



Effect of external interventions on conflict intensity

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Note: this is a stand-alone paper which is chapter 5 of a PhD thesis. Access to chapter 3 and appendices 3 referenced in the paper are not essential and therefore such documents are not provided.

Abstract

External interventions in civil wars are a recurrent practice of the international community, executed through a series of mechanisms—most notably, military, economic or diplomatic interventions (with UN and non-UN missions being a combination of these). Studies of these interventions have focused on how effective they are in stopping civil war or maintaining peace. Despite the focus of these studies on high intensity conflicts, the effect these interventions have on conflict intensity is still unclear. Additional studies have not appropriately controlled for the endogeneity of the relationship between interventions and conflict. Conflicts' characteristics attract interventions, and interventions influence conflict characteristics. Based on a balance of the capability model, this paper explores conflict-intensity levels and conflict-intensity changes, with a new dataset on external interventions for Africa for the period between 1989 and 2010. The regression results, based on a zero-inflated negative binomial and logit models controlling for endogeneity, indicate that partisan, military and economic interventions increase conflict intensity whereas neutral and diplomatic interventions have no effect on conflict intensity. In fact, after controlling for endogeneity, successful or failed mediation is found to have no significant effect on conflict intensity. The conclusion is that more detailed research needs to be conducted to understand the unexpected effect of diplomacy and interventions' objectives.

5.1 Introductionⁱ

In recent decades, civil wars have become the most recurrent form of conflict, and most of them are characterized by the active involvement of foreign actors. These external interventions use military, economic or diplomatic means and can be carried out by single states, coalitions or multilateral organisations, taking the form of more or less complex missions. One thing all interventions have in common is their intent to affect the conditions of the conflict.

Yet the objectives of external interventions have been questioned as they are more often than not occurring in months with high numbers of battle deaths. In Africa, 42 conflicts occurred between 1989 and 2010, with an average of 14 interventions per conflict. Months in which an intervention started had on average 6.1 more battle deaths than months without interventions; this positive ratio was observed across all types of interventions, with the

extremes being military interventions with 7.6 and UN and non-UN missions with 0.75. Furthermore, the diplomatic initiatives, by definition intended to manage conflicts, were started in months with 4.5 more battle deaths than months without interventions. But the direction of causality is unclear, as external interventions can escalate conflict and more intense conflicts attract more external interventions

More than duration, which has been the object of analysis in other studies, this chapter investigates the effect that different types of external interventions have on conflict intensity and, in more detail, the effect of successful and failed diplomacy. This research is done through an econometric approach based on a new dataset on external interventions.

The chapter will first review the main findings from other researchers. It then proposes a theoretical framework based on the balance of capabilities. The research design is then discussed. The design is divided between an analysis of the external interventions' effect on the conflict intensity's level and change, the latter providing a better control for endogeneity. The empirical results are then presented as well as the conclusion.

5.2 Previous research on external interventions

External interventions' effects on conflict are measured in terms of changes in conflict duration or intensity (Högbladh et al., 2011), but to date studies have mainly focused on the effect on duration. The ways external interventions affect conflict have been found to depend significantly on the targets and types of the intervention. Intervention targets can be biased and partisan, when in support of the government or opposition, or neutral, when not intended to change the balance of capabilities of the parties. Intervention types can be grouped into military, economic, and diplomatic interventions as well as missions by the UN and other actors.

Previous studies on the targets of interventions have demonstrated that neutral interventions increase the duration of the conflict but biased interventions do not (Regan, 2002c; Elbadawi and Sambanis, 2000) and can increase the chances of military victory by the supported group (Balch-Lindsay et al., 2008). If these bias interventions support the rebels, the interventions are bloodier than if in support of the government (Lemke and Regan, 2004). The result of no effect of bias interventions on duration has been questioned by findings that biased military support provided to the challenging group can shorten the conflict, but if provided to the government or if economic support is provided to either side, it does not have an effect on conflict duration (Collier et al., 2004).

In terms of the types of interventions, military or economic interventions have been found to increase the duration of conflict (Regan, 2002c; Elbadawi and Sambanis, 2000); this escalatory effect has been attributed to a sub-set of interventions, where interveners pursue an 'independent agenda' (Cunningham, 2010). The results for diplomatic interventions, normally considered neutral interventions, are more unequivocal. Diplomacy facilitates the termination of civil war (Regan et al., 2009), even when used in combination with other types of interventions (Regan and Aydin, 2006). Therefore, it has been concluded that the manipulation of information, as in negotiations by third parties, is a more effective tool for conflict management than the manipulation of fighting capabilities (Regan, 2010).

Recent research on periods of instability (and not necessarily only civil war)ⁱⁱ confirms some of the results that military interventions increase the likelihood of a civil war onset (escalation of conflict) whereas economic and diplomatic interventions decrease the likelihood of civil war onset (Regan and Meachum, 2014). Although UN peacekeeping

operations are deployed in the most difficult cases (Gilligan and Stedman, 2003), most studies indicate that they are effective in increasing the chances of peace and its duration (Fortna, 2004; Doyle and Sambanis, 2000; Hartzell et al., 2001) and more effective than non-UN peace operations (Sambanis and Schulhofer-Wohl, 2005).

5.3 Theoretical framework

The balance of capabilities of the parties to the conflict play a decisive role in the outcome of the fight (Eldabawi and Sambanis, 2000). Parties opt for a military or political solution depending on the expected net benefit of the outcome of the conflict versus a settlement through negotiations (Wittman, 1979). External interventions affect the absolute or relative capabilities of parties by changing their expected payoffs of conflict determined by a cost-benefit analysis of fighting, risk preferences and estimations on the likelihood of victory or no-defeat (Regan, 1996, 2002a).

If one party acquires a significant fighting capacity vis-à-vis its opponents, its chances of a military victory will increase which in itself can increase the likelihood that opponents are more willing to negotiate. If fighting capabilities are more evenly distributed, chances are that the parties reach a military stalemate (Zartman, 2000). A military stalemate predisposes both parties to attempt a negotiated solution, in which case a set of other factors become more crucial for an agreement to be reached and for it to hold. Otherwise, if both parties overestimate their fighting capacity, the fighting will continue (Collier et al., 2004).

A broader conceptualisation of intervention would consider that it can be forcible or non-forcible (like economic coercion), direct or indirect (through the use of a proxy state), and open or clandestine (covert operations) as perpetrated by different actors (state and non-state) (Bull, 1984); it is not necessarily lawful or unlawful, but breaks a conventional pattern of international relations (Vincent, 1974:13).

In the literature, researchers debate about the assumption that external interventions are primarily intended to lower conflict intensity or shorten the conflict period through a process of conflict management. Some scholars ascribe a conflict resolution intent to interventions (Regan, 1996, 2002a; Cunningham 2010), with a specific (moral) imperative of stopping the killing (Licklider, 1993, 2001; Hampson, 2001). The success of interventions is normally understood to be the capacity to de-escalate conflict, allowing for a diplomatic solution to be sought (Regan, 1996, 2002a, 2010). Altruistic motives are ascribed to interventions such as upholding human rights, stopping genocides, promoting democracy or a moral commitment of an intervening state. In this perspective, humanitarian considerations prevail—in terms of lowering conflict intensity—not only as an end in itself, but also as a means for the negotiation process.

If peace takes precedence, interventions should support the stronger side in order for it to more quickly reach victory or force the signing of an agreement (Betts, 1994). The stronger side is often the government, especially in the early stages of the conflict. Some results confirm this dynamic as, dependent on the type of intervention, there can be a higher probability of ending the war if the intervention supports the government rather than the challenging forces (Regan, 2002a). But empirically this intervention pattern is not observed, as not all interventions support the government. In this dataset, covering Africa from 1989 to 2010, 139 interventions support the government and 60 support the opposition, with 377 being neutral (of these 102, 40 and 19 are military, respectively).

Third parties' motivations are normally exogenous to conflict (Balch-Lindsay et al., 2008, Mullenbach, 2005; Suhrke and Noble, 1977) to the point that, when the parties are still pursuing the military option, a partial intervention is considered mandatory in the context of peace enforcement (Betts, 1994). In particular, Cunningham (2010) found that, when military state interventions have independent agendas, they prolong the conflict duration to the extent of offsetting possible benefits from external intervention peace objectives. This could be explained by the fact that interventions are costly and third parties do not intervene randomly, but choose the cases where they have the greatest marginal effect in getting a preferred outcome. These mainly occur in the 'toughest' cases—namely, when there are strong rebel groups capable of overcoming the government. In such a situation, support for either the government or the rebel group will have the greatest return to interveners versus a non-intervention (Gent, 2008).

Therefore interventions can be self-centred, such as being motivated by territorial acquisition; regional stability; protection of the intervener's diplomatic, economic or military interests; ideology; specific international politics and superpower rivalry; domestic and organisational politics; and cultural affinities between the peoples in the target countries and intervening countries (Regan, 1996, 2002a, 2010).

The de-escalation of the conflict should be seen not as an end in itself to the intervention, but as a possible means for other ends. In this case, not all peace solutions are desirable by interveners, and interveners will seek to achieve their preferred peace solution, eventually through forceful processes. The escalation of the conflict can be part of a coercive intervention strategy to bring the parties to negotiations or reach an agreement (Schelling, 1960).

In practice, interventions can have a multitude of motivations, including multi-actor, overlapping, possibly conflictual or changing, and eventually illusive. Regan (1996) identified additional challenges—namely, in terms of determining links among a particular intervention, a conflict and the outcome of the fighting. These challenges pose serious operationalization problems if one is to quantify in a dataset the intention of interventions in a conflict.ⁱⁱⁱ

This analysis did not overcome this challenge, but rather considers interventions to be carried out to stop the fighting on terms favourable to the intervener, which can mean an escalation, de-escalation or continuation of the conflict intensity. Therefore, the analysis focuses on the effects of interventions measured in terms of conflict intensity and not on the success of interventions. This means that an intervention that escalates or prolongs the conflict is not unsuccessful as it is not possible to determine what the objectives are. Instead, the understanding is that different interventions affect conflict intensity (and duration) differently, and we have a case of omitted variable bias in intentions which may be a source of spurious correlation.^{iv}

Although it is not possible to identify intent, interveners make specific intervention choices. A combination of target, if biased or neutral, and types of interventions, if military, economic, diplomatic or missions and the option made, will reflect interveners' objectives in specific civil war contexts and can have a decisive influence on the civil war (Rosenau, 1964).

Biased partisan interventions aim to achieve victory for one side regardless of conflict escalation or duration whereas neutral interventions' objective is to de-escalate or solve the actual conflict (Högbladh et al., 2011). Elbadawi and Sambanis (2000) made a similar distinction between unilateral partisan interventions (by one or more parties) in favour of

either the government or opposition and ‘external agency’ intervention which are ‘multilateral and essentially neutral’, aimed at impartial resolution of conflicts (e.g., peacekeeping and peacemaking). This conflict management intent is normally ascribed to the case of mediation, closer to an objective of peace promotion (Regan, 2002b).

Within this framework, biased partisan interventions can boost the capacity of belligerents while fighting (Regan, 1996), and neutral interventions can facilitate negotiation processes (Zartman, 1993) or have a key role in securing the implementation of an agreement (Walter, 2002).

Although war endures biases, partisan interventions can directly increase the fighting capabilities of the parties, such as through the provision of troops or other military equipment. These interventions can also aim to curtail such capabilities, such as through military sanctions. By either boosting or curtailing the military capacity of parties, the interventions affect the balance of capabilities leading to an increase of military action to materialize the advantage.

If a negotiation process is ongoing, a neutral intervention can facilitate the process, such as through the efforts of international mediation teams in brokering information between the parties. These efforts can significantly increase the capacity of parties in dealing with the political process and find more agreeable solutions. In such cases, the intervention would alter the utility function of the parties by at least making a settlement more attainable, thereby increasing the likelihood of the benefits of an agreement vis-à-vis the costs in continuing fighting. If an agreement is reached, neutral interventions can guarantee its implementation, such as through the establishment of a third-party peacekeeping mission. This significantly reduces the risk function that a fighting party might have of being betrayed during the implementation of the agreement.

Neutral interventions affect the balance of capabilities in the sense that they increase the benefits of settling by signalling the existence of potential neutral third parties to mediate, monitor and implement a peace process. In contrast, biased partisan interventions affect the balance of capabilities, either by giving an advantage to one party or, if there are countering interventions (interventions in support of both sides), by raising the level of capabilities of both parties to a new level.

This is a model of the effect of intervention on fighting capacity, and indirectly on conflict related fatalities and not a model of the interaction between intervener and civil war protagonists. This is modelled in terms of the utility of fighting for the government and challenging groups where the expected utility in terms of the payoffs from fighting is the proxy for conflict intensity: higher expected utility increases conflict intensity and lower expected utility decreases conflict intensity. Such an expectation occurs even if parties who have higher utility might not fight or the fight might not produce deaths, and parties without the expected utility, for instance without external support, might fight harder with their own resources (more on this processes in the zero-inflated negative model specification). The model is silent on the motivations of the intervener focusing on the changes to payoffs to the fighting parties

In the model, government is represented by 1 and rebels by 2. The expected utility of fighting for the government is:

$$\Pi \left(\frac{\alpha F_1}{F_1 + F_2} \right) R_1 + Z_1 - C(F_1) \quad (1)$$

Π – probability of victory

F_1 – fighting by government

F_2 – fighting by rebels

α – military effectiveness parameter for government

β – military effectiveness parameter for rebels

R_1 – pecuniary value from victory

Z_1 – other non – conflict – related income

C – cost of fighting

R_2, Z_2 and $C(F_2)$ are similar for rebels.

The expected utility of fighting for rebels is:

$$\Pi \left(\frac{\beta F_2}{F_1 + F_2} \right) R_2 + Z_2 - C(F_2) \quad (2)$$

For simplicity, the denominator in the Tullock contest function $\left(\frac{1}{F_1 + F_2} \right)$ is treated as a constant.

Strategic variables for the two sides are F_1 and F_2 .

For the government, one maximizes function (1) with respect to F_1 :

$$\Pi_{F_1} R_1 - C_{F_1} = 0 \quad (3)$$

where $\frac{\delta \Pi}{\delta F_1} = \Pi_{F_1} > 0$; $\Pi_{F_{11}} < 0$ and $\frac{\delta C}{\delta F_1} = C_{F_1} > 0$; $C_{F_{11}} > 0$.

Note that the probability of victory rises with fighting effort, but at diminishing rates, such that the second derivative is negative.

For the rebels, from (2):

$$\Pi_{F_2} R_2 - C_{F_2} = 0 \quad (4)$$

where the partial derivatives have similar signs as after (3).

To obtain the reaction functions in F_1 and F_2 , derivatives of (3) and (4) with respect to F_1 and F_2 are used.

Note that by symmetry, $\Pi_{F_{12}} = \Pi_{F_{21}} > 0$.

From (3) we have:

$$\Pi_{F_{11}} R_1 dF_1 - C_{F_{11}} dF_1 + \Pi_{F_{12}} R_1 dF_2 = 0$$

or

$$\left(\frac{dF_2}{dF_1} \right) = \left(\frac{\Pi_{F_{11}} R_1 - C_{F_{11}}}{-\Pi_{F_{12}} R_1} \right) > 0 \quad (5)$$

From (4) we have:

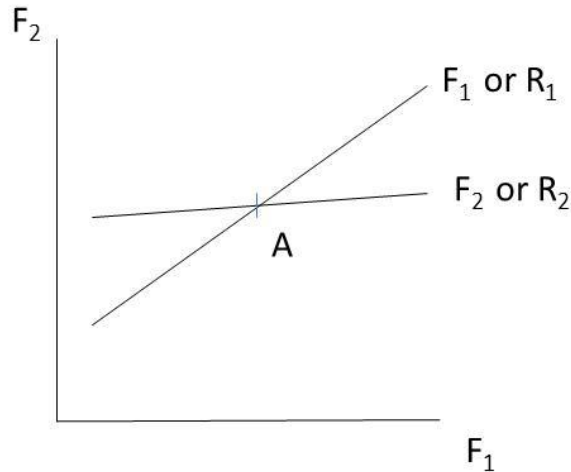
$$\Pi_{F_{22}} R_2 dF_2 - C_{F_{22}} dF_2 + \Pi_{F_{21}} R_2 dF_1 = 0$$

or

$$\left(\frac{dF_2}{dF_1} \right) = \left(\frac{-\Pi_{F_{21}} R_2}{\Pi_{F_{22}} R_2 - C_{F_{22}}} \right) > 0 \quad (6)$$

where (5) is steeper than (6) with a Nash equilibrium at intersection A (see Figure 5.1 for the reaction function of F_1 and F_2).

Figure 5.1 - Reaction functions of fighting by the government and rebels



Changes in exogenous parameters of external intervention can shift the reaction functions. A rightward shift in F_1 shows more fighting by government for each F_2 , and an upward shift in F_2 shows more fighting by rebels for each F_1 . The converse applies to leftward and downward shifts.

Biased partisan interventions only shift one reaction function, with countering interventions shifting each party function in turn. Neutral interventions both shift in the same direction.

A military intervention supporting only the government, as with military aid, lowers the cost of fighting the government, and F_1 moves to the right. Bombing, if by both sides, can first increase fighting capacity to both, F_1 shifts right and F_2 up; however, as a result the bombing can also reduce both sides' capabilities: F_1 shifts left and F_2 down.

Economic aid lowers the costs of fighting (to both sides or to the government), leading to more fighting; the partisan shifts only one while neutral shifts both.

Diplomacy raises Z_1 and Z_2 through the income accrued for the parties in the negotiations or lowers α and β . When parties use the negotiations period to build up their capacity, then α and β increase.

The above analysis is static. The dynamic effect of an intervention, L , over time (t) in months will be:

$$L_t = \begin{cases} 1, & t > 0 \wedge t \leq 12 \\ 2, & t > 12 \wedge t \leq 24 \\ 0, & t > 24 \end{cases}$$

It is therefore proposed that interventions' effects are short lived in contrast with other studies (Regan and Aydin, 2006; Collier et al., 2004). Unless interventions are constantly renewed and redoubled, they cannot have lasting effects beyond a certain period—in this case, proposed to be two years. For instance, economic aid has an effect with an impact that wanes unless aid is continued. Military support (e.g., with equipment) similarly wanes, even if the equipment continues to serve the fighting, the reason being that changes in expected utility are progressively incorporated into a new equilibrium.

The driving property that determines interventions' effects on conflict intensity is therefore the target, if biased/partisan or neutral, and the utility of fighting is considered a direct proxy for the conflict-intensity measure in battle deaths.

The two main hypotheses proposed are:

H1: Partisan interventions increase conflict intensity

H2: Neutral interventions decrease conflict intensity

In addition, each type of intervention occurs normally, but not necessarily with a certain target: Military and economic are normally partisan and diplomatic, and missions are normally neutral.^v Most cases of military interventions, like troops, equipment or air support, are provided in support of one of the parties, although in some cases they can be neutral, such as with the deployment of troops to supervise a ceasefire or control a buffer zone. Similarly, most economic support is directed to one of the parties but can be provided to both. The most recurrent type of diplomatic initiatives, mediation, is by definition neutral as it is defined as initiatives for the settlement of the dispute 'without resort to physical violence' (Bercovitch et al., 1991: 8). In addition, with this type there can be partisan diplomatic initiatives, as with political sanctions that target only one side of the conflict. For

UN missions, one would expect them to be associated with less conflict intensity, as UN interventions are rarely of peace enforcement and consistently follow a peace agreement. Non-UN missions are different from UN missions in their nature as they do not require the existence of a peace agreement but are nevertheless mostly done by sub-regional or regional multilateral institutions that have a broader legitimacy than unilateral state-based interventions. For this reason, the non-UN missions are expected to equally lead to less conflict intensity.

Considering these patterns per type of intervention, five additional hypotheses are tested:

H3: Military interventions increase conflict intensity.

H4: Economic interventions increase conflict intensity.

H5: Diplomatic interventions decrease conflict intensity.

H6: UN missions decrease conflict intensity.

H7: Non-UN missions decrease conflict intensity.

Based on the theoretical model and case study, diplomacy—or, more precisely, mediation—can lead to increased fighting under some circumstances: directly when mediation periods are used by the parties to build up the fighting capacity and indirectly when mediation initiatives break down and the parties realize the only solution for the conflict is military and thus fighting resumes with increased intensity. This increased utility of fighting does not have to be, although it can be, supported externally as the parties might resort to their own resources for it. Thus, an additional hypothesis is that:

H8: Failed mediation increases conflict intensity.

Before presenting the research design, it is important to clarify the conceptualization for the possible patterns of conflict phase and interventions. Some studies represent conflict along a continuum of phases, such as from a pre-crisis to crisis, severe crisis and war, and post-crisis, with different initiatives of third parties in each phase (Ryan, 1998). Although some general trends can be found along these dimensions, this theoretical design considers instead the possibility for a multitude of intervention types and intentions that occur in tandem matched by equally diverse utility functions of the conflicting parties, creating a scenario where several concurrent effects occur. In some cases, fighting persists while negotiations are ongoing, whether by parties not considered in the negotiations, by parties involved in the process but attempting to improve their negotiation position, or as a result of a diversity of positions within a party. For example, in the case of Angola, the 1989 Gbadolite Accords were frustrated not only by the shortcomings of the agreement, but by the government's (People's Movement for the Liberation of Angola [MPLA]) unsuccessful attempt in winning over the rebel side (National Union for the Total Independence of Angola[UNITA]) in the 1990 Zebra military operation (Sousa, 2011a). The peace process

that culminated in the more successful Bicesse peace accords of 1991 was possible because of the military stalemate that resulted from the failure of Operation Zebra but also by the progressive disempowerment of the war-prone party wing of the MPLA (Sousa, 2009). In other cases, negotiations are the only mechanisms used by the parties to serve specific interests, such as a tactic to gain time or circumvent sanctions, but where there is little propensity for the party to cease the armed struggle. Such was the case of the unsuccessful 1994 Lusaka accords in Angola, which only occurred in the context of military losses and sanctions to the UNITA (Stedman, 1997). Once agreements are reached through negotiations, even if they can be genuine attempts to bring all stakeholders into an agreement, there are a series of conditions which need to be met for the agreement to hold. When such is not the case, parties can denounce the agreement or splitting factions might continue to fight, as evidenced by the international efforts in the 1992 elections in Angola, which were insufficient in size and capacity, to secure the implementation of the peace agreement (Hodges, 2001).

The next section presents the research design with the econometric approach and dataset.

5.4 Research design

5.4.1 Econometric approach

There are four main limitations of the current research which this study attempts to address: the reliance on categorical outcome variables instead of count data, overlooked periods of low intensity conflict, improved controls for endogeneity and the lack of recent and comprehensive data on interventions.

The studies on the relationship between interventions and conflict have focused mainly on the duration of conflict as the dependent variable. Normally the success of interventions is determined by an outcome variable that identifies whether the conflict stopped or not, normally operationalized by a threshold of 200 or 999 battle deaths per year. This procedure provides little information on the exact effect that interventions have on escalating conflict, particularly for the escalation above the threshold and for low intensity conflict.

Based on recently available event data on conflict, it is possible to build a monthly account of battle deaths and, in this way, measure the actual effects of interventions along the full range of conflict intensity with at least one battle death.

The relationship between interventions and conflict intensity or duration is endogenous. Interventions affect conflict intensity, and conflict intensity affects the patterns and modes of interventions. This effect of conflict on interventions has been identified in several studies. In Holl (1993), third parties are more likely to be involved in the termination stage of the conflict motivated by an interest in acquiring political leverage.^{vi} With mediation (a form of diplomatic interventions), it is more likely to occur in longer and more intense wars (Karl DeRouen et al., 2011).

Specifically, given the effect that conflict intensity has on military interventions, Elbadawi and Sambanis (2000) considered that interventions are more likely in bloodier wars, and Regan (2002a) found that interventions are more likely to end the war when the conflict is more intense but interventions are less likely to occur. In addition, third-party interventions make a negotiated settlement less likely unless the civil war last for a long duration (Mason et al., 1999) and war duration, intensity and the military balance have been found to be determinants in the initiation of negotiations (Walter, 2002).

This study addresses endogeneity by analysing the level of conflict intensity and change in conflict intensity. The model of conflict-intensity level includes the count of battle deaths as the outcome variable controlling for endogeneity through a lagged variable of conflict-intensity level on the right-hand side of the equation. Because the outcome variable has an over-representation of zeroes (3808 zeroes corresponding to 66% of entries) and is over-dispersed with a variance greater than the mean, a zero-inflated negative binomial (ZINB) regression is used in the analysis. However, this estimation is considered insufficient for dealing with endogeneity, and it is complemented with an analysis of change.

The model of conflict intensity changes and regresses the monthly change in intensity on the change of the independent variables. The variable of the monthly change is based on the changes in the monthly count of battle deaths which, due to the normal lack of its distribution, is transformed into three dummy variables of change: one for positive change (escalation of conflict), one for negative change (de-escalation of conflict), and one for no change (no escalation or de-escalation). As the outcome variable is a dummy, the model is regressed with a logit estimator.

For a robustness check of the outcome variable, the main model on conflict-intensity level was regressed with an ordered logit on a categorical variable of the conflict-intensity level.^{viii} The analysis is based on a new broad dataset that covers the period from 1989 to 2010 for Africa and includes detailed information on a series of interventions that can have effects on conflict intensity, including UN and non-UN missions. A detailed presentation of the dataset is provided in Chapter 3.

5.4.2 Dataset

The unit of analysis of the study is interventions in conflicts (civil wars) in a month. Conflicts are defined as a contested incompatibility for the government or territory through armed force between two parties, where at least one party is the government of a state and which results in at least 25 battle-related deaths (Gleditsch et al., 2002). Although other forms of conflict exist, such as communal violence or one-sided violence, the analysis is restricted to state-based violence as it is the one that attracts the most interventions. The dataset includes 42 conflicts in 30 countries.

The dataset starts the period of each conflict from the date of the first battle death, which significantly enlarges the conflict timeline to periods where there was very low intensity of conflict (fewer than 25 battle deaths). This minimizes the potential problem of a selection bias where the analysis only looks at interventions that occur in countries where the state authority has already been significantly challenged as evidenced by higher conflict intensity. Instead, the analysis covers the full spectrum of battle deaths, from the first to the highest recorded monthly values. The dataset includes 5582 conflict months corresponding to 5787 entries.

The two main outcome variables are the count of monthly battle deaths (*int_m*) and the monthly change of this count transformed into the dummy for positive change (increased intensity), negative change (decreased intensity) and no change (same intensity). All variables are based on UCDP's Georeferenced Dataset (GED) v1.5-2011 database (Melander and Sundberg, 2013).

The definition of external interventions is adapted from Regan et al. (2009) and Rosenau (1968), where external interventions are convention-breaking political, economic or military (including UN and non-UN missions) actions in a country targeting the authority structures

of the country (in support of the government, opposition or neutral) in order to influence the balance of power between the parties or have an effect on the conflict process. According to the definition, the intervener can be a state or non-state party, but must be foreign to the country. ‘Convention breaking’ refers to a significant change in the normal course in which relations between the countries were being held. Such changes should be temporary (so as not to become the convention) and ‘profound and enduring’ in the target society (Rosenau, 1971: 357). This new form is different from influence, which is a normal characteristic of international relations between states. The other criterion, ‘authority target’, means that interventions are political in nature and should aim at the ‘identity of those who make the decisions that are binding for the entire society and/or processes through which such decisions are made’ (Rosenau, 1971: 359), regardless of the attempt to overthrow or uphold such authority. The fact that the intervention occurs within a conflict period automatically meets the convention breaking or exceptionality criteria. The main adaptation in this definition is the inclusion of neutral interventions, as they can crystalize conflict conditions or enable agreements that change the conflict dynamics. In this way, they affect the balance of capabilities.

The interventions data are based on a dataset developed by the author (see Chapter 3 for a presentation of the dataset). Interventions are coded for the date of initiation, and there are as many intervention entries in one month as the number of interventions. Thus, the dataset is a cross-section of country-conflicts but without a real-time dimension, even if the entries are per month. This creates specific limitations on the estimation techniques that can be used and is justified by the possibility to have more information on the theoretical variables of interest.^{viii}

As Table 5.1 indicates, 576 interventions are distributed between targets and types of interventions.^{ix}

Table 5.1 Intervention types and targets

Intervention	Neutral	Partisan	Total
Military	142	19	161
Economic	40	12	52
Diplomatic	10	295	305
UN mission	1	31	32
Non-UN mission	6	20	26
Total	377	199	576

These interventions have been coded in their month of start in the dataset, and then the lagged effect is applied. The effect is cumulative and lagged with a value of 1 for the first 12 months and a value of 2 for the second 12 months (with the exception of the sub-type of military intervention air support which has a value of 2 only in the month it occurs). For descriptive statistics of conflict intensity and intervention variables, see Table 5.2.

Table 5.2 Summary of statistics of conflict intensity and interventions

Variable	Mean	Std. Dev.	Min	Max
Count of battle deaths (int_m)	63.61	392.66	0	14100
Increased intensity	0.22	0.41	0	1
Decreased intensity	0.20	0.40	0	1
Same intensity	0.58	0.49	0	1
Neutral intervention	2.44	5.13	0	47
Partisan intervention	1.40	3.82	0	43
Military intervention	1.10	3.02	0	40
Economic intervention	0.36	1.11	0	10
Diplomatic intervention	2.03	4.34	0	45
UN missions	0.19	0.60	0	6
Non-UN missions	0.15	0.54	0	4

A robustness check of the specification of interventions was made using Collier et al.'s (2004) specification of a permanent and cumulative effect and Regan and Aydin's (2006) specification of a non-cumulative effect with a declining utility over time. The main difference of these two specifications is that, in this paper, interventions have a temporal effect on conflict intensity but then the changes in capacities are absorbed into the conflict dynamics and the intervention ceases to have a direct effect on conflict intensity. The two alternative specifications consider the effect to be permanent until the end of the conflict (even if declining in one of them).^x

The main level of conflict model is specified as:

$$\text{Conflict intensity}_{it} = a_{1i} + I_{it}b_2 + C_{wit}b_w + d_{it}month_t + e_{it} \quad (7)$$

Conflict intensity is the count of battle deaths per month, where I_{it} is the lagged effect of the interventions. A vector of w control variables C_{it} relevant to either conflict or interventions is identified. First, previous levels of conflict intensity allow for the reduction of endogeneity; this is controlled with a categorical variable of intensity with the same categories as identified in footnote 7 ($int_yrleveln1$). Second, the size of the country's population might have an effect on the number of battle deaths and is controlled for with a natural log of the population ($lnpop$). Third, the measure of wealth is controlled for with the purchasing power parity adjusted GDP per capita of the previous year ($income_pc_n1$). Fourth, one controls for the level of democracy in the country with the polity score converted to a 0 to 20 scale ($polity$). Fifth, the existence of natural resources in the form of oil or gas is controlled for with a dummy variable ($oil_gas_on_off$). Both oil and democracy have been found to be associated with conflict in other studies and can equally be linked to the likelihood of interventions. A sixth variable controls for Overseas Development Assistance (ODA), with a natural log of ODA ($lnoda$). This is the foreign action most similar to an external intervention. A conflict-specific time trend starting from the initiation of the conflict ($d_{it}month_t$) is included to account for the temporal dependence ($time_m$).

Country fixed effects (\mathbf{a}_i) capture time-invariant country characteristics. The term (e_{it}) is a disturbance term.

The change of conflict model is similar to the level of conflict model, but with the change factor—namely:

$$\text{Conflict change}_{it} = a_{1i} + \Delta I_{it}b_2 + \Delta C_{wit}b_w + d_{it}month_t + e_{it} \quad (8)$$

where the change of each variable is the difference between month t-1 and t. The outcome variable is the dummy for positive, negative or no change in battle deaths between months. For the country variables with yearly data, the overall change is attributed to each month of the year.

Finally, the hypothesis that failed mediation increases conflict intensity is modelled separately. The full treatment of this hypothesis would require a different unit of analysis, such as mediation processes, which would entail a new dataset. Instead, within the existing dataset, it is possible to address this question through the use of interaction variables. The mediations (a sub-type of diplomatic interventions) interact with the proxy for success and failure of mediation.

The UCDP Peace Agreement (PA) (Harbom et al., 2006) dataset provides information on all peace agreements, identifying whether the peace agreement ended. The period after the end of the peace agreement can constitute a proxy for a time of failed diplomacy (failed mediation). Twelve months is considered long enough to allow for military repercussions to be planned and executed, but not too distant from the point where events become detached from the moment the agreement failed.

The UCDP PA dataset offers more options to proxy for the success of mediation than failure. At the same time, it is reasonable to state that if failed mediation escalates conflict, successful mediation de-escalates conflict intensity, even if one is not a logical deduction of the other. In this way, three proxies for success of mediation were developed. One refers to whether mediation occurs in the aftermath of signing a peace agreement (mediation with a peace agreement). This variable is further disaggregated into three levels of success: signing a peace agreement process, a partial peace agreement and a full peace agreement. Because a peace agreement is a long process, its effect is considered felt within 24 months of its signing. Another proxy of success is for mediation in the aftermath of peace agreements with a ceasefire provision, which should have a direct effect on conflict intensity (mediation with ceasefire). Signing a ceasefire agreement is expected to have a quicker effect within a 12-month timeframe. The other proxy for success is that mediation occurs while a peace agreement is holding, which has a time effect from the signing of the agreement until its end (mediation within the peace agreement period). The interaction variable assumes the value of the mediation variable during the period of the effects of the proxies. Descriptive statistics of the interaction variables are presented in Table 5.3.

Table 5.3 Descriptive statistics of failed and successful mediation proxies

Variable	Mean	Std.Dev.	Min	Max
Mediations with ceasefire	0.585623	2.360023	0	23
Any type of peace agreement	1.03888	3.056396	0	24
Mediations with peace process agreement	0.122862	1.003592	0	19

Variable	Mean	Std.Dev.	Min	Max
Mediations with partial peace agreement	0.546224	2.254863	0	24
Mediations with full peace agreement	0.369794	1.96955	0	23
Mediations with peace agreement period	0.747883	2.578098	0	24
Mediations with failed agreement	0.272853	1.6929	0	21

Because mediation is mainly neutral (with 247 neutral interventions and one intervention in support of the government), analysing mediation is synonymous with analysing neutral mediations.

The model estimations are similar to those previously specified for conflict-intensity level and change—namely:

$$\begin{aligned}
\text{Conflict intensity}_{it} \\
&= a_{1i} + M_{it}b_2 + I_{it}b_3 + C_{wit}b_{it} + d_{it}month_t \\
&+ e_{it} \qquad (9)
\end{aligned}$$

$$\begin{aligned}
\text{Conflict change}_{it} \\
&= a_{1i} + \Delta M_{it}b_2 + \Delta I_{it}b_3 + \Delta C_{it}b_{it} + d_{it}month_t \\
&+ e_{it} \qquad (10)
\end{aligned}$$

The difference is that the interaction variable of success or failure of mediations (M_{it}) controls for other intervention types and other sub-types of diplomatic interventions besides mediation (I_{it}). The results will be presented in the next section in the same order: first the conflict-intensity level, then conflict-intensity change, and then the failed diplomacy, with an analysis of the level and change of conflict intensity.

5.5 Empirical analysis

The way for using the ZINB estimation to deal with the excess zeroes is to model two different processes, one dealing with the zeroes and another for the count, with the underlying assumption that there are two distinct processes. The first process is used when there is no intent to fight, and the second process is used when there is intent to fight. The first process is considered ‘certain’ zero as, with no fight, there is no battle death regardless of other factors. In the second process, the intent to fight can be enhanced by other factors, but is not enough to produce battle deaths; thus, one also needs to fight, resulting in battle deaths. Therefore, in the second process, there is a propensity for battle deaths if certain conditions are met.

The first process is modelled with an outcome variable of 1 for a certainty of zero battle deaths in the month and 0 otherwise (identified as *inflate* in the tables); it is estimated with a logit regression. In this case, a negative sign in the coefficient of the independent variable indicates a decreased likelihood of a certain zero, thereby resulting in an escalation of the conflict. A positive sign in the coefficient indicates either a non-escalation or a de-escalation of the conflict. The second process is modelled with an outcome variable of the count of battle deaths (identified with *int_m* in the tables) and is estimated using a Negative Binomial Regression. In this case, the reading of the coefficients is more straightforward with a

positive coefficient, meaning escalation of the conflict and a negative coefficient a de-escalation of the conflict. The results are presented in Table 5.4.

Table 5.4 Zero-inflated negative binomial (ZINB) of intervention targets and types on conflict intensity level

VARIABLES	(1) int_m	(2) Inflate	(3) int_m	(4) inflate
Neutral interventions	-0.0432*** (0.00877)	-0.000613 (0.00910)		
Partisan interventions	0.0215** (0.00879)	-0.0939*** (0.0141)		
Military interventions			0.0203* (0.0119)	-0.110*** (0.0190)
Economic interventions			0.0495* (0.0274)	-0.0720* (0.0434)
Diplomatic interventions			-0.0410*** (0.0111)	0.0101 (0.0126)
UN missions			-0.187** (0.0811)	0.0331 (0.0783)
Non-UN missions			-0.0616 (0.0798)	0.0204 (0.0951)
int_yr_leveln1	0.266*** (0.0554)	-0.787*** (0.0477)	0.254*** (0.0556)	-0.797*** (0.0481)
lnpop	-4.848*** (0.510)	-0.219 (0.462)	-5.026*** (0.518)	-0.165 (0.472)
income_pc_n1	-0.000740*** (0.000155)	-5.15e-05 (0.000176)	-0.000759*** (0.000158)	-4.30e-05 (0.000176)
Polity	-0.0513*** (0.0150)	0.0321** (0.0153)	-0.0489*** (0.0152)	0.0341** (0.0153)
oil_gas_on_off	1.002*** (0.366)	-0.849* (0.501)	1.050*** (0.364)	-0.918* (0.478)
lnoda	0.0486 (0.0959)	0.0557 (0.0829)	0.0844 (0.103)	0.0849 (0.0860)
time_m	0.00521*** (0.000884)	-0.00267*** (0.000815)	0.00571*** (0.000896)	-0.00277*** (0.000829)
Country Fixed Effects	Yes	Yes	Yes	Yes
lnalpha		0.721*** (0.0425)		0.722*** (0.0430)
Observations	5,285	5,285	5,285	5,285

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: lnalpha is the natural log of the dispersion parameter alpha. A significant value identifies that the Negative Binomial is justified instead of a Poisson model.

The results for target and types are very consistent considering the overlap of the two.^{xi} Partisan interventions and military and economic interventions increase conflict intensity by both decreasing the likelihood of having a zero battle death month and increasing the intensity in months with a propensity for battle deaths (all models).

Neutral interventions and diplomatic interventions de-escalate conflict only in the months with a propensity to battle deaths (Models 1 and 3) and with no significant effect in the month without a propensity for battle deaths (Models 2 and 4). The lack of significance in

the inflated model could be justified by some findings that mediation (the main diplomatic initiative) occurs in the later and more intense periods of the conflict.^{xiii}

UN missions have a de-escalating effect in months with a propensity for battle deaths (Model 3). This is an expected effect considering the success ascribed to the UN and that most missions occur once a peace agreement has been signed. Non-UN missions have no significant effect on conflict intensity in either model, falling short from the theorized effect of de-escalating conflict. This could be due to the identified smaller capacity of non-UN missions in comparison to the UN, making them less effective, or by the different nature of the mandates.

The results of the control variables are consistent across the models.

The measure of the last year's conflict intensity is significantly and positively associated with conflict intensity in the current month. This is expected as the history of conflict affects current levels of conflict, which can be happening through different channels, such as due to accumulated hatred, war capital (such as with equipment and fighters) or the maintenance of a war economy.

Contrary to expectations, a larger population has a de-escalation effect on conflict intensity in the months with a propensity for battle deaths. Intuitively, one would expect that a greater population would mean more deaths. One explanation for this result could be the specification of using solely state-based battle-related deaths. This means that only deaths directly related to combat between warring parties are counted and that one-sided violence against civilians, communal violence or other indirect civilian deaths are not considered. Therefore, the battle death measure will only be connected to the population size as a function of the recruitment capacity of fighting groups, which is in itself dependent on other factors.

The wealth of the country in the previous year is negatively associated with conflict intensity in the current month, meaning that richer countries have fewer battle deaths. This is an expected result found in other studies where two main mechanisms have been identified. The wealth of the country determines the opportunity costs for would-be rebels, making it more or less difficult to recruit. Therefore, even if there is an opportunity for conflict, the costs to mount a rebellion are increased (Collier and Hoeffler, 2004; Collier et al., 2009). The other mechanism is that the wealth of the country is also representative of state capacity (Fearon and Laitin, 2003). If the state is wealthier, therefore stronger, it can mean less conflict due to its capacity to crush the rebellion or, because the dataset is limited to the cases when a conflict occurs, it can mean the conflict results in low intensity guerrilla strategies in peripheral locations (Human Security Research Group, 2012).

Democracy de-escalates conflict intensity, by both increasing the likelihood of zero battle death months and de-escalating intensity in months with a propensity for battle deaths. This is an expected result as the intensity of conflict in democracies has been found lower even if the conflicts last longer (Gleditsch et al., 2009), and more democratic countries prior to the initiation of the conflict have a higher probability that the negotiated peace settlements will endure (Hartzell et al., 2001).

The existence of oil and gas increase the intensity of conflict in months both with and without a propensity for battle deaths, which is in line with the results of other studies of the 'greed and grievance', either for the onset of civil war (Collier and Hoeffler, 2004; Collier et al., 2009; Fearon and Laitin, 2003) or for lower level armed conflict (Hegre and Sambanis, 2006).

The level of ODA is not significantly associated with the level of conflict in both models. In this case, a reverse relationship with conflict intensity would be expected, as the levels of ODA would decline in the cases where there is an open war with a high number of battle deaths. It could be that the decline of the budget of the main ODA programmes, which target sustainable, long-term and poverty-reducing initiatives, is slightly compensated by the programme on humanitarian assistance (which is a smaller portion of the main programmes), making the coefficient non-significant. The conflict specific time trend is significant where longer conflicts are more intense. Longer conflicts are less likely to have months with zero battle deaths while simultaneously having more battle deaths in the months with a propensity for battle deaths.

These results confirm the previous findings in the literature and the propositions of the theoretical model. They are robust to an estimation with an ordered logit on the categorical transformation of the outcome variable, but are sensitive to the specification of the external interventions. Indeed, Regan and Aydin's (2006) and Collier et al.'s (2004) specification produce distinct results (see appendice 3 for a detailed presentation of the results).

The model leaves two issues to solve. One is that the estimation does not control enough for endogeneity, the effect of interventions on conflict intensity and vice versa; the other is that the results for partisan, military and economic interventions with the ZINB are more robust (both inflated and negative binomial estimations have significant values in the expected direction) than the results for neutral and diplomacy (which is only significant in the negative binomial estimation). We will first address the issue of endogeneity and then further investigate neutral diplomacy.

As presented in Equation (8), a model of change is used with three dummy outcome variables for positive, negative and no change in the monthly count of battle deaths which are regressed with a logit estimator. The results are presented in Table 5.5.

Table 5.5 Logit estimation of changes of intervention targets and types on conflict intensity change

VARIABLES	(1) Positive	(2) Positive	(3) Negative	(4) Negative	(5) No change	(6) No change
Δ Neutral interventions	0.0416 (0.0537)		0.0239 (0.0533)		-0.0623 (0.0513)	
Δ Partisan interventions	0.123** (0.0492)		-0.0670 (0.0451)		-0.0385 (0.0436)	
Δ Military interventions		0.160** (0.0713)		-0.166** (0.0650)		0.0269 (0.0655)
Δ Economic interventions		0.326** (0.148)		0.156 (0.130)		-0.462*** (0.149)
Δ Diplomatic interventions		-0.0203 (0.0568)		0.0407 (0.0576)		-0.0202 (0.0555)
Δ UN missions		-0.165 (0.192)		0.153 (0.199)		0.0328 (0.196)
Δ Non-UN missions		0.0493 (0.221)		-0.327 (0.211)		0.241 (0.207)
Δ int_yr_leveln1	0.264*** (0.0392)	0.266*** (0.0393)	0.294*** (0.0404)	0.298*** (0.0405)	-0.425*** (0.0360)	-0.428*** (0.0360)
Δ lnpop	0.527* (0.303)	0.510* (0.305)	-3.466** (1.445)	-3.466** (1.449)	-0.180 (0.236)	-0.169 (0.236)
Δ income_pc_n1	-0.000657** (0.000325)	-0.000635* (0.000325)	-0.000505 (0.000326)	-0.000489 (0.000326)	0.000776*** (0.000286)	0.000755*** (0.000286)
Δ polity	-0.0177 (0.0186)	-0.0154 (0.0186)	0.00435 (0.0191)	0.00735 (0.0192)	-0.00100 (0.0171)	-0.00467 (0.0171)
Δ oil_gas_on_off	0.219 (0.244)	0.219 (0.244)	-0.153 (0.252)	-0.168 (0.253)	0.00356 (0.257)	0.0105 (0.257)
Δ lnoda	0.0178 (0.0823)	0.0235 (0.0823)	0.114 (0.0864)	0.120 (0.0864)	-0.131* (0.0720)	-0.135* (0.0721)
time_m	0.00293*** (0.000470)	0.00293*** (0.000471)	0.00265*** (0.000486)	0.00263*** (0.000487)	-0.00404*** (0.000427)	-0.00404*** (0.000428)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,409	5,409	5,409	5,409	5,409	5,409

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The results reinforce the findings that partisan, economic and especially military interventions increase conflict intensity. Their coefficients are significant and positive in the models of positive change (Models 1 and 2), and the military interventions effect is also significant and negative in the model of negative change (Model 4). The only other significant coefficient is economic interventions which is negatively associated with no change (Model 6). UN missions are no longer significant, which can be explained by the fact that even if UN missions are associated with lower levels of conflict they are not necessarily associated with significant changes in conflict intensity as normally UN missions start once peace agreements have been signed.^{xiii}

The novelty of the results is the non-confirmation of the de-escalating effect of neutral and diplomatic interventions which are non-significant in all models, with the expected sign in each of them, but with standard errors bigger than the coefficients. These results would suggest that, after controlling for endogeneity, changes in the frequency of diplomatic initiatives do not have an effect on changes in conflict intensity. On one hand, it does not confirm to one of the most robust results of the literature; on the other hand, it renders it plausible that it is a sub-set of diplomatic initiatives, the failed diplomacy, which are annulling the significance of the results. Such would be in line with the findings of the case study and the proposed hypotheses, to which we now turn.

Based on equation (9) for the conflict-intensity level, the results for failed diplomacy with the ZINB are presented in Table 5.6.

Successful mediation de-escalates conflict while failed mediation has no effect on conflict. Mediation after signing a cease fire, a peace agreement or done while a peace agreement is holding both increase the likelihood of a zero battle death month as well as decreases intensity in months with a propensity for battle deaths (Models 3 to 8). Any of the three effects is higher than the normal effect of mediation (Models 1 and 2). Failed mediation has not significant effect on conflict intensity while other non-failed mediation is significantly decreasing conflict (Models 9 and 10). The significant control variables have similar results to those presented before for the ZINB model, with some differences in tests of specification.

This increase effect of more successful mediation is confirmed when disaggregating peace agreement types. For the disaggregation of type of agreements in table 5.7, only the peace process agreement can escalate (Model 4) or de-escalate conflict (Model 3) while a partial or full peace agreements only de-escalate conflicts (Mode 6 and 7 respectively). A peace agreement with a cease fire is the one that more significantly decreases conflict intensity (Model 9 and 10).

Table 5.6 ZINB of successful and failed mediation on conflict intensity level

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	int_m	inflate	int_m	inflate	int_m	inflate	int_m	inflate	int_m	inflate
Mediation	-0.0254* (0.0140)	0.0228 (0.0147)								
Mediation with ceasefire			-0.0668*** (0.0184)	0.0804*** (0.0215)						
Other mediation without cease fire			-0.00860 (0.0153)	-0.00634 (0.0166)						
Mediation with a peace agreement					-0.0355** (0.0154)	0.0394* (0.0164)				
Other mediation without peace agreement					-0.00424 (0.0201)	-0.0209 (0.0236)				
Mediation within peace agreement period							-0.0379** (0.0175)	0.0589*** (0.0175)		
Other mediation outside peace agreement period							-0.0146 (0.0168)	-0.0189 (0.0182)		
Failed mediation									-0.0159 (0.0236)	-0.0261 (0.0251)
Other non-failed mediation									-0.0279* (0.0152)	0.0342** (0.0154)
Other diplomatic initiatives									-0.0858*** (0.0248)	-0.0487 (0.0402)
UN and non-UN missions									-0.127*** (0.0490)	-0.0487 (0.0402)
Military									-0.141*** (0.0500)	0.0522 (0.0521)
Economic									0.0223* (0.0122)	-0.106*** (0.0191)
int_yr_leveln1									0.0640** (0.0282)	-0.0648 (0.0438)
lnpop									0.262*** (0.0553)	-0.797*** (0.0476)
income_pc_n1									-0.789*** (0.0475)	-0.795*** (0.0474)
polity									5.101*** (0.320)	-5.104*** (0.321)
oil_gas_on_off									-0.000718*** (0.000158)	-0.000719*** (0.000158)
lnoda									-0.0510*** (0.0152)	-0.0511*** (0.0153)
time_m									1.018*** (0.365)	1.028*** (0.362)
Country Fixed Effects									0.00987*** (0.000906)	0.00993*** (0.000910)
lnalpha	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	0.717*** (0.0420)	0.717*** (0.0420)	0.714*** (0.0419)	0.714*** (0.0419)	0.714*** (0.0419)	0.714*** (0.0419)	0.714*** (0.0419)	0.714*** (0.0419)	0.713*** (0.0414)	0.713*** (0.0414)
Observations	5,285	5,285	5,285	5,285	5,285	5,285	5,285	5,285	5,285	5,285

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5.7 ZINB of peace agreement types and mediation

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	inc_m	infafe	inc_m	infafe	inc_m	infafe	inc_m	infafe	inc_m	infafe
Mediation with a peace agreement	-0.0355* (0.0154)	0.0394** (0.0162)								
Other mediation without peace agreement	-0.00424 (0.0201)	-0.0209 (0.0236)								
Mediation with a peace process agreement			-0.0720** (0.0293)	-0.0673* (0.0397)						
Other mediation without peace process agreement			-0.0184 (0.0149)	0.0389* (0.0148)						
Mediation with a partial peace agreement					0.0181 (0.0227)	0.0646*** (0.0175)				
Other mediation without a partial peace agreement					-0.0372** (0.0146)	-0.000637 (0.0143)				
Mediation with a full peace agreement							-0.0811*** (0.0180)	0.0370 (0.0249)		
Other mediation without a full peace agreement							0.00482 (0.0162)	0.0178 (0.0157)		
Mediation with ceasefire									-0.0668*** (0.0184)	0.0804*** (0.0215)
Other mediation without ceasefire									-0.00860 (0.0153)	-0.00634 (0.0166)
Other diplomatic initiatives	-0.0743*** (0.0224)	-0.0412 (0.0364)	-0.0839*** (0.0226)	-0.0624 (0.0398)	-0.0925*** (0.0248)	-0.0329 (0.0346)	-0.0864*** (0.0232)	-0.0469 (0.0387)	-0.0076*** (0.0230)	-0.00459 (0.0362)
UN and non-UN missions	-0.105** (0.052)	-0.0209 (0.0831)	-0.141*** (0.047)	0.0275 (0.0321)	-0.183*** (0.0497)	-0.0192 (0.0479)	-0.100** (0.0471)	0.00602 (0.0216)	-0.107** (0.0491)	-0.00624 (0.0311)
Military	0.0828* (0.0126)	-0.0831** (0.0192)	0.0204 (0.0172)	-0.0321 (0.0187)	0.095*** (0.0160)	-0.095** (0.0184)	0.0271 (0.0121)	0.00181 (0.0188)	0.0911** (0.0172)	0.0911** (0.0187)
Economic	0.0599** (0.0283)	-0.0647 (0.0439)	0.0749*** (0.0288)	-0.0382 (0.0446)	0.0542* (0.0285)	-0.114** (0.0393)	0.0543* (0.0283)	-0.0610 (0.0435)	0.0523* (0.0285)	-0.0759* (0.0448)
inc_yr_level1	0.264*** (0.0554)	-0.786*** (0.0475)	0.260*** (0.0551)	-0.787*** (0.0475)	0.216*** (0.0556)	-0.840*** (0.0415)	0.267*** (0.0550)	-0.785*** (0.0476)	0.265*** (0.0549)	-0.786*** (0.0472)
Inpop	-5.086*** (0.520)	-0.256 (0.466)	-5.118*** (0.519)	-0.259 (0.468)	-5.779*** (0.519)	0.220** (0.0637)	-5.392*** (0.516)	-0.270 (0.467)	-5.217*** (0.517)	-0.157 (0.465)
income_pc_n1	-0.000677*** (0.000174)	-4.00e-05 (0.000174)	-0.000696*** (0.000160)	-6.57e-06 (0.000174)	-0.000986*** (0.000125)	-0.000969*** (0.000111)	-0.000673*** (0.000175)	-2.77e-05 (0.000175)	-0.000669*** (0.000158)	-5.74e-05 (0.000174)
polity	-0.0522*** (0.0153)	0.0354** (0.0153)	-0.0515*** (0.0153)	0.0367** (0.0152)	-0.0449*** (0.0153)	0.0194 (0.0194)	-0.0486*** (0.0152)	0.0362** (0.0152)	-0.0504*** (0.0152)	0.0317** (0.0152)
oil_gas_on_off	0.3259 (0.259)	-0.491 (0.347)	0.3259 (0.259)	-0.491 (0.347)	1.327 (0.347)	0.269 (0.188)	0.3259 (0.259)	-0.491 (0.347)	1.188 (0.347)	0.3259 (0.259)
lnoda	0.115 (0.105)	0.0385 (0.0860)	0.0885 (0.102)	0.0613 (0.0850)	0.0878 (0.103)	0.0275 (0.0602)	0.0875 (0.101)	0.0628 (0.0850)	0.122 (0.102)	0.0275 (0.0853)
time_m	0.00987*** (0.000906)	-0.0261*** (0.000820)	0.00588*** (0.000906)	-0.00275*** (0.000828)	0.00664*** (0.000891)	-0.00177*** (0.000350)	0.00585*** (0.000886)	-0.00267*** (0.000823)	0.00585*** (0.000899)	-0.00267*** (0.000818)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
lnalpha	0.714*** (0.0419)	0.714*** (0.0419)	0.714*** (0.0419)	0.714*** (0.0419)	0.714*** (0.0419)	0.763*** (0.0453)	0.707*** (0.0418)	0.707*** (0.0418)	0.704*** (0.0412)	0.704*** (0.0412)
Observations	5,285	5,285	5,285	5,285	5,285	5,285	5,285	5,285	5,285	5,285

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Based on equation (10) of change in conflict intensity, the logit model with dummy variables has no significant effect throughout and is not presented (see appendice 3 for details). Such results further question the effect of mediation once controlling for endogeneity.

In summary, failed mediation does not have an effect on conflict intensity and successful mediation has a de-escalating effect on conflict but once controlling for endogeneity successful or failed mediation have no significant effect on conflict intensity.^{xiv}

5.6 Conclusion

This study uses a new dataset on external interventions with the conflict period extended to lower intensity while combining all the main intervention types. The theoretical model focuses on the target of interventions as the main determinant of intervention effects, but also considers types of interventions. The analysis is done on the effect of interventions at the conflict level and change which allows to better control for the endogeneity of the conflict–interventions relationship.

The results confirm some of the literature findings and provide some novel and important insights. The confirmation is given by the finding that partisan, military and economic interventions increase conflict intensity and that the results are robust in the change model controlling for endogeneity. Similar results have been found by Pettersson (2011), with the new UCDP dataset on economic and military support looking at the effect on conflict intensity.

The results for UN and non-UN mission are less robust as both are non-significant in the model controlling for endogeneity and only UN missions de-escalate conflict in the model of conflict level. The hypothesis purposed are not confirmed but such can be due to the dataset which is design to better account for quick interventions than long term initiatives.

The novel finding is that, although neutral and diplomatic interventions decrease conflict intensity in the conflict-intensity level model, as other studies have identified, when using the conflict-intensity change model, these interventions have no significant effect. These results suggest that, after controlling for endogeneity, neutral or diplomatic interventions have no effect on the intensity of conflict. Considering the importance of diplomacy as a conflict management tool, these results are surprising. Nevertheless, the case study presented in Chapter 2 has identified a few mechanisms through which diplomacy might have the unintended effect of increasing conflict intensity.

In order to further investigate these findings, an additional model of failed and successful mediation was tested. Again, before controlling for endogeneity the results suggest that success mediation decreases conflict intensity but failed diplomacy has no effect on conflict intensity. But after controlling for endogeneity neither successful or failed mediation has a significant effect on conflict intensity.^{xv}

These results need to be properly contextualized, as they are measured for a time frame of 24 months, not accounting for the longer effects. Furthermore, diplomacy is the main mechanism of conflict management—something not disputed in this chapter—with several other achievements. Diplomacy is part of the processes through which peace agreements are reached, many of them resulting in a transition to a less violent society. Even in the one third of cases when peace agreements fail, violence resumes with less than 80% of battle deaths compared to the period before the signing of the peace agreement (Human Security Research Group, 2012). Therefore, diplomacy can lead to successful peace agreements and to failed peace agreements that lead to less killing, even if they do not lead to less battle deaths in the short term.

Nevertheless, the results identify an area of research related to the ‘unintended’ consequences of diplomatic processes and indicate that the form and effect of diplomacy need to be further investigated and controlled for endogeneity in order to account for unexpected mechanisms. Here, an identification of intentions would be informative as, for instance, sincere diplomacy generates different results from ‘cheap talk’ diplomacy.

The main implication for theory is that intentions of interventions are relevant. Not only the type, but also the intended target of support of an intervention determines its effect on conflict intensity. As identified in this study, intentions of interventions are a main source of the omitted variable bias, and such bias is relevant, as demonstrated by the significance of the target of interventions—namely, a simplified account of intention. Developing data on intentions could greatly contribute to our understanding of the effectiveness of interventions using lenses through which we are not able to see at the moment.

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https://sites.google.com/site/ricardosousa2000/phd_attachments

ⁱⁱ Regan uses a sub-set of Goldstone et al.'s (2010) countries at risk of civil war onset.

ⁱⁱⁱ Attempts to code intentions had to resort to coders' decisions, such as in Kisangani and Pickering (2009). In their research, motivations could be domestic dispute issues, regime or policy change issues, strategic issues, territorial issues, rebel pursuit issues, diplomatic protective issues, economic issues, humanitarian issues, or social protective issues.

^{iv} Other possible emitted variables are paramilitary and covert operations not coded in the dataset.

^v In the dataset, 88% of military interventions and 77% of economic interventions are partisan and 97% of diplomatic and 87% of missions are neutral.

^{vi} These results can be biased as diplomatic efforts are more likely to be disclosed if the prospects of positive outcomes can be capitalized domestically and internationally by the external parties involved.

^{vii} The count variable is transformed into categorical (*int_m_level*) with the values of 0 for 0 battle deaths, 1 for between 1 and 24 battle deaths, 2 for between 25 and 999 battle deaths, and 3 for above 999 battle deaths. A series of other procedures were performed to address the issue of endogeneity. With a categorical outcome variable of conflict level, the Two Stage Least Square (2SLS) model was used with multiple and single instrumental variables. The estimation with multiple instruments followed the procedure detailed by Eldabawi and Sambanis (2000), but in the first stage the equation predicted interventions based on a vector of variables exogenous to conflict intensity. The instruments were chosen to reflect the external relationships of the country with conflict, having the least possible correlation with conflict. These instruments are the colonial power of the country, membership in the Franc African Financial Community, number of the country's borders, the country's sub-region of Africa, telecommunications with the world and with the USA, membership in international organisations and security agreements signed. The 2SLS single instrumental variable followed the procedure used in Miguel et al. (2004). In this case, the telecommunications of each country with the USA was used as the instrumental variable. In both cases the instruments were found not to be valid. In addition, for the model of conflict intensity change, an estimation was made with an ordinary least squares method, but the distribution of the outcome variable is not normal invalidating the estimations. Procedures are documented in appendice 3.

^{viii} In Chapter 3, an expanded explanation is provided.

^{ix} Types and targets of interventions have been coded and disaggregated into the following: for military troops, naval forces, equipment or aid, intelligence advisors, air support and military sanctions; for economic grants, loans, non-military equipment or expertise, credits, relief of past obligations and economic sanctions; for diplomatic mediation, international forum, arbitration, recall of ambassadors, offers to mediate by third parties that were not accepted, requests for diplomatic intervention by one of the warring parties that were not accepted and political sanctions; and for UN and non-UN missions which are disaggregated into the mandates of political, observer, traditional, multidimensional and enforcement.

^x Collier, Hoeffler and Soderman (2008) operationalize interventions as a permanent function of time until the end of the conflict and cumulative with each additional intervention. The assumption is that interventions will be more effective the more they occur and there is no erosion of their effect in time. Regan and Aydin (2006) operationalize interventions with a permanent decline function which is restarted once a new intervention is made. The assumption being that the value of an intervention is not restricted to the month in which it occurs but the value wears out after some time (a declining factor of .99). Collier et al. (2004) only dealt with military and economic interventions, the effect is here applied also to other types of interventions.

^{xi} Most partisan interventions are military or economic, and most neutral interventions are diplomatic.

^{xii} In this analysis, more attention is focused on the significance and signal of the coefficients than their strength as the interventions have no specification of their strength, but rather only if they have occurred in a certain month. Interventions with different strengths all have the same effect. For instance, the deployment of 1.000 or 10.000 troops has been coded with the same effect on the dataset. To state that an additional intervention increases or decreases battle deaths by a certain amount would not be appropriate.

^{xiii} The results for the control variables have differences from the ZINB model. Conflict level in the previous year has a contradictory result on increasing and decreasing conflict intensity: Increasing the population increases conflict intensity and polity, and oil and gas become non-significant. The non-significant results can be explained by the small variation across the time of these variables. The positive population effect could mean that a growing population puts added pressure on conflicts. The contradictory effect of the previous level of conflict is more difficult to explain. The results are sensitive to the specification of interventions, with different results for the alternative specifications. See appendice 3 for details.

^{xiv} The appendice 3 presents the summary results of all estimations.

^{xv} As expected, the results are sensitive to the specification of interventions. See appendice 3 for an assessment of the specification differences.