-sided violence, I use the UCDP data on one-sided violence (Eck and Hultman 2007) because this data only deals with purposeful killings by combatants. The UCDP defines one-sided violence as the intentional and direct use of violence against civilians, resulting in at least twenty-five deaths per year. Second, my theory and hypotheses require information on the government's reputational concern for human rights. I use Fariss' (2014) latent human rights protection score to estimate each government's reputational concern for human rights. Fariss' latent score allows me to better capture systematic changes to the human rights country reports published annually by the U.S. Department of State and Amnesty International. Alternatively, I use the government's polity score to measure a government's reputational concern for human rights. According to Davenport and Armstrong (2004) and Bueno de Mesquita et al. (2005), democracy is a necessary condition for improvements in human rights protections. I also assume that regimes with high human rights

scores and polity scores are more exposed to either international or domestic criticism when targeting civilians.

To test a trade-off relationship between different reputations for toughness and human rights, I construct an interaction term consisting of the government's indiscriminate violence and the two key independent variables (a government's human rights protection score and polity score) to examine whether the government's reputational concern for toughness increases the influence of its indiscriminate violence against civilians on the likelihood of negotiated settlements. I also include several control variables such as the rebel group's indiscriminate violence, the number of rebel groups, and conflict intensity. Table 3.2 describes the key variables and control variables used in the empirical models.

Table 3.2 Summary Statistics

Variable	Mean	Sta. Dev.	Min	Max	N
Negotiated Settlements	0.044	0.204	0	1	1,885
Indiscriminate Violence _{t-1} (G)	1.586	1.607	1	10	1,362
Indiscriminate Violence _{t-1} (R)	1.604	1.543	1	10	1,362
Human Rights Scores (G)	-1.480	0.722	-3.134	1.604	1790
Polity Scores (G)	0.376	6.634	-10	10	1709
Conflict Intensity _{t-1}	5.321	1.563	3.219	10.330	788
Number of Rebel Groups (R)	1.630	0.924	1	6	1,191

The results of the empirical analyses are reported in Table 3.3. As the dependent variable is binary, I use the logit models and robust standard errors clustered on each conflict to account for within-group correlation. To deal with temporal dependence of recurrent peace agreements, I include a measure of the number of years since the last partial peace agreement with cubic splines (Beck,

Katz, and Tucker 1998) in Models 1 to 4. In Model 5, I use the non-nested multilevel model to control for unobserved heterogeneity at each conflict and year levels. While the estimated residual variation between years is 0.201, the estimated residual variation between civil war conflicts is 3.369. These variation show that observations are not independent within conflicts or years.

All Models in Table 3.3 suggest that rebel groups have more incentives to accept negotiated settlements in the present day when the government targeted civilians in the previous year. All coefficients for the government's indiscriminate violence variable (or Indiscriminate Violence_{t-1} (G)) are positive and significant at the 0.01 level. On the other hand, the coefficient for the rebel group's indiscriminate violence variable (or Indiscriminate Violence_{t-1} (R)) is not significant in Models 1 to 5.

More importantly, an interaction term between the government's indiscriminate violence and its human rights score (Indiscriminate Violence_{t-1} (G) × Human Rights Protection Score (G)) is positive and significant in Models 1, 2, and 5. An interaction term between the government's indiscriminate violence and its polity score (Indiscriminate Violence_{t-1} (G) × Polity Score (G)) is also positive in Models 3 and 4. These results are consistent with the argument that a government's reputation for toughness may influence rebel groups' behaviors more effectively when the government signals strong resolve despite high political costs.

Table 3.3 A Government's Indiscriminate Violence and Negotiated Settlements

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Indiscriminate Violence _{t-1} (G)	0.794*** (0.157)	0.769*** (0.141)	0.199** (0.074)	0.199** (0.075)	0.772*** (0.309)
Indiscriminate Violence _{t-1} (R)	0.044 (0.074)	0.053 (0.075)	0.064 (0.072)	0.073 (0.065)	0.035 (0.093)
Human Rights Scores (G)	-0.721+ (0.387)	-0.569 (0.389)			-1.006+ (0.575)
Indiscriminate Violence _{t-1} (G) × Human Rights Scores (G)	0.353*** (0.087)	0.338** (0.079)			0.398* (0.170)
Polity Scores (G)			-0.082+ (0.043)	-0.079+ (0.043)	
Indiscriminate Violence _{t-1} (G) × Polity Scores (G)			0.021 (0.014)	0.021 (0.014)	
Conflict Intensity _{t-1}	0.088 (0.107)	0.104 (0.105)	0.031 (0.118)	0.036 (0.117)	0.100 (0.131)
Number of Rebel Groups (R)		0.249 (0.163)		0.139 (0.146)	
Years since the Last Settlement	-0.541* (0.225)	-0.474* (0.231)	-0.508* (0.231)	-0.466* (0.236)	
Spline 1	-0.019 (0.015)	-0.015 (0.015)	-0.019 (0.014)	-0.016 (0.014)	
Spline 2	0.006 (0.007)	0.004 (0.007)	0.006 (0.006)	0.005 (0.006)	
Spline 3	-0.000 (0.002)	0.000 (0.002)	-0.001 (0.001)	-0.000 (0.001)	
Constant	-3.232*** (0.874)	-3.585*** (0.888)	-1.902 (0.001)	-2.225** (0.727)	-5.646*** (1.134)
Random Effect (Group Level)					Variance
Conflict ID					3.369
Year					0.201
Number of Years					21
Number of Conflicts					87
Number of Observations	731	731	727	727	731
Log-likelihood	-171.288	-170.304	-171.293	-170.908	-175.900
Pseudo R ²	0.155	0.159	0.132	0.134	

Note: Results are from a logit model (M1-4) and a non-nested multilevel model (M5). Clustered standard errors by conflict id in parentheses.

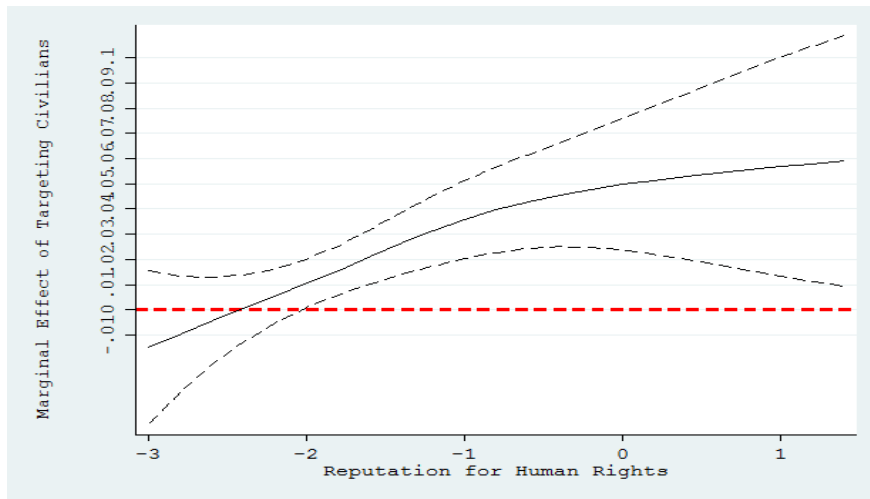
+*p* < 0.1, **p* < 0.05, ***p* < 0.01, ****p* < 0.001 (two-tailed).

Figure 3.1 shows the marginal effect of targeting civilians over a range of the government's human rights protection levels and polity levels. Both Figure 3.1 (a) and (b) show that the effect of the government's targeting civilians on the

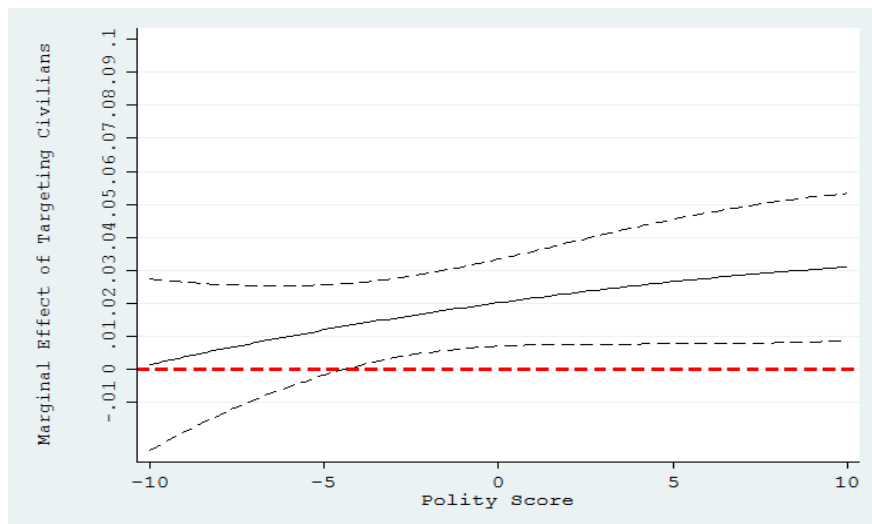
rebel group's incentive to accept a peace agreement is stronger when the government has higher reputational concerns for human rights.

Figure 3.1 Targeting Civilians and the Government's Reputation for Human Rights Protection

(a) Marginal Effects of Targeting Civilians Conditional on the Government's Human Rights Protection Scores



(b) Marginal Effects of Targeting Civilians Conditional on the Government's Polity Scores



In sum, results from estimating the likelihood of negotiated settlements on the UCDP/PRIO Armed Conflict Dataset suggest that rebel groups are more likely to accept the government's offer when the government recently manifested its resolve through one-sided violence against civilians. The government's indiscriminate violence creates more incentives for the rebels to accept the peace offer, especially when the government has a good reputation for protecting human rights because it is perceived to be harder for those states to invest more heavily in a reputation for toughness. However, the rebel group's indiscriminate violence does not affect the likelihood of negotiated settlements. This is because a weaker rebel group has more incentive to attack civilians to coerce support from them (Valentino 2004; Pape 2005; Hultman 2007; Wood 2010; Wood et al. 2012).

The Israeli Government's Reputation-Building through Indiscriminate Violence

In-depth process tracing, along with the quantitative analysis, helps to validate the causal mechanisms of the government's incentive to build its reputation for toughness through indiscriminate violence against civilians. As Walter claimed (2006; 2009a; 2009b), the government has more incentive to build its reputation when it anticipates a series of rebellions over time. This section deals

with the Israeli government's attempt to build its reputation for toughness through indiscriminate violence.

Since Israel has fought with multiple rebel groups, such as Hamas and Hezbollah, at the same time, it is important for the Israeli government to build a reputation for toughness. Thus, the case analysis on Israel's use of indiscriminate violence against civilians allows us to better understand why the government sometimes attacks civilians in the face of international or domestic criticism. Israel has occupied the territories of the Gaza Strip, the West Bank, the Golan Heights and parts of Southern Lebanon through numerous conflicts. The Israeli government has sometimes used violent repression against civilians to deter insurgency activity (UCDP Conflict Encyclopedia)²⁹ despite high levels of criticism from the international community.

In fact, Israel's reputation for toughness has changed over leadership and time. Rebel groups perceive that the successive Israeli government leader's reputation may differ from that of his predecessor. Given uncertainty about the new leader's resolve, rebel groups have incentives to challenge the government in order to gauge his resolve (Wolford 2007, 772). In particular, the crisis between Israel and Palestinians in Gaza shows how Israel wishes to build a reputation for toughness through indiscriminate violence against civilians. Israel needed to build its reputation for toughness before the Gaza War (2008-2009).

When Ariel Sharon's Likud government staged a unilateral Israeli pullout from Gaza in August 2005, this withdrawal was perceived as a humiliation for

²⁹ http://www.ucdp.uu.se/gpdatabase/gpcountry.php?id=79®ionSelect=10-Middle_East#

the Israel Defense Forces (Shlaim 2009) particularly after the 2006 electoral victory of Hamas in Gaza.³⁰ Israel withdrew from Gaza because Israel believed this action could end the rocket attacks and lead to a peace settlement. However, Israel's withdrawal led to the Hamas takeover in 2006 and rocket fire also persisted. In addition, Israel's reputation for toughness was also eroded "by the inconclusive 2006 War in Lebanon in which Hezbollah claimed it had achieved a 'divine victory'" (Lieberman 2013, 240).

During a three-week armed conflict between Israel and Palestinians in the Gaza Strip that began on 27 December 2008 and ended on 18 January 2009, Israel attacked civilian institutions in Gaza City while fighting with Hamas. As a result, 1434 people in Gaza were killed in the fighting and 960 of them were civilians, according to Palestinian officials. According to one report by Radhika Coomaraswamy, the U.N. Secretary-General's Special Representative for Children and Armed Conflict, "civilian targets, particularly homes and their occupants, appear to have taken the brunt of the attacks, but schools and medical facilities have also been hit." Another report by nine UN investigators also pointed out that 431 children and 114 women were killed by Israel's indiscriminate targeting (Reuter 3/23/2009).³¹ Such attacks led to damage to innocent Palestinian civilians and their properties.

³⁰ Since the Israeli evacuation in 2005, the Palestinian Authority (PA) had taken control of Gaza and the PA consisted of secular-minded Palestinian nationalists from the Fatah Party. Unlike Hamas, those nationalists believed that they could make a final agreement with Israel. In January 2006, however, Hamas won the legislative election and Hamas-led PA government was formed in March.

³¹ <http://www.reuters.com/article/2009/03/23/idUSLN537222>

The issue of dealing with Palestinians is central to Israel's international reputation because many governments and international organizations are highly interested in this issue in the West Bank, Gaza, and East Jerusalem. Thus, a group of top international judges and human rights investigators called for an inquiry into Israel's actions in Gaza (*NY Times* 2009/3/19). For example, the UN High Commissioner for Human Rights, Navanethem Pillay, called for independent investigations into possible war crimes committed by Israel.

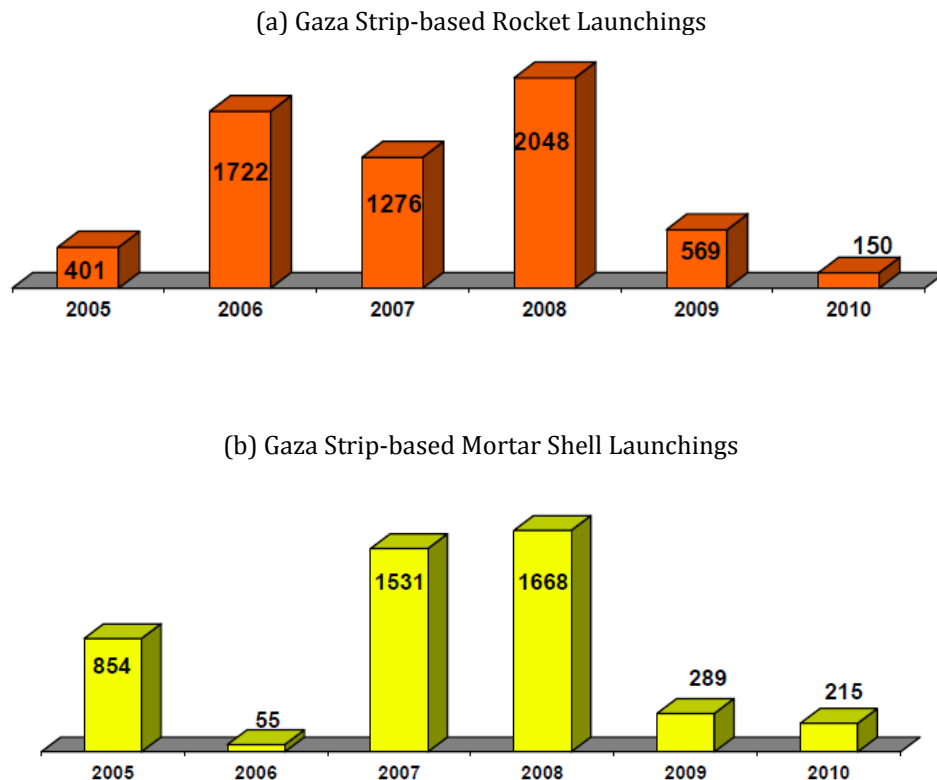
Given that Israel faced "naming and shaming" of human rights abuses, Israel's diplomatic and foreign reputation had been strongly tainted by its indiscriminate violence in the Gaza. According to the *NY Times*, Israel faced its "worst diplomatic crisis in two decades" (*NY Times* 2009/3/19) in the weeks since the Gaza war.³² On January 9 in 2009, the UN Security Council passed Resolution 1860 calling for an immediate ceasefire in Gaza and Israel's withdrawal by 14 votes to one abstention. On January 16 in 2009, the UN General Assembly also adopted Resolution ES-10/18 calling for the support of UNSC Resolution 1860. At that time, only three countries Israel, the U.S. and Nauru voted against this resolution.

Although Israel's reputation for human rights had been strongly tainted, however, Israel could successfully signal its resolve to Palestinian factions including Hamas through its indiscriminate violence. Israel's unexpected crisis behavior helped Hamas update its belief about the Israeli government's resolve. Hamas Politburo Chief Khaled Meshaal admitted that "he had been surprised by

³²http://www.nytimes.com/2009/03/19/world/middleeast/19israel.html?_r=3&hp|title=Israel&pagewanted=print

Israel's assault, its length, and its ferocity" (Zanotti et al. 2009, 8). Thus, Hamas not only announced a one-week ceasefire right after Israel declared a unilateral ceasefire but also reduced attacks toward Israel. Figure 3.2 shows a decline in the number of rocket launches or mortar shell attacks from the Gaza Strip toward Israel after an armed conflict (Israel Security Agency 2010).³³ Compared to 569 rocket launches in 2009, there were only 150 launches in 2010. Moreover, there was a drop in the number of mortar shell attacks in 2010 (289→215).

Figure 3.2 Gaza Strip-based Rocket and Mortar Shell Launchings (2005-2010)



³³ <http://www.shabak.gov.il/SiteCollectionImages/english/TerrorInfo/reports/2010summary2-en.pdf>

During an internal conflict, the government needs to weigh its reputation for toughness to deter a rebel group against its reputation for human rights to avoid international pressure. However, during a three-week armed conflict between Israel and Palestinians in the Gaza Strip, Israel weighed its reputation for toughness against a more intangible threat to its reputation for human rights. Given a trade-off relationship between reputations for toughness and human rights, this case suggests that rebel groups are more likely to perceive the government's strong resolve when governments would target civilians in the face of heightened international pressure.

Conclusion

A government has neither a single reputation nor an entirely compartmentalized one (Guzman 2008). Given that governments may have multiple reputational concerns, a reputation for one issue area may influence another reputation. During an internal conflict, in particular, some governments need to weigh their reputation for toughness against reputation for protecting human rights.

In this paper, I argue that there is a trade-off between reputations for resolve and reputations for complying with international human rights standards. When the government targets civilians despite high political costs, the government's behavior may signal its toughness to rebel groups. Given this trade-off relationship, some governments invest more heavily in reputation for toughness by intentionally ignoring another reputational loss.

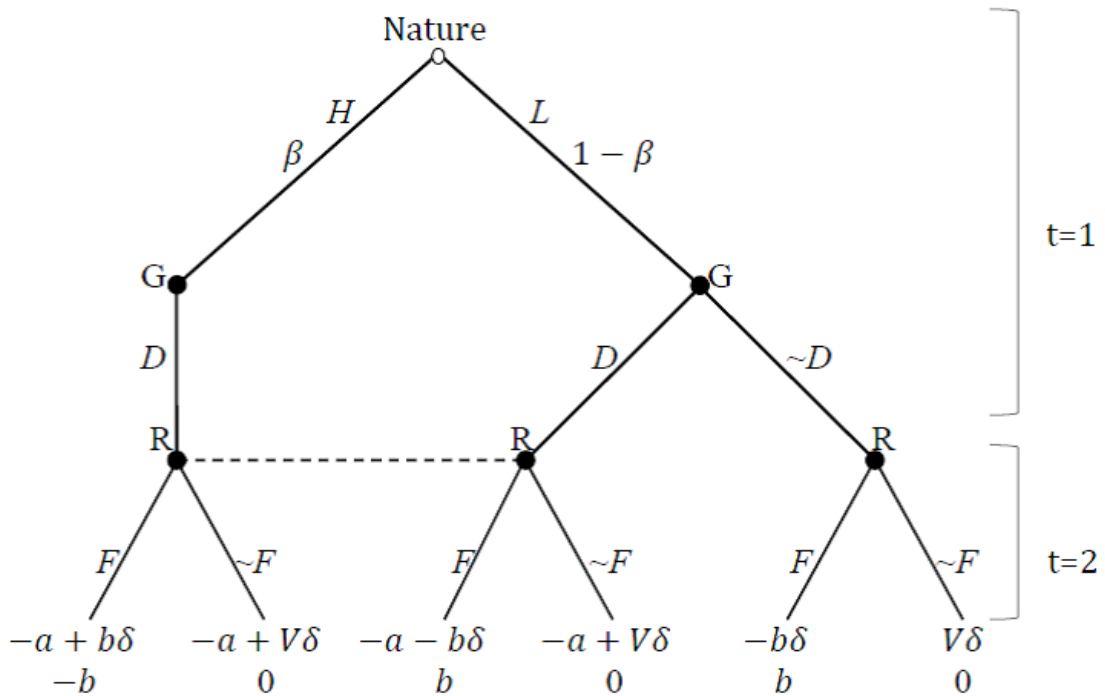
My quantitative analysis suggests that rebel groups are more likely to draw inferences about the government's strong resolve and accept the government's offer when the government engages in one-sided violence against civilians. This effect is even stronger when governments have a good reputation for keeping human rights standards. My quantitative analysis suggests that rebel groups interpret this violence as a signal particularly when the government does not have a penchant for attacking civilians in general.

The case analysis on Israel's indiscriminate violence against Palestinian civilians during a three-week armed conflict between Israel and Palestinians in the Gaza Strip also shows how Israel attempted to build a reputation for toughness through indiscriminate violence against civilians. Although Israel's reputation for human rights was strongly tainted due to its indiscriminate violence, Israel could successfully signal its resolve to Palestinian factions. Israel's unexpected crisis behavior allowed Hamas to update its belief about Israel's resolve.

Appendix

A. A Two-period Extensive Game for the Government's Incentive to Demonstrate Resolve

Figure 3.3 A Government's Incentive to Demonstrate Resolve



A two-period extensive game in Figure 3.3 shows a government's incentive to demonstrate its resolve. In this simplified game, a rebel group (R) has incomplete information about the type of the government's resolve: *High* (H) vs. *Low* (L). A player R 's prior belief about a government's (G) resolve is given by $p(H) = \beta$ and $p(L) = 1 - \beta$, respectively. While the high type of government (H) demonstrates its resolve at time period 1, the low type of government (L) has two options: *Demonstrate* (D) and *~Demonstrate* ($\sim D$). When G demonstrated resolve at the first stage, it pays a cost of $a > 0$ regardless of its type. At time

period 2, R can choose whether to keep fighting with G: (F) or ($\sim F$). Given that a high type of government can defeat a rebel group without any concession, it can achieve a benefit of $b > 0$ when R chooses the fighting strategy F . On the other hand, a low type of government pays a cost of $b > 0$ from fighting with a rebel group R. Lastly, if R does not challenge any more, G achieves a benefit of $V > 0$. I assume that each player's payoffs satisfy $0 < a < b < V$ and that G's benefit becomes R's cost, and vice versa. Three Perfect Bayesian Equilibriums (PBEs) can be found in this game:

B. Equilibrium Analysis

1. G's strategy is (D, D)

In this case, R's expected utility of choosing F is

$$EU_F(C) = \beta \times (-b) + (1 - \beta) \times b = -2\beta b + b.$$

R's expected utility of choosing the status quo ($\sim F$) is

$$EU_{\sim F}(C) = \beta \times 0 + (1 - \beta) \times 0 = 0.$$

Thus, R chooses $\sim F$ if $-2\beta b + b \geq 0 \leftrightarrow \beta \geq \frac{1}{2}$ whereas R chooses F if $\beta < \frac{1}{2}$.

If $\beta \geq \frac{1}{2}$, G has an incentive to choose (D, D) if $-a + V\delta \geq -b\delta \leftrightarrow \delta \geq \frac{a}{V+b}$, given

that R always chooses F when G chooses $\sim D$. If $\beta < \frac{1}{2}$, on the other hand, there is no pooling equilibrium.

2. G's strategy is $(D, \sim D)$

If $\beta < \frac{1}{2}$, R chooses F . Since $-b\delta > -a - b\delta$ is satisfied by assumption, there is a separating equilibrium regardless of the size of a discount factor δ . On the other hand, if $\beta \geq \frac{1}{2}$, R chooses $\sim F$ as long as $\delta < \frac{a}{v+b}$. Thus, under this condition, there exists another separating equilibrium.

The equilibrium of interest is a pooling equilibrium in which both types of government have incentives to demonstrate resolve. The equilibrium analysis suggests that a weak type of government also has an incentive to expend resources for building reputation for toughness if a challenger group's prior belief about the government's resolve is high and the government's time horizon is long enough. In this case, a rebel group would negotiate a peace with the government. This suggests that reputation is meaningful when the government discounts future highly. In other words, a discount factor is important in affecting the government's reputation for toughness. Simply put, we can assume that the government's reputation declines over time.

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