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# Qui bono? Foreign military, economic, diplomatic interventions, and the termination of civil wars: An integrative approach

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#### **ABSTRACT**

Foreign interventions are generally considered as game changers in civil wars. Yet the extant literature on this topic typically focuses on a single type of intervention, neglecting the effect of other intervention types deployed within the same conflict. Breaking with tradition, this article proposes a more extensive, multi-faceted bargaining model that integrates multiple types of interventions - military, economic, and diplomatic - that may be employed in a given conflict. The new framework analyzes how the interventions – either alone or in combination with others – shift the balance of power, often partly because interventions reveal previously private information regarding the true capacities of the warring parties. By including the asymmetrical aspects of civil wars in the framework, the article argues and finds support that although rebel-sided interventions usually produce their desired effect by enhancing the opposition's military capacity, state-sided interventions tend to backfire and ultimately undermine the government.

Por lo general, las intervenciones extranjeras se consideran puntos de inflexión en las guerras civiles. No obstante, las publicaciones existentes sobre este tema suelen centrarse en un solo tipo de intervención e ignorar el efecto de otros tipos que se implementan dentro del mismo conflicto. Para abandonar la tradición, este artículo propone un modelo de negociación multifacético y más amplio que integra varios tipos de intervenciones (militares, económicas y diplomáticas) que pueden emplearse en un conflicto determinado. El nuevo marco analiza de qué manera las intervenciones, ya sea por su cuenta o en combinación con otras, cambian el equilibrio del poder, con frecuencia de manera parcial, ya que las intervenciones revelan la información anteriormente privada sobre las verdaderas capacidades de las partes en guerra. Al incluir los aspectos asimétricos de las guerras civiles en el marco, el artículo presenta argumentos y encuentra evidencias de que, a pesar de que las intervenciones a favor de los rebeldes suelen

#### **KEYWORDS**

civil wars; foreign interventions; military intervention; economic sanctions; mediation producir el efecto deseado al mejorar la capacidad militar de la oposición, las intervenciones a favor del Estado tienden a resultar contraproducentes y, a la larga, debilitan el gobierno.

Les interventions étrangères sont généralement considérées comme changeant la donne dans les guerres civiles. Cependant, la littérature existante sur ce sujet se concenter sur un seul type d'intervention en négligeant l'effet des autres types d'interventions déployées dans le même conflit. Rompant avec la tradition, cet article propose un modèle de négociation multi-facette plus complet intégrant plusieurs types d' - militaires, économiques et diplomatiques - qui peuvent être employées dans un conflit donné. Ce nouveau cadre permet d'analyzer la manière dont les interventions - seules ou combinées à d'autres - changent l'équilibre des forces, souvent en partie car elles révèlent des informations précédemment secrètes concernant les véritables capacités des parties en guerre. En incluant les aspects asymétriques des guerres civiles dans ce cadre, cet article émet et trouve du soutien à l'argument selon lequel bien que les interventions côté rebelles produisent généralement l'effet souhaité en renforçant la capacité militaire de l'opposition, les interventions côté État ont tendance à se retourner contre le gouvernement et à le miner.

Within the field of international relations as a whole, the role of foreign interventions have become of paramount salience, especially in the wake of recent civil wars in Syria, Libya, and Yemen. Third parties affect conflicts through a variety of activities - military, economic, and diplomatic. Yet, despite a general belief in the usefulness of such interventions, we actually do not know about the impacts of these efforts, especially when multiple types of interventions are used within the same conflict. Current scholarship focuses exclusively on a single type of intervention, neglecting the effect of others employed in the very same war (Beardsley, Cunningham, and White 2019; Diehl and Regan 2015; Hoeffler 2014). This historical blind spot prompts us to consider, for example, the effect of a diplomatic mediation following an economic sanction, or whether an economic sanction on a government in conjunction with a hostile military intervention supporting rebels is an effective way to bring an end to aggression. In addition to these questions, which inquire about the single and combined effects of interventions, a further challenge in the study of interventions lies in the asymmetric nature of civil wars as the fighting takes place between two unequal antagonists (Arreguin-Toft 2001; Butler and Gates 2009; Hultquist 2013). With regard to this issue, it is important to ask questions such as "how does the asymmetry play out in the case of external interventions? or "is the utility of a supportive military

intervention the same for both government and rebel sides equally?" These are some of the questions relating to the influence of outside parties in civil wars to which we presently lack precise answers.

This article addresses these gaps in information by proposing the use of a bargaining framework in which multiple intervention types are incorporated in the analysis. It starts by discussing how foreign interventions alter disputants' bargaining positions by changing the power distribution between warring parties, in part by revealing previously private information about their real capacities. This provides a general basis for including other aspects of foreign interventions in the framework. Next, I incorporate the idea of asymmetry into the theory and show how interventions disproportionately affect government or insurgent sides as a result of asymmetry. Then, I discuss the multiplicity of intervention types, describing how they affect the termination of a civil war. Finally, the overall argument offers the general conjecture that interventions of any type benefit rebels, while undermining the state mainly resulting from the dynamics of asymmetry. To put it more concretely: a military intervention in favor of the state is expected to backfire and thus undermine the incumbent's bargaining position with rebels, suggesting the counterproductive consequences of foreign involvement for an embattled government.

I examine these expectations via an analysis of all intrastate conflicts that took place around the world from 1946 to 2012. The results of this analysis reveal that, consistent with the overall expectation, interventions of any form, irrespective of their targeted side, primarily deteriorate the state's bargaining position and so serve the interests of the insurgency. This entire argument offers implications for the US war efforts in Afghanistan and Saudi involvement in Yemen, and demonstrates the importance of incorporating all relevant intervention types into the analysis.

# The Literature On External Interventions In Civil Wars

The overwhelming majority of current research on intervention outcomes in civil wars has focused exclusively on either military interventions (Balch-Lindsay, Enterline, and Joyce 2008; Cunningham 2010; Gent 2008; Regan 1996), economic sanctions (Escribà-Folch 2010; Gershenson 2002; Hultman and Peksen 2015; Marinov 2005; Strandow 2006), or diplomatic interventions (Bercovitch and Derouen 2004; Clayton and Gleditsch 2014; Frazier and Dixon 2006; Svensson 2007). As a group, these studies emphasized the prominent role of foreign actors in conflict cessation. However, the literature has less effectively addressed the effects of biased interventions – those supporting one warring party - or, particularly, examining their utility in advancing

<sup>&</sup>lt;sup>1</sup>The Syrian War poses a counter case to the argument and is discussed further in the article.

targeted side's material capacity. For example, there is a consensus in the literature about the effectiveness of rebel-biased assistance, which concludes that biased military interventions in support of insurgents enhance the rebels' military capacity (Akcinaroglu 2012; Balch-Lindsay, Enterline, and Joyce 2008; Gent 2008). However, other studies present equivocal empirical results regarding the efficacy of state-favoring interventions. For example, Gent (2008), Akcinaroglu (2012), and Collier, Hoeffler, and Måns (2004) provide evidence that state-biased military interventions have no effect on government victory, but other research finds that interventions in support of a government reduce the time required to defeat the opposition (Balch-Lindsay, Enterline, and Joyce 2008).

A few notable studies in the literature move beyond the analysis of single interventions and include multiple interventions in their analysis. Regan (2000) explores the role of foreign interventions, including military and economic assistance, in terminating civil conflicts. Regan and Aydin (2006) investigate the role of mediations in complementing military and economic interventions. And Lektzian and Regan (2016) propose a theory based on the use of foreign military deployment as a way to enforce economic sanctions.

Besides focusing on war outcomes, there is also a strand of literature that focus on the peacetime process. Olson Lounsbery and DeRouen (2016, 2018), for example, focus on the effects of multiple intervention types on the durability of peace agreements in civil wars.

Ultimately, the scholarship on intervention outcomes has typically focused on a single intervention type despite a wealth of historical evidence that the sides involved in civil wars often receive multiple sorts of external assistance. Thus, the main effort in this article will be the examination of external interventions in civil wars by providing a general framework that incorporates multiple types into the analysis.

# **Theory**

# War as a Bargaining Process

The idea of bargaining during the course of war has received considerable attention in the literature (Filson and Werner 2002; Powell 2004; Slantchev 2003; Smith and Stam 2003; Wagner 2000). These models treat war as a process during which antagonists continue to bargain while they fight. Most importantly, these analyses attempt to display the ongoing strategic transmission of information between parties within the wider context of a military contest.

In this view, a war begins when the bargaining breaks down over divergent beliefs about the relative strength of two disputants. As fighting progresses, more information is revealed about the parties' real military capacities. During combat, belligerents learn about their relative strength and accordingly adapt their expectations for the likely outcome of the war. By providing important information, bargaining reduces the parties' uncertainty regarding the other's capability and the possible outcome (Mason 2009; Wagner 2000). As the parties' assessment of each one's capacity converge, they can more accurately estimate the distribution of power and thus predict the outcome. In the meantime, both sides are constantly reassessing and adapting their likely bargaining positions in response to new information that arrives as the war progresses. If neither side wins, the fighting (bargaining) continues until the disputants reach an agreement (Reiter 2003).

The introduction of outside actors into the ongoing conflict can be one of the factors that change the level of information, as well as the power distribution between belligerents.

# Interventions as an Information-revealing Mechanism

External involvement in conflicts can come in different forms, including diplomatic, economic, and military interventions. From a bargaining point of view, diplomatic interventions function as information providers. Mediators share information regarding the parties' capabilities and resolves (Gurses, Rost, and McLeod 2008; Regan and Aydin 2006; Savun 2009; Smith and Stam 2003; Wallensteen and Svensson 2014). This enables each side to update their knowledge regarding their own and the other side's capacity, and on this basis, to revise their beliefs regarding the likely outcome of the conflict. Military and economic interventions, on the other hand, can produce two different effects (Wagner 2000): influencing military capacities and revealing information about relative capabilities based on the new assets.

Ultimately, interventions update disputants' estimates of their rival's capabilities and resolve. The parties thus revise their expectations about the war's outcome and their positions in the bargaining.

# **Asymmetric Nature of Civil Wars**

Asymmetric Warfare and Military Interventions: Civil wars are typically asymmetric contention that involves the (more powerful) state on one side and (less powerful) non-state actor(s) on the other (Arreguin-Toft 2001; Butler and Gates 2009; Hultquist 2013; Mason 2009). This asymmetry produces significant implications for the potential effects of foreign interventions on each side's ability. Most importantly, as previously discussed in the literature section, the utility of external military interventions differs for the state and the opposition.

The disparity partly stems from the asymmetry in the military tactics parties employ during the war. Most, but not all, civil wars involve a preponderance of state military capacity vis-à-vis weaker rebel forces (Dixon 2001; Regan 2002). According to the Non-State Actors in Armed Conflict Dataset (NSA), in just some 5.1% of conflicts did the military capacity of rebel groups exceed that of their governments (Cunningham, Gleditsch, and Salehyan 2013). Given this essential imbalance of power, rebel groups typically adopt irregular military tactics to compensate for the limits of their military power (Butler and Gates 2009; Lyall and Wilson 2009; Sullivan and Karreth 2015). Thus, the introduction of external forces to the battlefield in favor of the state can be negated by rebels' resorting to irregular tactics, such as hit-and-run ambushes, and thus avoiding most costly direct battles (Hultquist 2013).

Another challenge that comes with the adoption of irregular warfare is the force ratio – or how many troops are required to prevail over an opponent for each specific military operation (Quinlivan 1995). Traditionally, military planners assume that combatants require a 10–or 15–to 1 advantage over insurgents in order to defeat them (Department of the Army 2006).<sup>2</sup> Yet, according to the US Army Counterinsurgency Manual, no fixed ratio of incumbent troops to rebels can be presumed to ensure success. This disproportionality inflicts substantially higher costs on the intervening states but do not still guarantee victory over the opposition's indirect war-fighting strategies.

Consequently, this asymmetric nature brings a discrepancy about the utility of support depending on which side receives it. While the incumbent may not efficiently translate the external support into a sufficient increase in a military capacity, rebels could better take advantage of a supportive intervention.

Asymmetric Warfare and Information Asymmetry: In addition to the discrepancy in utility, asymmetry also has implications for how a military intervention functions as an information-revealing tool. A civil war essentially involves state and non-state actors contesting over claims to the sovereign right to rule (Mason 2009). As discussed above, the state typically has superior power than the rebels. Despite their power disadvantage, rebels nevertheless take up arms and start challenging a regime in pursuit of their cause. In return, the government responds to these demands with violence. The implicit calculation in this interaction is that the state typically does not yield to rebel group's demands peacefully as long as it holds the power advantage over the opposition. To then use a stronger deterrent for the insurgency, the government also tends to overstate its military strength. Following Fearon (1995) argument, there is, embedded in all conflicts, a combination of private information regarding relative power and a strategic incentive to misrepresent it.

<sup>&</sup>lt;sup>2</sup>There is still ongoing debate about the specific force requirements for insurgency operations (Goode 2009).

Given this equilibrium, the incumbent, over the course of war, aims to maintain superior power - both objective military strength and the power derived by exaggerating/misrepresenting the military strength (subjective).

In contrast with this equilibrium, a state-sided military intervention reveals a critical piece of information to the rebels: that the state believes it needs external assistance to defeat them. Typically, a third-party intervenes when its help is utterly needed for the targeted side to influence the power balance (Gent 2008; Regan 2002; Sawyer, Cunningham and Reed 2015). Thus, a supportive intervention makes the government appear needy and weak, upsetting the narrative that the incumbent is superior to the opposition. Accordingly, it sends a strong signal that the state cannot defeat the rebels by itself, implying that the state cannot maintain the monopoly on the legitimate use of violence - a feature identified by Max Weber and many other scholars as the central foundation of the state (capacity). Consequently, a military intervention exposes previously concealed information regarding the regime's military (in)capability.

# The Outcome of War: Win, Lose, or Negotiated Outcome

The main dilemma in civil wars is that insurgents, despite their inferior military capacity, challenge an incumbent and eventually end up fighting a war (see, for a broader discussion, Lichbach 1995). This raised the question: how could a weak opposition hope to win a war against a stronger enemy a sovereign state? In his groundbreaking article about interstate wars, Wagner (2000) argues that a weak state can hope to gain concessions from a strong state even if it is ultimately unable to win the war. This argument also lends itself to understanding the essential dilemma in civil wars: that is, civil wars happen because there is a chance of a negotiated settlement and the opposition, as typically the weaker side, hopes to obtain concessions through this process.

An additional reason why negotiated settlements are important to the opposition is because they provide legitimacy to non-state actors. In face, recognition is often the central demand that these groups ask for (Dixon 2001; Melin and Svensson 2009; Zartman 1993). The act of sitting at the negotiation table with the government for a diplomatic settlement is typically viewed as a great success for the rebel group (Clayton 2013).

Ultimately, the state in a civil war typically favors a clear victory over the opposition while a rebel group prefers either a victory or a negotiated settlement given the asymmetry in power and legitimacy of the two warring sides.

# Modeling the Conduct of Civil War as a Bargaining

Based on the above considerations of war as a bargaining process and of the role of asymmetry in a civil war, I now model how external interventions can change the probability of certain outcomes. In general, the outcome of war is mainly a function of the prospects of winning. More specifically, the likelihood of a victory for either party increases when the expected utility of continuing the war rises. Conversely, the possibility of a negotiated settlement increases when the anticipated utility of continuing the war decreases.

Each side's view of the utility of continuing the war depends on the probability of its winning and on the future costs of the war.  $P_{SW}$  represents the government's probability of winning the war, and  $P_{RW}$  represents that of the insurgents. The superscript t is used to emphasize that the expected utility for each side will change over time as the war progresses. The costs of the war include both military and political consequences that accrue as the party continues fighting over time. Following Wittman (1979) and Mason and Fett (1996), the payoffs of continuing to fight are:

$$\mathbb{E}(U_i^t) = P_{iW}(U_{iW}) + (1 - P_{iW})(U_{iD}) - \sum_{t_i=0}^{t_W} C_{ti}$$
 (1)

where  $\mathbb{E}(U_i^t)$  is the expected utility of continuing the war as compared to that of reaching a negotiated settlement,  $^3U_{iW}$  represents each party's estimate of the benefits of a victory,  $P_{iW}$  is each actor's estimated probability of winning,  $U_{iD}$  is each party's estimate of the cost of defeat,  $1 - P_{iW}$  is the estimated probability of defeat, and  $C_{ti}$  is it's estimate of the costs that will accumulate from the beginning of war  $(t_i = 0)$  until it is won  $(t_W)$ .

Most importantly,  $P_{iW}$  is the subjective probability of winning, which, in this analysis, consists of two components: the objective probability of winning  $(P'_{iW})$  and the overrate fraction  $(P^)_{iW}$ . This first component corresponds to the real probability of winning based on the actual military capacity of the respective side. The overrate fraction represents the tendency of each side to overstate its actual capacity in order to gain a better deal during the bargaining (private information originally suggested by Fearon [1995]). Converted into mathematical symbols;

$$P_{iW} = P'_{iW} + P_{iW} \tag{2}$$

 $<sup>{}^{3}\</sup>mathbb{E}(U_{t}^{t})$  accounts for the utility of two outcomes – continuing the war and of a political settlement which are conversely related in that an an increase in the utility of one necessarily decreases the utility of the other.

where  $P_{iW}$  is the subjective victory probability consisting of  $P'_{iW}$  and  $P'_{iW}$ . Over the course of a conflict,  $P_{SW}$  and  $P_{RW}$  are subject to adjustment as a function of change in  $P'_{iW}$  (as the power distribution shifts) and  $P'_{iW}$  (as the new information is introduced).

Each party's expected utility from continuing the war depends on its estimated probability of winning and on the costs of the war. As the war progresses, each side reassesses its estimated probability of winning  $(P_{iW})$  the war. The change in the military capacity (through  $P'_{iW}$ ) and the transmission of new information regarding the opposite party's military capability (through  $P_{iW}$ ) are the main inputs upon which this continuous assessment is based. As the war continues, it also inflicts costs over time for each side  $(C_{ti})$ .

In general, an event that causes one party to increase its estimated probability of winning will increase the utility it sees from continuing the war and thus increase the odds of victory for that side. Conversely, an event that results in one party decreasing its estimated probability of winning will reduce the expected utility of continuing the war and therefore increase the likelihood of its agreeing to a negotiated settlement. The party with a reduced probability of winning can be expected to accede to a peaceful settlement due to the increasing costs of the war as the fighting continues. That is, given the cost of continued fighting, the actor with a reduced probability of winning is better off with a deal at time t compared to a settlement at time t + 1.

When applied to a civil war context as asymmetric warfare, some adjustments are needed in the bargaining process between state and non-state actors. An event that causes a government to increase its estimated probability of winning will typically lead to its continuing the war. However, an event that causes a rebel group to improve its estimated prospect of winning may lead them either continuing the war with hopes of winning or seeking a negotiated settlement, given the uneven power distribution and the rebels' incentive for legitimacy. Conversely, an event that decreases the likelihood of state's victory will reduce its expected utility of continuing the war and thus increase the likelihood of two outcomes: a settlement or a rebel victory. Finally, an event that decreases the insurgents' estimated probability of winning will also lower the opposition's expected utility of continuing the war and therefore increase the odds of a government victory.

Regarding the costs of war accrued over time, the utility of continuing the war basically will diminish as time passes. The proposed effects of interventions will become more pronounced in the later stages of a conflict, increasing the probabilities of outcomes in the expected direction. Moreover, this framework further clarifies the argument about the sunk cost barrier to conflict termination. The sunk cost effect refers to the tendency of parties – owing to their past commitments and costs - to continue fighting even when the

<sup>&</sup>lt;sup>4</sup>A similar setup is used in Rubinstein's model (see, for a broader discussion, Powell 2002; Rubinstein 1982).

Table 1. Summary of the hypotheses.

	Negotiated Settlement Outcome	State Victory Outcome	Rebel Victory Outcome
Diplomatic Interventions	Increases the probability	-	-
Economic Interventions	Increases the probability, esp. when used w/diplomatic interventions	Decreases the probability	Increases the probability
State-biased Military Interventions	Increases the probability, esp. when used w/diplomatic interventions	Decreases the probability	-
Rebel-biased Military Interventions	Increases the probability, esp. when used w/economic sanctions and also w/diplomatic interventions	Decreases the probability, esp. when used w/ economic sanctions	Increases the probability, esp. when used w/ economic sanctions

benefits fail to meet the expected utility (Aydin 2010; Levy 1997; Regan 1998).<sup>5</sup> In essence, accumulating costs of war over time help overcome the sunk cost barrier. In addition, through influencing power distribution, foreign interventions could help shift the attention from the past (sunk costs) to the future benefits by paving the way for possible conflict termination.

In the following section, the model will be applied to assess the effects of various combinations of interventions in generating particular war outcomes.(Table 1)

# **Multiple Interventions and Hypotheses**

Based on the theoretical framework of this study, a negotiated settlement in civil wars essentially arrives when the probability of winning decreases following a loss in military capacity and/or a reduction in the overrate fraction. Again, a victory for either side is more likely when the odds of its winning increase. External interventions can affect this equilibrium by increasing the military capacity through military or economic interventions – and by shrinking the overrate fraction through the revelation of private information.

Mediations, by their very nature, are designed to increase the flow of information between disputants. This reduces the overrate fraction  $(P'_{iW})$  for both sides and generates convergence on the objective capabilities between actors. A decrease in  $P'_{iW}$  will result in a decline in the estimated probability of winning for each side, which reduces the expected utility of continuing the war for both sides. In addition to reducing the odds of victory, a settlement at time t can leave each side better off than a settlement at time t+1 due to accumulating costs of the war. This leads to the following hypothesis:

<sup>&</sup>lt;sup>5</sup>Expanding the concept of sunk costs, Schulhofer-Wohl (2020) introduces the idea of quagmire – the lingering entrapment of conflict that is difficult to leave – and views it largely as a product of external actors.



Hypothesis 1: Diplomatic interventions increase the likelihood of a negotiated outcome.

Economic sanctions in civil wars are typically imposed on the incumbent (Lektzian and Regan 2016) and designed to bring an end to the conflict by denying material resources to the government (Hufbauer 2007), which reduces the state's military capacity. Furthermore, since they are part of the information-providing process (Escribà-Folch 2010; Strandow 2006), sanctions publicly reveal two things: first, that the government is weakening and secondly, that at least some members of the international community are troubled by the government's action against the opposition. Together, these two factors diminish the overrate fraction of the state side.

This reduction in both the state's military capacity and the overrate fraction overall decreases  $P_{SW}$  and thus  $\mathbb{E}(U_S^t)$ , while increasing  $P_{RW}$  and therefore  $\mathbb{E}(U_R^t)$ . As the conflict endures over time, the costs of fighting accumulate, decreasing the utility of continuing to war and increasing the probability of a negotiated settlement.

Against this new backdrop, rebels can decide either to continue fighting in hopes of winning or to accept a negotiated settlement and reach a compromise with their government.

Moreover, economic sanctions accompanied by diplomatic interventions will increase the probability of a peaceful settlement as diplomacy decreases the overrate fraction by increasing the flow of information between the parties. This theoretical argument generates the following expectation:

**Hypothesis 2:** Economic sanctions: increase the likelihood of a negotiated outcome, especially when used with a diplomatic intervention; decrease the likelihood of a state victory; and increase the likelihood of a rebel victory.

Earlier, I discussed the differential effects of biased military interventions for each side, highlighting the fact that rebel-favored interventions increase the target's military capacity whereas state-sided interventions do not. I also discussed how state-sided military interventions can be counterproductive because they disclose the incumbent's reduced capacity.

However, the timing of state-supportive interventions is critical here since the warring regime may try to prevail over rebels using such leverage rather than negotiating with them, especially in the early stages of a conflict as rebel groups typically start off much weaker relative to the state, seeking to muster a competent military force in the later stages

(Cunningham, Gleditsch, and Salehyan 2009). Thus, insurgents may not have sufficient leverage to push for a negotiated settlement, and the government would be less willing to agree with rebels under these conditions. Therefore, when a state receives a supportive military intervention early in the conflict, it might lead to a decline in the prospect of a negotiated solution. Nevertheless, this effect is expected to change and decrease over time as rebels get mobilized and prove more capable in the later periods of the conflict. Accordingly, state-sided interventions after the initial period would increase the prospect of a negotiated resolution.

The case of early supportive military intervention can also be related to the idea of 'stalemate.' In the wake of external support, the government could feel heartened to win the conflict, but to no avail. At the same time, this early intervention impedes sides from settling their disputes through negotiations. Thus, the conflict reaches an impasse such that neither party is likely to prevail through force, as the supportive intervention turns out to be ineffective to bolster the incumbent's military capacity and as rebels are not sufficiently mobilized. Eventually, disputants are most likely to accede to mediation only after this initial period when they find themselves locked in a conflict from which they cannot escalate to victory and when they seek a way out (Zartman 1985).

In general, supportive military interventions are not effective in bolstering regime's military capacity  $(P'_{SW})$  while they signal government's weakness relative to the insurgency, reducing the overrate fraction  $(P^{)}_{SW}$ . Given the overall decline in  $P_{SW}$ , incumbent's expected utility of continuing the war will decrease over time, especially given the accumulating costs of fighting.

On the other hand, a decrease in  $P_{SW}$  produces a boost in rebels'  $P_{RW}$ , increasing the expected utility of war for them. In this case, insurgents can decide either to continue the war in hopes of a victory or to comply with a negotiated settlement. Military interventions followed by diplomacy will further increase the likelihood of a negotiated outcome. Again, given the increasing costs of war over time, an earlier settlement at time t could leave each side better off than a later settlement at time t + 1.

**Hypothesis 3:** State-biased military interventions: increase the likelihood of a negotiated outcome, especially when used in tandem with diplomatic interventions; and decrease the likelihood of a state victory. These effects will get stronger over time.

More efficiently translated on the battlefield, rebel-supportive military interventions enhance  $P'_{RW}$  and thus increase  $P_{RW}$ , while decreasing  $P_{SW}$ . This increases the utility of continuing the war for the opposition, while

reducing it for the government side. Furthermore, economic sanctions after a pro-rebel military intervention can make things worse for the government as they deny resources from the state while also exposing incumbent's reduced fighting capacity, which together results in a smaller  $P_{SW}$ . As the war lasts, these effects are pronounced more over time. Given these changes, rebels can choose either to continue fighting in order to win or to accept a negotiated settlement.

**Hypothesis 4:** Rebel-biased military interventions: increase the likelihood of a negotiated outcome, especially when followed by mediations; decrease the likelihood of a state victory, especially when used together with economic sanctions; and increase the likelihood of a rebel victory, especially carried out in conjunction with economic sanctions.

Note that the most important finding of this analysis is that external interventions of any form a) reduce the likelihood of state-favoring outcomes – government victory, and b) increase the probability of outcomes that favor the rebels - rebel victory and negotiated settlement.

# **Empirical Analysis**

#### Data

The data used for this study was derived from the Uppsala Conflict Data Program (UCDP) Dyadic Dataset (v1-2015) (Harbom, Melander, and Wallensteen 2008), a yearly cross-sectional dyadic dataset for all active civil wars - based on the UCDP/PRIO definition (Gleditsch et al. 2002; Kreutz 2010). The analysis includes years between 1946 and 2012. I use the structure of dyad episodes to identify the beginning, end, and duration of each internal conflict. An episode begins in the first year that the conflict meets the UCDP criteria of active armed conflict. The episode then continues for until the final year for which fewer than 25 battlerelated deaths are recorded. Given my interest in the different ways that wars end, I treat each episode as a new conflict.

The data for conflict outcomes comes from the UCDP Termination dataset v.2-2015 (Kreutz 2010). This dataset covers the same periods and locations as the UCDP Dyadic Dataset and thus provides information regarding the outcome of each episode and its duration. The duration, corresponding to the period until each termination outcome is reached, is the dependent variable and is measured in years. The dataset consists of 2385 dyadic (country-rebel group) active conflict years in 652 episodes between 1946 and 2012. Of these conflicts, seven percent of the episodes ended in a peace agreement with an average duration of 4.9 years, eighteen percent in government victory with an

average duration of two years, and almost eight percent in a rebel victory with an average duration of 2.4 years. The average duration for the ongoing conflicts is 8.8 as of the end of the year 2012. The rest of the dataset consist of other UCDP-defined termination categories, including ceasefire, low activity, and actor ceases to exist. For the purpose of this analysis, I limit my consideration of negotiated settlement outcomes to peace since ceasefires could be manipulated by the belligerents for strategic purposes (Blattman and Miguel 2010; Osborn 2013).

# **Model Specification**

This study analyzes the influence of third parties on war outcomes-government victory, rebel victory, or negotiated settlement. Each outcome is part of the set of possible alternative outcomes available to combatants during the course of the war. It could be said that these alternatives "compete" with one another to be the first outcome (event) that is observed. The fundamental issue in analyzing multiple competing outcomes is that these events are not independent (Box-Steffensmeier and Jones 2004), and ignoring the interrelationships between alternatives could produce a biased estimation of coefficients (Greene 2012). Therefore, consistent with the literature, a Competing Risks Duration Model (CRDM) is seen as the most appropriate model specification for the analysis (Balch-Lindsay, Enterline, and Joyce 2008; Box-Steffensmeier and Jones 2004; Brandt et al. 2008; Wright and Greig 2012). CRDM is a model of historical events in which the analysis focuses on the time it takes to observe one of several competing outcomes as events that end the duration (Box-Steffensmeier and Jones 2004). Using this estimation, the probability of each competing outcome is then adjusted based on the probability of other competing events (StataCorp 2017).

In this study, CRDM fits estimates for each of the three possible outcomes, treating the other two as censored cases. In addition, this model also allows censored cases that continued beyond the end of the study (at the end of the year 2012) to be included. These incomplete cases are specifically called right censored and, by using CRDM, could still be included in the analysis (Box-Steffensmeier and Jones 2004).

An alternative to CRDM, the multinomial logit model (MLM)<sup>6</sup> is an another specification used to predict the probabilities of the different possible outcomes (DeRouen and Sobek 2004). Yet, MLM has two drawbacks for this study. First, results in MLM are interpreted relative to only a baseline category – the continuation of war (Box-Steffensmeier and Jones 2004; Brandt et al. 2008). However, this study involves analyzing the effects of interventions on each possible outcome, which requires

<sup>&</sup>lt;sup>6</sup>The MLM is also employed for robustness purposes.

a comparison of the probability of a given outcome relative to all of possible outcomes and to the probability of the war continuing. Secondly, MLM assumes the independence of all categories of dependent variables (StataCorp 2017) - in this case duration for war outcomes. Given my hypotheses, the study attempts to examine the impact of thirdparty interventions on competing war outcomes - events that are not necessarily dependent on one another.

Finally, the theory also predicts the effects of timing into the analysis, which a duration model conveniently estimates. Ultimately, the CRDM can effectively produce the probability for each war outcome, as it reveals how the effect changes over time (Austin and Fine 2017).

#### **Variables**

Main Independent Variable - External Interventions: This study focuses on three types of third-party involvement - military intervention, economic sanction, and mediation. As noted earlier, data for military interventions come from the UCDP Dyadic Dataset, which identifies interveners that deploy military troops within civil war state (Pettersson and Wallensteen 2015). These data are all military interventions biased in favor of either party in the conflict – government or rebels – and do not include neutral interventions, such as UN peacekeeping operations or other military activities like military aid, aerial bombardment etc., that involve no direct troop participation.<sup>7</sup>

Data on economic sanctions is from the Hufbauer (2007) dataset, which defines sanctions as "the deliberate, government-inspired withdrawal, or threat of withdrawal, of customary trade [including both exports and imports] or financial relations" (Hufbauer 2007, 3). This definition does not include cases related to national security that are essentially designed to restrict the sale of weapons and military equipment. From Hufbauer's global sanctions dataset, I used cases derived from the context of civil wars in which the explicit goal of the sender state(s) and international/ regional organization(s) is described as a desire to bring an end to a civil war, to ease state repression, and/or to weaken or destabilize an incumbent government. This dataset includes only sanctions, and does not encompass any economic support information.

Diplomatic intervention data mainly comes from the Civil War Mediation (CWM) Dataset (DeRouen, Bercovitch, and Pospieszna 2011). The original dataset was updated by the same authors to capture the years

 $<sup>^{7}</sup>$ Military interventions by multinational organizations, such as NATO, are included in the analysis when these interventions are conducted to target either side in a conflict, such as the NATO interventions in Serbia and Afghanistan.

Category Number	Description of Category	Number (Percent) of Conflict Years
1	No Intervention	1336 (56.02%)
2	Diplomatic Intervention	232 (9.73%)
3	Economic Intervention	347 (14.55%)
4	Economic and Diplomatic Intervention	105 (4.40%)
5	Military Intervention	238 (9.98%)
6	Military and Diplomatic Intervention	61 (2.56%)
7	Military and Economic Intervention	52 (2.18%)
8	Military, Economic, and Diplomatic Intervention	14 (0.59%)

**Table 2.** Categories of independent variable (external interventions).

between 1946-2012. In addition to the CWM dataset, diplomatic intervention variables are condensed by Svensson (2007) replication dataset to include these years.

Given that all of the hypotheses as a group predict the effects of foreign interventions - both single and multiple interventions conducted in the same conflict, I generated a categorical variable "External Intervention" to use as the key predictor. The categories in this variable indicate the types of interventions deployed in a given year for each conflict and outlined in Table 2.

I also control for the effect of external interventions by employing three sets of variables commonly used in the literature on interventions: features of the country at civil war, internal characteristics of the conflict, and the settings for the international system. I operationalize the variables as follows:

# Variables for the features of the country at civil war

Polity Score: Data on the level of democracy are taken from the Polity IV dataset (p4v2015) (Marshall, Gurr, and Jaggers 2018). These were prorated and then rated on a scale from 1 to 21, where 1 denotes the least democratic activity and 21 denotes the most.

**GDP per capita:** This is the main measure used to capture the state strength (Collier and Hoeffler 2004; Fearon and Laitin 2003; Salehyan, Gleditsch, and Cunningham 2011). The data were taken from the Cross-National Time-Series Data Archive (Banks and Wilson 2016) and then values were transformed by taking the natural logs.

# Variables used to describe the characteristics of conflict

*The Intensity of Conflict:* This is a dummy variable that used the value 1 when the conflict year had at least 1,000 battle-related deaths. The data is from the Dvadic Dataset (Version 1-2015) (Harbom, andWallensteen 2008).



**Table 3.** Summary statistics for the variables.

Variables	N	Mean	Std.Dev.	Min	Max
External Intervention	2385	2.22	1.70	1	8
Pro-state Military Intervention	2385	0.14	0.34	0	1
Pro-rebel Military Intervention	2385	0.03	0.18	0	1
Polity Score	2376	10.79	6.45	1	21
GDP per Capita (In)	2363	6.18	1.44	3.04	10.84
Intensity of Conflict	2385	0.22	0.41	0	1
Type of Conflict	2385	1.54	0.50	1	2
Relative Strength	2226	1.68	0.68	1	5
Post-Cold War	2385	0.47	0.50	0	1

Table 4 Competing risks model of civil war outcome

	(1) Negotiated Settlement	(2) State Victory	(3) Rebel Victory
EXTERNAL INTERVENTIONS	Settlement	victory	victory
Diplomatic Intervention	2.76***	74	06
•	(.48)	(.48)	(.45)
Economic Intervention	.71	45	.78*
	(.71)	(.31)	(.47)
Economic and Diplomatic Interventions	1.73**	-1.46	1.10**
zeonomie ana zipiomatie metremons	(.70)	(1.04)	(.54)
State-biased Military Intervention	-4.92***	-1.13**	-15.52***
state blased Minitary intervention	(1.61)	(.50)	(.44)
State-biased Military Intervention x In(t)	3.15***	(.50)	()
otate-biased Military intervention x in(t)	(.72)		
Rebel-biased Military Intervention	1.99**	.36	-14.18***
reper-placed Millitary litterverition			
Military (State biased) and Diplomatic Interpretians	(.83) 2.40**	(.55) 38	(.77)
Military (State-biased) and Diplomatic Interventions			76
with the last of the state of	(1.00)	(.71)	(.99)
Military (Rebel-biased) and Diplomatic Interventions	-17.97***	-16.68***	.54
	(.62)	(.37)	(1.10)
Military (State-biased) and Economic Interventions	-13.69***	16	17
	(.96)	(.49)	(1.21)
Military (Rebel-biased) and Economic Interventions	-17.59***	68	1.05
	(.60)	(1.00)	(1.06)
Military (Rebel-biased) and Economic Interventions x ln(t)			1.75**
			(.81)
Military (State-biased), Economic, and Diplomatic Int.	2.47*	-17 <b>.</b> 51***	-15.70***
	(1.43)	(.49)	(.94)
Military (Rebel-biased), Economic, and Diplomatic Int.	2.66*	-16.66***	2.89***
	(1.41)	(.61)	(.92)
CONTROL VARIABLES			
Polity Score	.02	02	04
•	(.33)	(.02)	(.03)
GDP per capita	13	11	15
Pro septiment	(0.15)	(.09)	(.14)
ntensity of Conflict	14	36	.92***
	(0.43)	(.31)	(.35)
Type of Conflict	.65*	.85***	1.13**
7,700 0. 00	(.39)	(.23)	(.57)
Relative Strength	.05	27**	1.29***
icidate suchgui	(.20)	(.11)	(.14)
Post-Cold War	.97	32	29
OSE COIG VVGI	(.35)	52 (.21)	29 (.41)
Observations	(.33)	(.21)	2237
Pseudo log-likelihood	-180.74	-596.74	-201.31

Notes: 1. The models in this table are presented in a condensed form. Original models are reported in the replication materials.

<sup>2.</sup> Estimations are made using noshr option in the Competing Risk Model; positive coefficients denote an increase in the probability of a given outcome while negative ones denote a decrease.

<sup>3.</sup> Standard errors are in parentheses. \* p < 0.1, \*\* p < 0.05, and \*\*\* p < 0.01.

<sup>4.</sup> The estimations for variables violating the proportionality assumption are corrected by including the interaction of a natural log of time. The text includes related discussion of this point.

*Type of Conflict:* This variable is used to differentiate what the parties are fighting over. The data is from the UCDP Dyadic Dataset (Version 1–2015) (Harbom, Melander, andWallensteen 2008), and is coded 1 for territorial and 2 for governmental conflicts.

**Relative Strength:** This is a composite measure taken from the Non-State Actor (NSA) dataset that includes relative troop sizes, mobilization capacity, arms procurement, and territorial control (Cunningham, Gleditsch, and Salehyan 2009). It uses an ordinal scale of 1 to 5, where 5 refers to rebels who are much stronger than the government.

# Systemic variables

**Post-Cold War:** This variable is coded 0 for the Cold War period, and 1 for the years since then.

Descriptive statistics for all the variables are presented in Table 3, below.

#### **Results and Discussion**

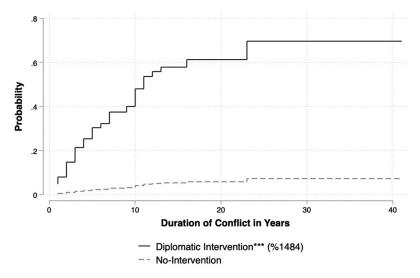
The results of the analysis largely support the general theory that any type of intervention used in a civil war produces adverse consequences for the government and more advantageous outcomes for rebels. More particularly, interventions of any form broadly increase the likelihood of a rebel-victory and negotiated settlement outcomes; and reduce the odds of a state-victory.

The corresponding findings for each outcome of war are presented in Table 4.8 For simplicity's sake, the models are presented in a condensed and simplified form, 9 and figures are provided below to illustrate some of the findings.

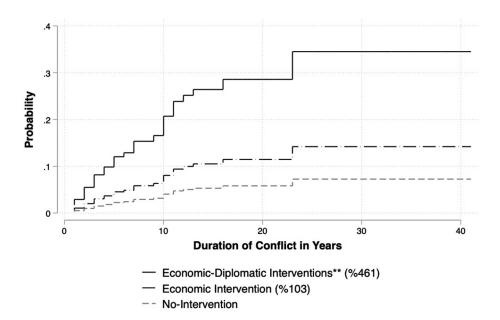
Hypothesis 1 focuses on the effect of diplomatic mediations on negotiated settlement outcome. As indicated in Figure 1, this relationship is statistically significant, with the probability of a civil war ending in a settlement increases almost fifteen times after a diplomatic intervention. Following the theory, the flow of information that increases as a result of mediations decreases the overrate fraction for each side, thereby leading to a reduced probability of winning and therefore to a decline in the expected utility of continuing the war. Ultimately, this perception increases the odds of reaching a peaceful outcome.

Hypothesis 2 overall focuses on the impacts of economic sanctions on various outcomes. It predicts a positive relationship between economic sanctions and a negotiated settlement, especially when sanctions are followed by mediation. Figure 2 shows that sanctions, especially ensued by diplomacy, significantly increase the odds of a peaceful outcome more than four times.

<sup>8</sup> test each of the variables for the proportionality assumption (Box-Steffensmeier and Jones 2004). Variables that violate the assumption are interacted with logged time. Relevant variables are reported in Table 4.
9 Tables reporting complete models are provided in the replication material.



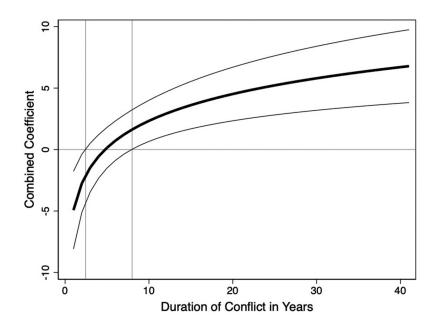
**Figure 1.** Relationship of diplomatic interventions and negotiated settlements. Note: The effect of mediations on the probability of negotiated settlement. The effect was tested for proportionality and did not violate the assumption, so the effect appears to be proportional over the years covered. Coefficients in Table 4 were converted to hazard rates (cumulative incidence). Probability (provided on vertical line-y) is shown as the Cumulative Incidence Function and indicates the probabilities for a negotiated outcome after a mediation vs. the probability of no intervention as the baseline category (StataCorp 2017). The statistical significance of effect and the increase in percentages for the treatment are provided below the graph.



**Figure 2.** Relationship of economic interventions and negotiated settlements. Note: The effects of economic sanctions with/without mediations on the probability of negotiated settlement. The effects are tested for proportionality and do not violate the assumption. So, the effects are proportional over years.

This finding has important implications. From a research standpoint, it demonstrates the importance of incorporating multiple intervention types into the analysis since focusing on only a single type fails to reveal the combined impacts of interventions. Similar to the arguments in Böhmelt (2013) and Melin (2011) articles, the cumulation of external interventions influence the outcome of conflict, especially by increasing the certainty of outsiders' intention about the ongoing war. And from a policy perspective, this finding indicates that an effective strategy to reach a peaceful settlement involves diplomacy carried out in conjunction with sanctions on an embattled government.

As also expected, the likelihood of a state victory decreases by almost one third after economic sanctions are imposed on a government even though the coefficient is insignificant. Sanctions do two things: first, they deny the government resources that could otherwise be mobilized to reinforce its military campaign; secondly, they reveal a state's waning capacity. The second hypothesis also predicts an increase in the probability of a rebel victory after eco-



**Figure 3.** Relationship of state-biased military interventions and negotiated settlements. Note: The effects of military interventions in support of government on the probability of negotiated settlement. Tested for the proportionality assumption, the effect is time-varying over years. The first vertical gray line at year 2.45 shows when the negative effect loses significance, and the second lineat year 8 shows when the positive effect gains significance. The two thin lines represent a 95-percentconfidence interval.

nomic sanctions are imposed on the incumbent. The odds of a rebel-victory outcome are doubled following a sanction. Checking the results for the

proportionality assumption, the tests indicate that the covariates do not violate the assumption. Thus the effect occurs regardless of when economic sanctions are imposed during the war.

Hypothesis 3 focuses on the effects of state-biased military interventions on different outcomes. It proposes a positive association between the negotiated settlement outcome and state-biased military interventions, especially when followed by mediations. It also expects a varied effect over time. The results find support for the expectation.

Tests for the proportionality assumption indicate that the effect of military support for a government on the odds of a settlement changes over the course of the civil war. Following Licht (2011) and Jones (2017), I plot the combined coefficient, which demonstrates how the effect of intervention varies depending on when in the war this type of interventions are deployed. 10

Figure 3 indicates that a supportive military intervention makes a negotiated settlement less likely when it occurs in the initial two years of a civil war. However, this effect loses statistical significance after two years indicated here by the first vertical gray line on the graph. Then, it becomes positive at the fifth year of conflict and statistically significant, starting with theeighth year - indicated by the second vertical gray line.

The result indicates that an early state-sided military intervention, consistent with the theory, may encourage the government to prevail over the rebels, as the insurgency is still in its early stages. This process undermines any possible negotiation opportunities. However, after the initial stage, any statebiased intervention increases the probability of a negotiated settlement, as the rebels continue mobilizing a sufficient capability. Furthermore, supportive interventions reveal private information about the state's (in)capacity, as such support also proves ineffective in bolstering the government's military power. The civil war in Yemen is a case in point, as Saudi Arabia's early support for the government drifted the conflict into a stalemate that was partially dissolved after some six years.

In addition, results indicate that pro-state military interventions, in conjunction with diplomacy, significantly increase the probability of a peaceful outcome, as expected in the theory.

Hypothesis 3 also suggests a negative relationship between military interventions in support of a state and the odds a war ending in a state victory. The findings support the hypothesis and show that the likelihood of a state victory is reduced by two thirds after a state-targeted military intervention.

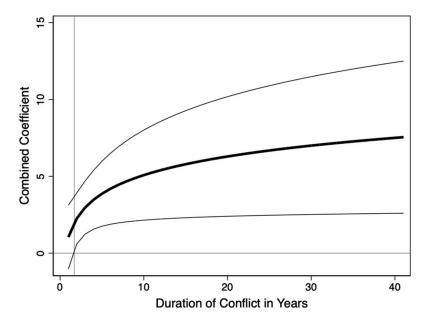
This particular finding strongly supports the points made above in the asymmetry discussion since state-sided interventions strongly decrease the probability of a government victory.

<sup>&</sup>lt;sup>10</sup>The combined coefficient is the sum of  $(b_1 + b_2) * In(time)$ , where  $b_1$  is the coefficient for state-biased military interventions, and  $b_2$  is the coefficient for the interaction of this intervention variable and logged time. Confidence intervals are also shown on the graph.

Hypothesis 4 focuses on the impacts of rebel-biased military interventions on various outcomes and begins by conjecturing a positive association between a negotiated settlement and military support for rebels. As predicted, the probability of a peaceful outcome rises over six-fold following a military intervention in favor of an insurgency. However, contrary to this expectation, mediations along with a pro-rebel military intervention are found to decrease the odds of a negotiated settlement. This finding can largely be attributed to the commitment problems discussed in Svensson (2007) article in which he found that state-biased mediations increased the probability of a settlement outcome, but rebel-biased mediations did not.

Hypothesis 4 also theorizes a negative relationship between a rebel-based intervention and a state victory, especially when the intervention is enhanced by economic sanctions on the government. The association is in the expected direction when pro-rebel interventions are complemented by economic sanctions on government, but is not statistically significant.

Finally, Hypothesis 4 predicts a positive relationship between a rebel victory and rebel-biased military interventions, especially when it is used in conjunction with economic sanctions. Contrary to this expectation, pro-rebel military interventions are negatively associated with a rebel-winning outcome. However, the association becomes positive and in the predicted direction once rebel-biased military interventions are paired with economic sanctions.



**Figure 4.** Relationship of rebel-biased interventions and rebel victories. Note: The combined effects of military interventions in support of rebels and economic sanctions on the government on the probability of a rebel victory. Tested for the proportionality assumption, the effect varies over the years. The vertical gray line at year 1.7 shows when the effect gains significance. The thin lines represent a 95-percent confidence interval.

As shown in Figure 4, the effect varies over time and is not significant for the first one-and-half years, but then, it becomes statistically significant and positive. A military intervention in support of the opposition and economic sanctions on the government increasingly enhance the odds of a rebel victory if carried out after the initial twenty months of the war.

Considered as a group, these outcomes highlight the combined effects of multiple interventions and suggests that rebel-biased military interventions increase the likelihood of a rebel victory only when they are followed by economic sanctions on the regime. One explanation of this phenomenon is that deploying only rebel-biased military interventions may not be enough to tip the balance of power and allow the opposition to prevail over the government (see, for a similar argument, Olson Lounsbery and DeRouen 2018). In cases like this, a negotiated settlement becomes more likely, as was already confirmed at the beginning of Hypothesis 4. And, once rebeltargeted interventions are complemented by economic sanctions on the government, the balance of power tips dramatically in favor of the insurgents, thereby leading to a rebel victory. This particular finding also reflects the arguments in Böhmelt (2013) and Melin (2011) articles about the effects of subsequent interventions deployed in a given conflict.

Finally, the results presented in Table 4 largely confirm previous findings in the literature with respect to the effect of the control variables. Polity Score variable is not significant at all. Scholars still debate the effect of democracy on civil war duration and outcomes (see, for example, DeRouen and Sobek 2004; Fearon 2004). The intensity of conflict is statistically significant and positively correlated with a rebel victory. The finding is consistent with some of the earlier research arguing that mounting casualty rate without a state victory over time would undermine support for the government while providing grounds for a rebel victory (Mason, Weingarten, and Fett 1999). In the literature, governments facing secessionist movements are considered less likely to concede (DeRouen and Sobek 2004; Walter 2003). Likewise, the coefficient is significantly positive, evidencing that governmental conflicts coded as the second category are more likely to end in the negotiated outcome than territorial ones. In the earlier studies, stronger rebel capabilities are associated with more likelihood for rebel victories (Hultquist 2013), which is also supported here. Eventually, more civil wars after the Cold War have ended in negotiated settlement than in military victory (Betts 1994; Mason 2009) and results of this analysis demonstrate that post-Cold War period is correlated with higher probability of negotiated outcome and lower likelihood of state and rebel victories.

# The case of foreign involvement in the Syrian civil war: A counterexample?

A counter case for the argument here can be cited using the civil war in Syria, where the Assad regime is supported militarily by Russia and Iran. As of now, the government seems to hold the upper hand in the contestation. Partly, it is a counterexample to the argument in this study. Nevertheless, the theoretical framework here can still account for the developments in Syria.

The theory in this study argues that military intervention in support of the state is counterproductive and eventually backfires against the government. The main assumption of this argument is that third parties deploy essentially conventional troops to assist the government, which turns out to be ineffective in a fight against rebels using irregular war tactics. Second, it argues that the state receiving outside support reveals a piece of critical private information that it is essentially incompetent to fight against the insurgency. Considering the case in the Syrian War, neither assumption holds in there.

First, Iran primarily deploys Hezbollah-like paramilitary forces that can effectively fight irregular warfare against the rebels. Furthermore, this type of support does not require the deployment of formal foreign troops, which poses much less challenge to the state's sovereignty. Besides, Russia mainly deploys aerial attacks to bombard urban areas where insurgents are supposedly blended in civilians – a form of military engagement that is not included in the analysis mainly due to data constraints.

Second, the theory assumes that the state has some private information that is revealed when a supportive military intervention is introduced in the conflict. However, before the Iranian and Russian involvement, particularly in late 2015, the Syrian government had almost no further private information to reveal as the Assad regime was evidently incapable of dealing with its domestic issue. With the advent of third parties in the conflict, the strife evolved to be a contestation between the rebels and foreign powers themselves, largely excluding the government, at least for a long while in the conflict until the rebels are weakened to a certain level. Furthermore, the US-led coalition's concurrent campaign against the Islamic State of Iraq and the Levant (ISIL) also complicated the equilibrium in Syria, turning the battlefield into a more complicated multilateral international arena. These are some of the possible reasons why the Syrian case might be a counterexample for the argument.

#### **Robustness Checks**

As a robustness check, I employ a two-stage estimation method to check for the possibility of selection bias in the analysis. This method is very similar to what is originally developed by Heckman (1979) and can be represented as accounting for omitted variables in fitting a regression. Different from

Heckman's joint two-stage estimation model, there are three intervention types - military, economic, and diplomatic - analyzed in the study and each of these types needs different instrumental variables and thus three separate first-stage models to generate Inverse Mills Ratio (IMR) to account for the possibility of nonrandom assignment of each intervention into civil wars. In the first stage, I fitted three separate probit models in which I generated IMRs for each intervention type by using the same control variables as in the original model besides the instrumental variables for each intervention type. In the second stage, I plugged in these three IMRs into the model and checked whether the signs of each particular intervention switch direction compared to the same regression without IMRs.<sup>11</sup>

The results demonstrate that the signs of intervention coefficients do not change and remain the same. 12 Overall, the results show that there is variation among conflicts in attracting different intervention types. More specifically, consistent with the literature (Clayton 2013; Clayton and Gleditsch 2014; Greig and Regan 2008; Melin and Svensson 2009), the likelihood of diplomatic interventions is increased during the post-Cold War era, in more extended conflicts, and as rebels get stronger in relation to government forces. Economic sanctions are more likely when wealthier countries get stranded in civil wars. Finally, the probability of military interventions gets higher, compatible with the scholarship, in more intense and prolonged conflicts, as well as in economically better countries and during the Cold War times.

As for the outcomes of interventions, the coefficients on IMRs are significant and negative, denoting a negative selection for each intervention type. It suggests that there are downward-biased estimates in the original findings. Thus, the effects of each intervention type on conflict termination are more increased than provided in the initial results in Table 4.13

Second, I employed multinominal logit models as an alternative model specification. 14 The findings from the alternative model are very much similar to the original model. Third, following Balch-Lindsay et al. (2008), Brandt et al. (2008), and Jones (2017), I checked the proportionality assumption for each variable in the estimations and added the interaction of natural log of time and the variable(s) violating the assumption in the models.<sup>15</sup>

<sup>&</sup>lt;sup>11</sup>I tested among the parametric duration models based on the likelihood ratio tests, and lognormal model provided the best fit and thus is used as the second stage model.

<sup>&</sup>lt;sup>12</sup>The signs of intervention covariates are not in the expected direction in neither of these models. However, the dependent variable used in these regressions is the pooled civil war outcome without parsing out negotiated settlement and victory outcomes and thus does not account for the competing risks between different war outcome. Therefore, the focus is mainly given whether the signs of covariates switch after plugging IMRs in the

<sup>&</sup>lt;sup>13</sup>Appendix Tables A2, 3, 4.

<sup>&</sup>lt;sup>14</sup>Appendix Table A7.

<sup>&</sup>lt;sup>15</sup>Provided within the full models and can be replicated using the replication materials.

Finally, I employed multiple alternative models to check for the variation in third party leverages, 16 to differentiate between unilateral vs. multilateral interventions, <sup>17</sup> alternative external support types, <sup>18</sup> and various alternative variables for the model. 19

#### Conclusion

This article focused on the effects of various types of foreign interventions in ending civil wars. Drawing on a bargaining framework, it demonstrated that military, economic, and diplomatic interventions increase the odds of a negotiated settlement and rebel victory outcome, but decrease the probability of a government victory. Most significantly, state-sided military interventions were found to reduce possibility of a military victory by the government while increasing the likelihood of a negotiated settlement. These results mainly stemmed from the asymmetrical nature of civil wars, a feature incorporated into our model through the discussion of both the informational and the material impacts of external involvement.

This new model provides a comprehensive framework to estimate the effects of multiple types of interventions. Results from this study suggest that inclusion of multiple intervention types when analyzing the impact of external interventions on the outcome of a civil war enables a more rigorous and comprehensive understanding of foreign involvement.

The ability to test the effects of multiple interventions also has significant implications for policymakers. First, combinations of different types of interventions cited in this study offer possible strategies for dealing with civil wars, depending on the desired outcome for each. These strategies suggest which particular intervention(s) to introduce in a given conflict and based on the likely outcome of the use of that or those particular interventions.

Second, when used in a concerted manner, multiple interventions produce strongly significant consequences that a single intervention could not. For example, rebel-biased military interventions can help increase the odds of a rebel victory-but only once complemented with economic sanctions on the state. Finally, this study suggests specific time windows when, and how, each intervention could be most effective in producing certain outcomes. Interventions that occur too early and/or are not combined with certain intervention types may not produce desired consequences in a civil war.

<sup>&</sup>lt;sup>16</sup>Appendix Table A5.

<sup>&</sup>lt;sup>17</sup>Appendix Table A6. <sup>18</sup>Appendix Tables A8,9,10.

<sup>&</sup>lt;sup>19</sup>Appendix Table A11.



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