

Civil Conflict Fragmentation and the Effectiveness of UN Peacekeeping Operations

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Abstract

While the extant literature has highlighted the importance of UN peacekeeping operations (PKOs) in addressing commitment problems in civil wars, actor fragmentation presents additional challenges for conflict resolution. A higher number of competing actors not only worsens coordination problems but also aggravates the risk of opposition to a peace process, generating an environment prone to spoiler violence. This article argues that UN interventions matter more when commitment and coordination problems are worse, which corresponds to known traits of fragmented conflicts. Using data on civil conflict duration and intensity, we present evidence that UN PKOs are effective at mitigating adverse impacts of fragmentation. Fragmented conflicts are both longer and deadlier when the UN is not involved to support a peace process, while UN peacekeeping mitigates the effects of fragmentation.

Keywords: UN peacekeeping; conflict fragmentation; peace process; civil war

1. Introduction

UN peacekeeping operations (PKOs) can be effective in supporting peace processes, but often the UN is ineffective if *spoilers*¹ control conflict dynamics and parties are not willing or ready to make peace.² Since the end of the Cold War, nearly a third of civil war terminations involved a political settlement of some sort.³ Yet, peace processes become fragile if fragmentation intersects with identity politics as several unsuccessful attempts at negotiation in Syria illustrate.⁴ Fragmentation not only increases the likelihood of infighting within groups but also exacerbates commitment problems by diminishing the value of expected gains from compromise⁵ and by making future shifts in power more likely⁶ –often hindering the UN from effectively supporting peace.⁷ Nonetheless, the empirical literature finds evidence that UN PKOs go to such hard cases.⁸ Although studies examining the overall effectiveness of UN peacekeeping often control for rebel fragmentation as an indicator of conflict intractability, few studies explore whether the UN mitigates the adverse effects of fragmentation.⁹ Focusing on the difference that UN peacekeeping makes in fragmented civil wars, we argue that the UN alleviates the adverse effects of rebel fragmentation on conflict duration and intensity.

Our paper makes two key contributions. First, we bridge the literatures on conflict fragmentation and UN peacekeeping effectiveness to examine the interaction between the two processes. We find that UN interventions should matter more when commitment and coordination problems are worse, which corresponds to known traits of fragmented conflicts.¹⁰ Second, existing empirical studies measure fragmentation using the number

¹ *Spoiler* refers to a conflict-party or a faction that opposes a peace process and attempts to undermine it, especially through violent actions. See [Stedman, “Spoiler Problems.”](#)

² [Doyle and Sambanis, *Making War*.](#)

³ [Kreutz, “How and When.”](#)

⁴ [Bakke et al., “A Plague of Initials”](#); [Pearlman and Cunningham, “Nonstate Actors.”](#)

⁵ [Blattman and Miguel, “Civil War”](#); [Cunningham, “Actor Fragmentation”](#); [Kydd and Walter, “Sabotaging the Peace”](#); [Rudloff and Findley, “The Downstream Effects.”](#)

⁶ [Christia, *Alliance Formation*.](#)

⁷ [Doyle and Sambanis, *Making War*](#); [Fortna, *Does Peacekeeping Work?*](#)

⁸ [Beardsley and Schmidt, “Following the Flag”](#); [Fortna, *Does Peacekeeping Work?*](#)

⁹ Such investigations are confined within qualitative case studies, e.g. [Howard, *Power in Peacekeeping*.](#)

¹⁰ Here we define UN involvement as the deployment of peacekeeping missions that are mandated to engage in activities such as patrolling, monitoring, and disseminating information.

of rebel groups, but this measurement does not capture differences between rebel groups in terms of their prominence in a conflict. Fragmentation is more than just the number of actors in a conflict; power dynamics and degree of actors' institutionalization also constitute key dimensions of fragmentation as a concept.¹¹ To account for such nuances in conflict dynamics, we build the Conflict Fragmentation Index (CFI) by adapting the Herfindahl-Hirschman Index (HHI), which measures market concentration through the relative size of firms in an industry.¹²

Overall, the quantitative and comparative literature provides increasing support for a conflict dampening impact of UN peacekeeping.¹³ UN PKOs save lives,¹⁴ support post-conflict peace,¹⁵ and reduce civil war duration both at the national and local levels.¹⁶ Furthermore, PKOs, especially larger PKO missions, can change the conflict dynamics by modifying the perception of actors as to whether they have an opportunity to raise resources and engage both in in-fighting and fighting against the government.¹⁷ In this paper, we argue that if the commitment problems are mild, the UN role in containing or resolving a conflict will be of limited value. However, if the commitment problems are severe, then the UN becomes even more important.

While the literature has addressed the relevance of the UN in mitigating the commitment problems emerging in civil wars, fragmentation presents additional challenges for conflict management. First, fragmentation leads to coordination problems making a stable agreement difficult. Second, the larger number of competing actors further aggravates the risk of opposition to specific deals and proposals.¹⁸ The UN becomes particularly relevant in these hard and highly fragmented conflicts by enhancing moderates, discouraging spoilers and mitigating both commitment and coordination

¹¹ Bakke et al., "A Plague of Initials."

¹² Rhoades, "The Herfindahl-Hirschman Index."

¹³ Hegre et al., "Evaluating the Conflict-Reducing"; Howard, *Power in Peacekeeping*.

¹⁴ Hultman et al., "Beyond Keeping Peace"; Hultman et al., "United Nations Peacekeeping and Civilian."

¹⁵ Doyle and Sambanis, *Making War*; Hultman et al., "United Nations Peacekeeping Dynamics"; Mac Ginty et al., "Liberal Peace."

¹⁶ Fortna, *Does Peacekeeping Work?*; Hegre et al., "Evaluating the Conflict-Reducing"; Ruggeri et al., "Winning the Peace Locally."

¹⁷ Ruggeri et al. "Winning the Peace Locally."

¹⁸ Cunningham, "Veto Players."

problems among actors.

We empirically test the implications of our theoretical framework in two ways. First, we investigate civil conflict termination by using a global dataset for the period 1990-2013.¹⁹ We expect fragmentation to prolong conflict, but the effect should be conditional on UN peacekeeping. Our results are in line with this expectation: fragmentation without UN involvement is associated with longer conflicts whereas UN peacekeeping mitigates the adverse impact of fragmentation on the likelihood of conflict termination. Second, we replicate an influential study by Hultman, Kathman and Shannon by introducing our conflict fragmentation measure and interacting it with the number of UN troops – the main explanatory variable of the study.²⁰ Hultman, Kathman and Shannon find that UN troops decrease the number of battle-related deaths in African civil conflicts from 1992 to 2011. In line with our expectations, we find evidence that fragmentation in a given month is associated with higher battle deaths in the following month when there is no UN troop deployment. However, UN troop deployment renders the impact of fragmentation indistinguishable from zero.

The remaining of our paper is structured as follows. The next section reviews the literature on fragmentation to unpack the key mechanisms that lead to intractability in fragmented conflicts. In the following section, we formulate our core argument by identifying the avenues within which UN involvement interacts with the conflict prolonging impacts of fragmentation. We also outline the implications of our theoretical framework. In the fourth section, we discuss our Research Design and explain the construction of the Conflict Fragmentation Index. The fifth section presents our empirical results and we conclude in section six.

2. Fragmentation and conflict intractability

The growing literature on actor fragmentation has drawn attention to several insights. First, in many conflicts, the “sides” fighting one another are far from unitary.²¹ Opposition movements often consist of numerous factions fighting in the name of the same

¹⁹ [Kreutz, “How and When.”](#)

²⁰ [Hultman et al., “Beyond Keeping Peace.”](#)

²¹ [Pearlman and Cunningham, “Nonstate Actors.”](#)

constituency,²² and the state itself may lack organizational cohesion.²³ Second, and related, even though there may be unity in terms of what a group is fighting against—e.g. overthrowing the regime, as in conflicts over central government control, or not wanting to be part of the state, as in territorial struggles—there may be disagreement about what the factions within the group are fighting for.²⁴ Often divergent intra-group preferences are not visible until after the dispute ends.²⁵ For example, in Libya the various factions agreed that they wanted to topple the Gaddafi regime, but they have since had serious differences with regards to what the central government should look like, and what the regional distribution of power should be.

Third, such deviations matter for conflict dynamics. To the degree that opposition movements consist of numerous factions, each faction finds itself in a dual struggle, against both the state and the other factions within the movement, with implications for how violence unfolds,²⁶ as well as whether and how the conflict comes to an end²⁷ — which have seen play out in failed attempts at negotiation in Syria in the last few years.

The literature presents at least three distinct mechanisms that render fragmentation an impediment to conflict resolution. First and foremost, fragmentation exacerbates commitment problems. Implementing a peace agreement depends on whether the warring parties can trust both the other side and their own allies to abide by the provisions of the deal reached.²⁸ Internal cohesion of actors may affect their ability to make credible promises as splintering may lead to the recurrence of violence.²⁹ As Blattman and Miguel argue, “the possibility that groups might split could exacerbate commitment problems” because “signing a peace deal with a rebel group leader is of

²² Bakke et al., “A Plague of Initials”; Cunningham, “Shirts Today.”

²³ Carey et al., “States, the Security Sector”; Clayton and Thomson, “The Enemy of my Enemy”; Jentzsch et al., “Militias in Civil Wars.”

²⁴ Cunningham, “Divide and Conquer.”

²⁵ Suhrke, “Reconstruction as Modernization.”

²⁶ Cunningham et al., “Shirts Today.”; Fjelde and Nilsson, “Rebels against Rebels”; Lawrence “Triggering Nationalist Violence”; Seymour, “Why Factions Switch Sides.”

²⁷ Cunningham, “Divide and Conquer”; Johnston, “Negotiated Settlements”; Nilsson, “Partial Peace”; Pearlman, “Spoiling Inside and Out.”

²⁸ Hoddie and Hartzell, “Institutionalizing Peace”; Kydd and Walter, “Sabotaging the Peace”; Pearlman, “Spoiling Inside and Out”; Stedman, “Spoiler Problems”; Walter, “The Critical Barrier.”

²⁹ Cunningham, “Actor Fragmentation”; Rudloff and Findley, “The Downstream Effects.”

limited value if hard-liners are able to secede and continue fighting.”³⁰ Often, fragmentation generates credible commitment problems because junior partners of a military alliance cannot be sure that their stronger allies would not double-cross them in the post-conflict era.³¹ As a result, junior coalition actors have incentives to keep the conflict ongoing.

Second, the internal contestation theory reveals the incentives for spoiling in fragmented conflicts.³² According to Pearlman, actors may choose to engage in either peace making or peace breaking to improve “their position in an internal balance of power.”³³ Through violent actions during a peace process, therefore, spoilers might be “aiming to coerce rivals within their own community” rather than undermining the external enemy.³⁴ The possibility of losing power in this internal balance of power leads factions to reject peace deals that are compatible with their preferences. In other words, actors shy away from reaching a peaceful resolution because of leadership contests within their movement, rather than focusing on the main incompatibility with other actors.

Alternatively, Cunningham proposes a veto-player framework as a distinct mechanism within which fragmentation emerges as an obstacle to conflict resolution through the proliferation of preferences.³⁵ Rebel fragmentation increases the number of actors that formulate preferences over a wide range of issues, making consensus hard to reach. Therefore, the higher the number of actors involved in a civil war, the less likely to reach a resolution through negotiations.

Peace agreements and ceasefires may provide opportunities for government and rebel authorities to strengthen their hand or can lead to rebel fragmentation.³⁶ Forms of conflict management such as direct negotiation and mediation can facilitate peace processes by supporting the flow of information between the belligerents and enhancing transparency in the real interests of actors. Information about the implementation of the

³⁰ Blattman and Miguel, “Civil War”, 16.

³¹ Christia, *Alliance Formation*.

³² Pearlman, “Spoiling Inside and Out.”

³³ *Ibid.*, 83.

³⁴ *Ibid.*, 82.

³⁵ Cunningham, “Veto Players.”

³⁶ Fjelde and Nilsson, “The Rise of Rebel Contenders”; Ruggeri et al., “Winning the Peace Locally.”

peace agreement is crucial for its success because the peace process provides opportunities that can lead to moral hazard and opportunistic behavior. Even if the fighting conclusively demonstrated relative military strength, the government and rebels may remain uncertain about the relative support among the population. Often, neither the government nor the rebels tend to have full control over parts of the country leaving lawlessness in areas where local gangs or transnational actors fill the power vacuum.³⁷ Yet, conflicts end, even the most fragmented ones. This raises the question of how highly fragmented conflicts end and how actors can reach a stable agreement.

3. UN Peacekeeping in highly fragmented conflicts

A growing number of studies present evidence that UN PKOs are on average effective at saving lives and making peace, defined as the absence of violent armed conflict. The literature investigates conflict dampening effects of UN PKOs through various channels.³⁸ Civil wars tend to spread from one country to another,³⁹ but peacekeeping contains conflict and prevents spill overs.⁴⁰ In post-conflict environments, UN PKOs decrease the likelihood of conflict recurrence.⁴¹ In the context of comprehensive peace agreements, UN involvement also increases overall accord implementation, which is likely to make an additional indirect contribution to the durability of peace.⁴² Regarding ongoing conflicts, the effectiveness of UN PKOs is contested,⁴³ but numerous studies argue that they reduce conflict duration both at the national and local levels.⁴⁴ The presence of UN peacekeepers also reduces both civilian casualties⁴⁵ and the intensity of violence between the

³⁷ Buhaug et al., "Geography, rebel capability."

³⁸ Howard, *Power in Peacekeeping*, 11; Sandler "International Peacekeeping."

³⁹ Gleditsch, *Transnational Dimensions*.

⁴⁰ Beardsley, "Peacekeeping and the Contagion"; Beardsley and Gleditsch, "Peacekeeping as Conflict Containment."

⁴¹ Doyle and Sambanis, *Making War*; Fortna, "Does Peacekeeping Keep"; Gilligan and Sergenti, "Do UN Interventions"; Hultman et al., "United Nations Peacekeeping Dynamics"; Mac Ginty et al., "Liberal Peace."

⁴² Maekawa et al., "UN Involvement"; Mac Ginty et al., "Liberal Peace." Note that both accord implementation and UN peacekeeping have separate independent impacts on the durability of peace whereas the latter also has a positive impact on the former.

⁴³ Doyle and Sambanis, *Making War*; Gilligan and Sergenti, "Do UN Interventions."

⁴⁴ Fortna, *Does Peacekeeping Work?*; Hegre et al., "Evaluating the Conflict-Reducing"; Ruggeri et al., "Winning the Peace Locally."

⁴⁵ Hultman et al., "United Nations Peacekeeping and Civilian."

combatants.⁴⁶ Through fine-grained sub-national data, a series of recent studies further unpacked local-level dynamics and linked the reduction in violence to the presence of UN peacekeeping personnel in local geographies.⁴⁷ These empirical innovations help to isolate the conflict dampening impact of UN peacekeeping.

The theoretical literature presents four mechanisms to explain how UN peacekeeping reduces conflict: addressing commitment problems; discouraging spoilers; facilitating coordination and communication between the belligerents. We argue that each of these four mechanisms interact with fragmentation and mitigate its conflict instigating effects.

Addressing commitment problems

First and foremost, UN PKOs provide vital security guarantees to conflict parties and act as an essential external enforcement mechanism.⁴⁸ Without such security guarantees and external enforcement, civil wars are unlikely to be resolved through negotiated means because the belligerents cannot credibly commit to abide by the terms of a peace deal. Through inducements and deterrence, UN PKOs raise both the benefits of compliance with the peace process and the costs of defection.⁴⁹ Moreover, accepting a UN peacekeeping mission presents a costly signal that a conflict actor –especially the state-party– is willing to act in accordance with the peace process even in the long term.⁵⁰ As such, UN PKOs change the incentives of conflict parties and reduce commitment problems.

Note that commitment problems are neither constant across cases nor stable over time.⁵¹ For example, if a peace process brings a greater propensity of change in future capabilities, then commitment problems are worse and the deal is less likely to be self-

⁴⁶ Hultman et al., “Beyond Keeping Peace.”

⁴⁷ Bara, “Shifting targets”; Cil et al., “Mapping blue helmets”; Fjelde et al., “Protection Through Presence”; Hunnicutt and Nomikos, “Nationality, Gender, and Deployments at the Local Level”.

⁴⁸ Doyle and Sambanis, *Making War*; Fortna, *Does Peacekeeping Work?*; Walter, “The Critical Barrier.”

⁴⁹ Fortna, *Does Peacekeeping Work?*; Howard, *Power in Peacekeeping*.

⁵⁰ Fortna, *Does Peacekeeping Work?*

⁵¹ Kirschner, “Knowing Your Enemy”; Walter, “Bargaining Failures.”

enforcing.⁵² Similarly, if mistrust between parties is deeply engrained, actors are more suspicious and will defect when a suitable opportunity arises. The United Nations Mission in Sierra Leone (UNAMSIL), for example, was established to help with the enforcement of the Lomé Peace Accord. As part of peacekeeping activities, monitoring reduced uncertainty about abiding by the agreed settlement. The latter mattered particularly for the rebels because the disarmament program put them in a vulnerable position, exposing them to possible government demands to renegotiate the terms of the agreement. At the same time the Kabbah government was weak relative to the RUF especially after the sudden death of the chief of defense Maxwell Khobe in April 2000.⁵³ UNAMSIL was eventually able to mitigate these changes in the parties' capabilities by deploying a substantial number of troops.

As discussed in the previous section, the longstanding literature on fragmentation shows that low internal cohesion and multiple factions make commitment problems worse.⁵⁴ We argue that UN PKOs are instrumental in addressing the negative impact of fragmentation. Coupled with security guarantees, building trust among belligerents significantly diminishes commitment problems in fragmented conflicts. In the anarchical environment of a fragmented conflict, the UN shifts the balance in favor of some factions over others.⁵⁵ Identifying moderates and strengthening their power vis-à-vis hardliners is an essential role that UN PKOs play.⁵⁶ Enabling moderates while weakening hardliners enhances cooperation and breaks security dilemma spirals.⁵⁷ Thus, the peacekeepers reduce overall uncertainty about the positions and interests of the conflict parties, minimizing future security dilemmas. As a result, achieving peace becomes more likely, even in fragmented environments in which prospects are otherwise grim.

⁵² Powell, "War as a Commitment Problem."

⁵³ Olonisakin, *Peacekeeping in Sierra Leone*; Ruggeri et al., "Managing Mistrust."

⁵⁴ Blattman and Miguel, "Civil War"; Cunningham, "Actor Fragmentation"; Christia, *Alliance Formation*; Rudloff and Findley, "The Downstream Effects."

⁵⁵ Dorussen and Gizelis, "Into the Lion's Den."

⁵⁶ Doyle and Sambanis, *Making War*; Fortna, *Does Peacekeeping Work?*

⁵⁷ Darby, "The Effects of Violence"; Doyle and Sambanis, *Making War*; Fortna, *Does Peacekeeping Work?*

Discouraging spoilers

Fragmentation and spoiling are closely linked.⁵⁸ According to Pearlman, both spoiling and fragmentation are endogenous to a peace process because the opportunities for new arrangements that the process brings may tip the balance of power within a group.⁵⁹ The position of a faction in this internal balance determines whether spoiling or compliance would yield a higher pay-off. Subordinate factions have more to lose from conflict resolution because the leadership can steer the peace process to build its internal dominance. Subordinate factions are more likely to splinter, adopt hard-line positions, and engage in spoiling and violent outbidding. Similarly, peace processes reduce strategic barriers to entry and facilitate the emergence of opportunistic original groups.⁶⁰ Aspirant political entrepreneurs who were side-lined during the conflict may find opportunities to spearhead new violent organizations during the peace process.⁶¹

Spoiling, however, does not always help aspirants and subordinate factions to improve their position within the internal balance of power. As Pearlman argues, expected benefits from spoiling is a function of public support to the peace process as well as material resources and external recognition that the process generates and distributes among factions.⁶² If opportunity structures render spoiling counterproductive for strengthening internal position, subordinate factions may seek external recognition and material patronage by complying with the peace process.

The presence of UN PKOs influences opportunity structures for spoiling. Earlier research showed that conflict-parties adjust their behaviour in the presence of UN PKOs.⁶³ Adopting a hard-line position to pursue an internal leadership contest becomes a riskier strategy with a lower expected payoff for two reasons. First, the UN seeks to strengthen moderate parties that favour peaceful resolution. Spoiling may cost actors to

⁵⁸ Bakke et al., “A Plague of Initials”; Pearlman, “Spoiling Inside and Out”; Rudloff and Findley, “The Downstream Effects.”

⁵⁹ Pearlman, “Spoiling Inside and Out.”

⁶⁰ Fjelde and Nilsson, “The Rise of Rebel Contenders.”

⁶¹ This point is inspired by Pearlman’s composite-actor model and her discussion of the Palestinian resistance movement; see Pearlman, “A Composite-actor Approach.”

⁶² Pearlman, “Spoiling Inside and Out.”

⁶³ Beardsley and Gleditsch, “Peacekeeping as Conflict Containment”; Dorussen and Gizelis, “Into the Lion’s Den”; Ruggeri et al., “Managing Mistrust.”

lose valuable external recognition and access to resources. During peace processes, UN PKOs are influential at distributing material resources through direct and indirect inducements, which may by-pass the institutional hierarchies of conflict in which militarily strong factions tend to dominate.⁶⁴ In other words, the UN influences how the peace dividend is distributed while generating new channels for sub-ordinate factions to have access to resources through compliance. Second, the UN seeks to raise public support for peace processes.⁶⁵ Spoiling can be counterproductive when there is strong public support for peace.⁶⁶ Through public information campaigns, the UN helps to create peace and reconciliation. Taken as a whole, UN involvement renders legitimacy and external recognition more valuable, prompting belligerents to re-evaluate their calculus for choosing violent actions.⁶⁷

Opportunities for spoiling are abundant when the number of warring factions is large and internal cohesion is low.⁶⁸ As UN PKOs moderate both incentives and opportunities for renegeing,⁶⁹ they become especially influential in such fragmented environments. Factions that are most likely to veto a peace process find fewer opportunities to do so when the UN is involved. UN PKOs can also confine otherwise mobile rebel groups to a geographical space usually by deploying to frontlines and diminishing the physical space and opportunities available to spoilers.⁷⁰ For example, the United Nations Mission in Liberia (UNMIL) and the United Nations Mission in Ivory Coast (UNOCI) coordinated efforts to patrol the border regions between Liberia and Ivory Coast. UNMIL assisted the Armed Force of Liberia (AFL) to patrol the borders and maintain security.⁷¹ Thus, effective peacekeeping halts the escalation and spread of conflict, maintains trust in the peace process, and reduces areas of lawlessness where

⁶⁴ For a detailed discussion of the material incentives that UN PKOs bring, see Fortna, *Does Peacekeeping Work?*; Howard, *Power in Peacekeeping*.

⁶⁵ Fortna, *Does Peacekeeping Work?*; Howard, *Power in Peacekeeping*.

⁶⁶ Darby, "The Effects of Violence"; Pearlman, "Spoiling Inside and Out."

⁶⁷ Hultman et al., "United Nations Peacekeeping and Civilian."

⁶⁸ Doyle and Sambanis, *Making War*.

⁶⁹ Doyle and Sambanis, *Making War*; Fortna, *Does Peacekeeping Work?*

⁷⁰ Beardsley and Gleditsch, "Peacekeeping as Conflict Containment"; Ruggeri et al., "On the Frontline"; Ruggeri et al., "Winning the Peace Locally."

⁷¹ UN News, "Security a top priority."

infighting becomes endemic.⁷²

Dealing with informational asymmetries

UN PKOs address informational asymmetries. The bargaining framework formulates that lack of reliable information on capabilities, resolve and preferences complicates conflict resolution and incite fighting.⁷³ Conflict parties have apparent incentives to misrepresent such information, and bargaining failures happen due to this inability to distinguish cheap talk from genuine claims. Again, fragmentation and UN peacekeeping intersect in the case of informational asymmetries. Even though information asymmetries are particularly severe in fragmented conflicts, UN involvement provides more reliable communication platforms and facilitates the flow of credible information.⁷⁴ Recently, Nomikos finds that UNPKOs increase the likelihood of institutionalized power-sharing agreements by providing information among factions.⁷⁵ The presence of UN PKOs becomes sufficient to alleviate information asymmetries. Peacekeeping missions have an advantage over other forms of conflict management because the deployment, even of small missions, tends to provide more transparency about the actions of government and rebel leaders, reducing uncertainty and inducing stability even in highly fragmented conflicts. Therefore, we expect the UN to mitigate the adverse impact of fragmentation and make a more profound difference when there are substantial informational problems.

Addressing coordination problems

Coordination problems may render peace unachievable even if conflict parties are willing to cooperate. According to Doyle and Sambanis, the assistance of the UN is paramount in enabling coordination.⁷⁶ Doyle and Sambanis also warn that fragmentation makes coordination more difficult, thus the UN should adapt its peace operations accordingly by

⁷² Ruggeri et al., “On the Frontline”; Ruggeri et al., “Winning the Peace Locally”; Dorussen and Gizelis, “Into the Lion’s Den”; Ruggeri et al., “Managing Mistrust.”

⁷³ Fearon, “Rationalist Explanations for War.”

⁷⁴ Cunningham, “Divide and Conquer”; Cunningham, “Veto Players”; Doyle and Sambanis, *Making War*; Fortna, *Does Peacekeeping Work?*

⁷⁵ Nomikos, “Why Share?”

⁷⁶ Doyle and Sambanis, *Making War*, 53-54.

taking this obstacle into account.⁷⁷ While we agree with their position, here we emphasize that these two mechanisms interact and the UN presence can have a moderating effect in addition to an additive impact. Peace processes tend to be volatile, but in fragmented conflicts they become explosive. UN PKOs provide much needed stability by decreasing the risks of accidental violence and skirmishes that may derail the whole process through conflict spirals.⁷⁸ As coordination failures are especially likely when fragmentation is high, UN PKOs have more far reaching consequences at changing the prospects for peace.

Implications

Fragmentation is a major obstacle to peacebuilding, but we expect UN PKOs to provide a level of stability. The literature presents extensive evidence that fragmentation fuels violence and decreases the likelihood of conflict termination. Building on these well-established findings, studies on UN peacekeeping caution that achieving success is harder in fragmented conflicts, without formulating an interactive impact of the UN. We propose that the UN can make a substantial difference in such fragmented environments. Therefore, our contribution is centred on the interaction between UN peacekeeping and fragmentation. We formulate the following two hypotheses:

Hypothesis 1: UN peacekeeping operations mitigate the adverse impact of fragmentation on conflict duration.

Hypothesis 2: UN peacekeeping operations mitigate the adverse impact of fragmentation on conflict intensity.

Doyle and Sambanis stress that “the probability of peacebuilding success should be lower if more factions are involved in the peace process.”⁷⁹ In fragmented conflicts, they add, “the prospects of sustainable peace are extraordinarily difficult” and “only exceptional multilateral and international commitment might succeed in overcoming incentives for resumed armed conflict.”⁸⁰ We agree that compared to coherent conflicts with few actors, UN PKOs are less likely to achieve full success in fragmented civil wars.

⁷⁷ *Ibid.*, 58.

⁷⁸ Fortna, *Does Peacekeeping Work?*

⁷⁹ Doyle and Sambanis, *Making War*, 96.

⁸⁰ *Ibid.*, 329.

Shifting our focus, however, we formulate the impact of UN peacekeeping in fragmented conflicts in terms of what would have happened if the UN had not been involved.⁸¹ We argue that the difference that the UN makes is even greater in fragmented conflicts because without UN involvement achieving peace is extremely unlikely. We can simplify our point with an analogy: Firefighters may find it easier to extinguish a small fire compared to a large-scale one, but their impact would be much greater in the latter.

The United Nations Interim Force in Lebanon (UNIFIL) illustrates how a peacekeeping operation can make a huge difference while falling considerably short on fulfilling its official mandate. Based on an extensive review, Howard concludes that even though achieving the mandate of UNIFIL might not be attainable, the mission still “has helped to keep the peace – among militias during the Lebanese civil war, as well as between Lebanon and Israel since that time.”⁸² Howard’s in-depth analysis provides evidence that UNIFIL made a significant difference in the context of a highly fragmented conflict. Deployed during the Lebanese civil war in a territory that the state virtually did not exist and 36 different warring factions competed to establish control, UNIFIL discouraged spoilers through persuasion and inducements; facilitated the gradual encroachment of the state authority by addressing problems of lawlessness and power vacuums; successfully engaged in institution building; enabled communication and flow of information among opposing forces; and mitigated coordination problems.⁸³ As a result, UNIFIL first contributed to the conditions that led to the Taif peace agreement in 1990, which eventually terminated the Lebanese Civil War, and then helped to maintain the peace afterwards. Writing in 1987, Thakur stated that UNIFIL is “not a peacekeeping force, but a war-dampening force. Its mandated task is impossible to attain, yet its presence remains indispensable.”⁸⁴ Focusing on the difference that UNIFIL made in a hard and highly fragmented case, we share Howard’s conclusion that UNIFIL is effective at saving lives and constraining violence even if it is not a success story in terms of fulfilling stated mandate and achieving positive peace.

⁸¹ Theoretically, we are also interested in the reverse condition: what would have happened if the UN had been involved in a fragmented conflict?

⁸² Howard, *Power in Peacekeeping*, 126.

⁸³ Howard, *Power in Peacekeeping*, 80-128.

⁸⁴ Thakur, “The United Nations Interim Force.” As quoted in Howard, *Power in Peacekeeping*, 126.

4. Research Design

We adopt two approaches to investigate the impact of fragmentation on conflict processes and how UN peacekeeping moderates this effect. In line with our first hypothesis, we look at conflict duration by using the UCDP Conflict Termination Dataset (CTD).⁸⁵ The CTD contains information on the start and end dates of conflicts globally for the 1946-2013 period. We limit our sample to civil conflicts and measure duration in terms of days in line with the conflict start and end dates available in the CTD.⁸⁶ We expect fragmentation to be associated with longer conflicts, but we also expect this association to be conditional on UN peacekeeping. This is based on our theoretical conjecture that UN peacekeeping would dampen the conflict prolonging impact of fragmentation. We use the conflict-level version of the CTD, but as a robustness test we also incorporate our conflict fragmentation measure to the Kathman and Benson study, which analyses the impact of UN personnel deployment on the dyadic-level conflict duration.⁸⁷ We report these results in Online Appendix. Our replication of Kathman and Benson yields results substantively identical to our main analysis presented here.

To test the second hypothesis, we replicate an influential study by Hultman et al., which analyses battle-related deaths in African civil conflicts from 1992 to 2011.⁸⁸ The outcome variable is the number of deaths due to fighting between a state-party and a non-state actor in a given month. Hultman et al. show that UN peacekeeping troop deployment is associated with a decrease in battle-related deaths in the following month. Based on our theoretical framework, we expect higher fragmentation to increase conflict casualties in the following month, but again we expect this relationship to be conditional on UN peacekeeping; the higher the number of troops, the less profound the adverse impact of fragmentation. As our discussion on UNIFIL suggests, UN PKOs can have a profound impact on fragmented conflicts even if they fail to end the fighting.

Overall, we analyse two outcome variables – (1) duration and (2) intensity – to test the argument that UN PKOs mitigate the adverse impact of fragmentation. These outcome variables are appropriate because our theoretical framework indicates that

⁸⁵ [Kreutz, “How and When.”](#)

⁸⁶ We follow Thyne to identify and remove coups from our sample. [Thyne, “The Impact of Coups.”](#)

⁸⁷ [Kathman and Benson, “Cut Short?”](#)

⁸⁸ [Hultman et al., “Beyond Keeping Peace.”](#)

fragmentation should significantly increase both duration and intensity of conflict when the UN is not involved. Note that both duration and intensity are commonly used features to assess the effectiveness of UN peacekeeping operations.⁸⁹ There is also an intrinsic link between the two, as a conflict is considered to be terminated only after the intensity falls below a certain threshold over a specified period of time. Therefore, the two outcome variables are complementary; they present different tests of our theoretical claim that the effectiveness of UN PKOs is conditional on fragmentation.

Our approach also falls in line with the established literature in terms of studying duration and intensity separately to investigate the pacifying effect of UN peacekeeping. This design is appropriate because examining an overall impact of UN peacekeeping is practically unattainable.⁹⁰

A growing number of studies present evidence that UN PKOs are deployed to hard-to-settle cases.⁹¹ The non-random assignment of UN PKOs brings a formidable hurdle for precise causal inference that quantitative studies have been unable to fully address.⁹² Identifying and leveraging strictly exogenous sources of variation in UN peacekeeping in civil conflicts is extremely difficult especially when the interest is on an interaction effect, as in this study.⁹³ In line with most of the quantitative literature on UN peacekeeping, we consider selection mechanisms, possible confounders and alternative explanations through our model specification. We control for factors that may render a conflict hard-to-settle and influence fragmentation and UN deployment. Nonetheless, we caution that we do not present strictly causal estimates of UN peacekeeping effectiveness, but rather test the presence of conditional associations expected by our theoretical framework while controlling for possible confounders. Despite this limitation that we share with the extant literature, we posit that our analysis still advances the study of UN peacekeeping effectiveness by shedding light on a modifying mechanism that earlier studies have not

⁸⁹ Hegre et al., “Evaluating the Conflict-Reducing”; Sandler, “International Peacekeeping.”

⁹⁰ Sandler, “International Peacekeeping.”

⁹¹ Beardsley and Schmidt, “Following the Flag”; Gilligan and Stedman, “Where Do the Peacekeepers Go?”; Fortna, *Does Peacekeeping Work?*

⁹² Beardsley et al., “Mediation, Peacekeeping”; Hegre et al., “Evaluating the Conflict-Reducing”; King and Zeng, “When Can History”; Gilligan and Sergenti, “Do UN Interventions”; Fortna, *Does Peacekeeping Work?*; Vivalt, “Peacekeepers Help.”

⁹³ Beardsley et al., “Mediation, Peacekeeping.”

considered.

Data on UN Peacekeeping

We use data on UN peacekeeping operations from Kathman.⁹⁴ For the conflict duration analysis, we generate a dichotomous variable, UNPKO, which indicates the presence of UN peacekeeping personnel in a conflict-year. This is a time-varying covariate, taking a positive value only after UN peacekeepers are deployed. Kathman also provides information on the number and type of UN personnel, but only 27 countries experiencing civil conflict received UN peacekeepers. This brings significant constraints on estimation and prevents us to further breakdown the level of UN involvement to respective personnel numbers. Earlier research also considered UN peacekeeping as a dichotomous variable when investigating its impact on conflict duration.⁹⁵ In a robustness analysis presented in Online Appendix, however, we breakdown UN personnel deployment to its respective numbers.

For conflict intensity models, we follow the original study by Hultman et al. and use the number and type of UN personnel.⁹⁶ Hultman et al. address estimation constraints by using fine-grained data on battle-related deaths at the monthly level. They also break down the type of UN personnel in terms of troops, police and military observers. As they attribute conflict dampening effect of peacekeeping to UN troops, we follow their approach and interact troops with our fragmentation measure.

Conceptualizing and measuring conflict fragmentation

Measuring conflict fragmentation is not a straightforward task. Although the dominant approach is to simply look at the number of actors in a conflict, this measurement does not capture differences between rebel groups in terms of their prominence within a conflict or the emergence of new conflict fronts. To illustrate, suppose conflict *A* has four active rebel groups and each government- rebel dyad accounts for 25% of the total battle-related deaths. Suppose another conflict, *B*, has also four active rebel groups, but one predominant dyad account for 95% of violence and the other three dyads only account

⁹⁴ Kathman, "United Nations Peacekeeping."

⁹⁵ Gilligan and Sergenti, "Do UN Interventions"; Fortna, *Does Peacekeeping Work?*

⁹⁶ Hultman et al., "Beyond Keeping Peace".

for the remaining 5% combined. Considering that the total number of battle deaths should reflect the distribution of power,⁹⁷ conflict *A* should be more fragmented, and thus more intractable, compared to conflict *B*. Although these two conflicts would be different on their level of conflict fragmentation, looking only at the number of active rebel groups gives the exact same measure.

We build the Conflict Fragmentation Index (CFI) to address this problem. We start with the premise that the distribution of combat activity among conflict-parties is a relevant measure to proxy fragmentation. Civil wars may have core actors responsible for most of the fighting, and tangential groups that marginally take part in conflict. Holding the total number of actors fixed, a conflict is less fragmented if most of the fighting is concentrated between specific actors, compared to conflicts that have the fighting more equally dispersed across conflict-parties. Therefore, depending on the concentration of combat activity, conflicts with equal number of actors can have different levels of fragmentation. To use the fragmentation through splintering as an example, if a non-state actor divides into two equally prominent entities, then fragmentation should increase more than a situation in which a relatively small component of the NSA disintegrates to form a new entity.

The CFI takes the information on the prominence of conflict-fronts into account by adapting the Herfindahl–Hirschman Index. It is calculated using the following formula;

$$CFI = 1 - \sum_{i=0}^n s_i^2$$

where s_i is the relative prominence of a conflict-front. It can be approximated as;

$$s_i = \frac{\text{casualties in dyad } i}{\text{total casualties in conflict}}$$

Using this formula would give a CFI measure of 0.75 for our first hypothetical example, conflict *A*, whereas conflict *B* would have a CFI of roughly 0.10.

For conflict duration, we use the casualty data corresponding to the CTD, which is the dyadic-level UCDP Battle-Related Deaths Dataset.⁹⁸ Following the formula, we calculate the share of each dyad on the total deaths within a conflict to build the CFI. Note

⁹⁷ Bakke et al., “A plague of Initials.”

⁹⁸ Melander et al., “Organized Violence.”

that the CFI is a time-varying measure, changing based on the relative prominence of different conflict-fronts.

The study by Hultman et al. already includes information on battle-related deaths both at the dyad and the conflict level.⁹⁹ We directly use this data to build the CFI. As the data is at the monthly level, we lag the CFI measure for a month. We expect a higher CFI in month m to produce more deaths in month $m + 1$. Our fragmentation index takes in information about dyadic battle-related deaths. Despite using lags, this might generate a concern because of a link between fragmentation and the outcome variable. We argue that the two variables measure substantively different concepts. Fragmentation is in relative terms measured at the conflict-level whereas the outcome variable is in absolute terms measured at the dyadic level. The correlation between our explanatory variable and battle deaths is -0.0068, suggesting that these two measures of conflict difficulty do not capture the same phenomenon. In line with the original study, we also control for lagged battle deaths.

[Figure 1](#) illustrates the relationship between the number of rebel groups and fragmentation by using data from Hultman et al.¹⁰⁰ When there is only one rebel group, there is no fragmentation; hence CFI is equal to zero. When there are multiple rebel groups responsible for generating battle deaths, CFI takes a value between zero and one. If a single predominant dyad is responsible for most of the battle deaths, then CFI approaches to zero. For example, there is a considerable variation among conflicts with five rebel groups in terms of the volume of fighting within each government-rebel dyad. In all these cases, the government forces fight with five different rebel groups but for those cases with low CFI rates, government forces fight with a predominant rebel group whereas other rebel groups only marginally contribute to the total battle deaths. On the other hand, for those cases with high CFI rates, government forces fight in multiple roughly equally bloody fronts. Moving from the number of rebel groups to the CFI allows us to capture this variation in conflict dynamics.

We contend that the CFI reflects conflict fragmentation better than the number of rebel groups active in conflict, which is the dominant approach in the literature. Bakke et

⁹⁹ [Hultman et al., "Beyond Keeping Peace."](#)

¹⁰⁰ [Hultman et al., "Beyond Keeping Peace."](#)

al. argue that fragmentation is a function of not only the number of rebel groups but also how pertinent these groups are to the conflict.¹⁰¹ We believe that the CFI improves our ability to measure fragmentation by more closely capturing the relevancy of groups. Nonetheless, we re-run our models with the traditional *number of rebel groups* measure as a robustness check.

Control Variables

Conflict intensity can impact both duration, CFI and prospects for resolution. To account for this, we control for the cumulative sum of *Battle Deaths*.¹⁰² We lag this measure one year and take its natural logarithm. As natural resources can influence both rebel fragmentation and conflict duration, we control for this using the dichotomous *Resources* variable.¹⁰³ Rebel fragmentation is likely to be correlated with conflict incompatibility and whether conflict has an ethnic dimension. We consider both conflict *Incompatibility* and *Ethnic* civil wars to account for this aspect. *Incompatibility*, which is taken from the CTD, identifies two distinct types to separate conflicts over acquiring governmental power from conflicts over acquiring territorial control. *Ethnic* is coded by using the ACD2EPR data.¹⁰⁴ There is considerable overlap between incompatibility and ethnic civil wars as territorial conflicts are more likely to have an ethnic dimension. Based on measures of model fit, we only report results using the *Incompatibility* variable.

Previous research showed that country-level factors can influence conflict duration and UN peacekeeping operations. These factors include population, GDP per capita and the level of democracy. To measure the level of democracy, we use V-Dem's *Polyarchy* index, which is based on Robert Dahl's conceptualization of electoral democracy.¹⁰⁵ The data on *Population* and *GDP per capita* are taken from Gleditsch.¹⁰⁶ We also include regional dummies because earlier research proposed that UN peacekeeping may have a geographical bias.¹⁰⁷ As the UN might be more inclined to intervene to

¹⁰¹ Bakke et al., "A plague of Initials."

¹⁰² Melander et al., "Organized Violence."

¹⁰³ Clayton "Relative Rebel Strength"; Buhaug et al., "Geography, Rebel Capability."

¹⁰⁴ Wucherpfennig et al., "Ethnicity, the state."

¹⁰⁵ Coppedge et al., "Varieties of Democracy."

¹⁰⁶ Gleditsch, "Expanded trade."

¹⁰⁷ Gilligan and Stedman, "Where Do the Peacekeepers Go?"

militarily weak countries, we control for the Composite Index of National Capability (CINC) available in the National Military Capabilities data.¹⁰⁸ We also control for *Explicit Rebel Support*, which indicates whether a rebel group receives explicit support from a third country. This measure is taken from the Non-State Actors dataset.¹⁰⁹ Finally, we control for whether the conflict is *Internationalized* or not, by relying on the type of conflict variable available at the CTD.

5. Results

We start our duration analysis with a series of Cox proportional hazard regressions. Cox models are commonly used to demonstrate the association between explanatory variables and time until an outcome event occurring –conflict termination in this case. Cox regression is appropriate for our purposes because we are interested in how different factors are related to conflict duration whilst we do not have any theoretical reasons to define the shape of the baseline hazard.¹¹⁰ [Table 1](#) reports results from these models. A negative coefficient means that a variable is associated with a decreased hazard rate, hence longer conflicts. Conversely, a positive coefficient indicates that an increase in the variable’s value is associated with a shortened conflict, holding all other variables constant.

As we expected, fragmentation –proxied by *CFI*– has a negative coefficient across models, meaning that higher fragmentation is associated with longer conflicts. In other words, the higher the fragmentation, the less likely a conflict is to be terminated at any given time. Model 1 presents results from the baseline model with only the core controls. Model 2 introduces *UNPKO* as a dummy without an interaction with the *CFI* variable. *UNPKO* is not significant and Model 2 performs worse than Model 1 in terms of model fit. Model 3 introduces an interaction term between *CFI* and *UNPKO*. Although the coefficient for *UNPKO* is still not significantly different than zero, the interaction term is positive and statistically significant, indicating a possible mitigating effect of UN intervention on the conflict lengthening effect of fragmentation. Put differently, the joint effect of UN intervention and fragmentation leads to shorter conflicts.¹¹¹ Model 4 presents the full

¹⁰⁸ [Singer et al., “Capability Distribution.”](#)

¹⁰⁹ [Cunningham et al., “It Takes Two.”](#)

¹¹⁰ We test and find no evidence against the proportional hazard’s assumption.

¹¹¹ In a regression model with a multiplicative interaction term between two variables, the

specification including the additional control variables. The interaction term remains significant and the result is robust to alternative model specifications. Inclusion of the interaction term improves model fit in all model specifications considered. Model 5 replaces the *CFI* with *No. of Rebel Groups*, which is the conventional approach to measure fragmentation. Both *No. of Rebel Groups* and its interaction with *UNPKO* are statistically significant. Model 5 shows that *CFI* does not drive our results and the conventional approach also yields similar results.

Although we do not find an unconditional association between UN intervention and conflict duration, our results are in line with our expectation that the UN has a possible conflict shortening effect through mitigating the adverse impact of conflict fragmentation. The correlation between conflict duration and UN peacekeeping is statistically insignificant in Models 1 and 2. This null result concurs with some recent studies.¹¹²

We focus on Model 4 to explore the substantive impact of fragmentation on conflict duration and its modification by UN peacekeeping deployment. [Figure 2](#) shows that when there is no UN peacekeeping deployment, fragmentation is associated with a 31% decrease in the hazard rate (i.e. longer conflicts). This increase in duration is statistically different to no change at the 99% confidence level. Conversely, when UN peacekeepers are present, fragmentation is associated with 11% increase in the hazard rate (i.e. shorter conflicts), but this association is not statistically distinguishable from no change. [Figure 3](#) further illustrates how predicted conflict duration changes with and without UN peacekeepers in different fragmentation scenarios. When there is no fragmentation (left panel of [Figure 3](#)), conflicts with and without UN peacekeepers follow very similar duration patterns. However, when *CFI* is equal to 0.4 (right panel of [Figure 3](#)), which is roughly the median fragmentation level when we observe fragmentation, conflicts involving UN peacekeepers (dashed line) end quicker compared to conflicts

individual terms for the two variables specified as interaction cannot be interpreted independently, as the net effect of each variable will depend on the level of the other variable and the coefficient for the interactive term, and the coefficient estimate for each of the individual term will depend on the scaling of the variables. In other words, one cannot differentiate the net effect of one independent variable on the overall model and the two variables must be interpreted together; see [Braumoeller, "Hypothesis Testing."](#)

¹¹² [Gilligan and Sergenti, "Do UN Interventions?"; Kathman and Benson, "Cut Short?"](#)

without UN peacekeepers (solid line).

Next, we turn to the number of battle-related deaths in African civil wars to investigate how the implications of our theoretical framework would change the findings of an influential study by Hultman et al.¹¹³ [Table 2](#) presents results from the negative binomial regression on the number of deaths in a given month. Model 6 is the replication of the original results by Hultman et al. Note that when the total number of battle deaths is equal to zero, *CFI* is undefined because the denominator is also zero. In order to address this problem, we reduce our sample to observations to conflict-months with battlefield deaths. Model 7 shows that reducing our sample by dropping observations following non-conflict months does not substantively influence the original findings. In Model 8, we introduce our lagged *CFI* variable. As we expected, *CFI* is positive and significant, indicating that higher fragmentation in a month is associated with higher battle deaths in the following month. Put differently, fragmentation generates more conflict as predicted by our theoretical framework. Model 9 includes an interaction term between *UN Troops* and *CFI*. The interaction term is negative and significant. Thus, considering the joint effect of *UN Troops* and *CFI*, increasing the number of troops mitigate the adverse effect of fragmentation.

[Figure 4](#) illustrates the marginal effect of *CFI* conditional on the number of UN troops. When there are no *UN Troops* and all other covariates are held at their means, we estimate that the marginal effect of *CFI* on the predicted number of deaths in a conflict-month to be positive and significant. When there are *UN Troops*, however, this figure quickly declines and becomes indistinguishable than zero, which suggests that a larger number of *UN Troops* may mitigate the impact of fragmentation on battle deaths.

Based on Model 9, [Figure 5](#) plots the predicted number of battle deaths with respect to different *CFI* scores. The blue line shows predicted deaths when 7000 UN troops are deployed, which is roughly the median number of troops when there is UN involvement in a conflict. The red line indicates no UN troop deployment. All other covariates are held at their means. Based on point estimates, increases in *CFI* are associated with higher battle deaths when there is no UN troop deployment whereas when there are 7000 UN troops, increases in *CFI* are associated with slightly decreasing

¹¹³ [Hultman et al., “Beyond Keeping Peace”](#).

predicted number of deaths. Again, the difference between number of deaths in UN and no UN cases is most distinguishable when fragmentation is higher.

6. Conclusion

Conflict fragmentation is a major hurdle to peacemaking. It intersects with local dynamics, facilitates spoilers who oppose a peace process and increases both the intensity and duration of fighting. Closely associated with failed attempts at making peace, these adverse traits suggest that UN PKOs may find it harder to effectively support peace processes in highly fragmented conflicts. Nonetheless, the empirical literature also shows that UN missions tend to be deployed in hard cases where the prospects for peace are slim. Does the UN remain ineffective in such hard and highly fragmented conflicts?

In this article, we argue that contrary to common perceptions, UN PKOs can be successful at addressing problems arising from fragmentation. We present evidence that UN involvement interacts with fragmentation, dampening its conflict augmenting impact. Compared to UN involvement, fragmented conflicts are both longer and deadlier when the UN is not involved to support a peace process. Thus, it is in these very difficult and highly fragmented conflicts that UN presence becomes so important. Our findings raise the possibility that in cases of small and relatively uncomplicated conflicts, other external actors might have a role in facilitating peace processes. In fragmented conflicts, on the other hand, UN missions can have a unique impact in reducing the duration and level of violence.

Our findings also suggest that the effectiveness of UN peacekeeping is likely to be conditional on conflict features. UN PKOs contribute to peace through discouraging spoilers, addressing commitment problems and facilitating coordination and communication among belligerents. However, these hurdles are not uniform across different conflicts and the difference that UN involvement would make is conditional on the severity of obstacles against peace. For example, when commitment problems are severe, we should expect UN involvement to make a more profound contribution towards peace. Similarly, when spoiler violence is particularly threatening a peace process, enhancing moderates and discouraging spoilers become especially crucial. Therefore, we conclude that when assessing the effectiveness of a UN PKO, focusing only on immediate outcomes in terms of mandate fulfilment and achieving full peace might be misleading. As demonstrated by UNIFIL, peacekeeping might have a significant impact in a hard and

highly fragmented conflict, substantially influencing conflict dynamics. Even if fulfilling mission mandate or achieving positive peace is beyond reach, the UN can be effective at saving lives and changing incentives towards more peaceful behaviour.

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Table 1: Cox Proportional Hazard Regression on Conflict Duration. Global Data, 1990 – 2012.

	Model 1 Baseline	Model 2 UNPKO	Model 3 Interactio n	Model 4 Full	Model 5 Alternativ e
CFI	-1.20* (0.57)	-1.20* (0.56)	-2.00** (0.66)	-1.83** (0.66)	
UNPKO		0.10 (0.16)	-0.01 (0.18)	-0.09 (0.20)	-0.78 (0.48)
CFI * UNPKO			2.26* (1.01)	2.37* (1.03)	
Incompatibility	-0.34* (0.16)	-0.32† (0.16)	-0.33* (0.16)	-0.34† (0.18)	-0.33† (0.17)
ln Real GDP p.c.	-0.08 (0.07)	-0.07 (0.07)	-0.08 (0.07)	-0.13 (0.12)	-0.12 (0.12)
ln. Population	-0.14** (0.05)	-0.14** (0.05)	-0.14** (0.05)	-0.16† (0.09)	-0.15† (0.09)
Polyarchy	-0.47 (0.34)	-0.48 (0.33)	-0.47 (0.33)	-0.64† (0.35)	-0.65† (0.35)
ln. Cumulative Battle Deaths _(t-1)	-0.27*** (0.05)	-0.27*** (0.05)	-0.26*** (0.05)	-0.25*** (0.06)	-0.24*** (0.06)
Resources	-0.23 (0.16)	-0.23 (0.16)	-0.22 (0.16)	-0.13 (0.17)	-0.13 (0.17)
Rebel Exp. Sup.				-0.36* (0.18)	-0.35* (0.18)
CINC				1.31 (5.39)	1.26 (5.35)
Internationalized Conflict				-0.51† (0.29)	-0.50† (0.30)
Group No.					-0.59** (0.21)
Group No. * UN PKO					0.70* (0.34)
Regional Dummies	X	X	X	✓	✓
Observations	833	833	833	832	832
AIC	1636.67	1638.34	1636.88	1595.21	1594.76
Log Likelihood	-811.3	-811.2	-809.4	-801.4	-801
No. of Subjects	224	224	224	223	223
No. of Failures	199	199	199	199	199

Robust standard errors clustered on conflict are in parentheses

*** p<0.001, ** p<0.01, * p<0.05, † p<0.10, two-tailed

Table 2: Negative Binomial Regression on Battlefield Deaths in Civil Conflicts in Africa, 1992-2011.

	Model 6 Original	Model 7 Reduced Sample	Model 8 CFI	Model 9 CFI Interaction
CFI _(t-1)			1.245* (0.497)	1.381** (0.497)
UN Troops _(t-1)	-0.130* (0.051)	-0.145*** (0.039)	-0.139*** (0.040)	-0.137*** (0.040)
UN Troops _(t-1) * CFI _(t-1)				-0.622*** (0.101)
Battle Deaths _(t-1)	0.009*** (0.002)	0.004** (0.001)	0.004** (0.001)	0.004** (0.001)
UN Police _(t-1)	0.227 (0.195)	0.199 (0.174)	0.177 (0.176)	0.250 (0.185)
UN Observers _(t-1)	2.732* (1.344)	2.733* (1.178)	3.132* (1.227)	3.184* (1.253)
Ceasefire	-0.075 (0.389)	0.068 (0.303)	0.049 (0.317)	0.049 (0.317)
Rebel Strength	0.385 (0.303)	0.323 (0.262)	0.279 (0.245)	0.272 (0.243)
No. of Rebel Groups	0.009 (0.063)	-0.100** (0.039)	-0.104** (0.038)	-0.104** (0.038)
ln Population	0.063 (0.188)	0.163 (0.198)	0.181 (0.187)	0.182 (0.186)
Biased Intervention	1.413*** (0.420)	0.577* (0.292)	0.558* (0.273)	0.567* (0.269)
Constant	1.151 (2.130)	1.586 (2.174)	1.371 (2.044)	1.359 (2.034)
Observations	5,861	2,465	2,465	2,465
Log Likelihood	-11858	-8541	-8534	-8529

Robust standard errors clustered on conflict-dyad are in parentheses

*** p<0.001, ** p<0.01, * p<0.05, two-tailed

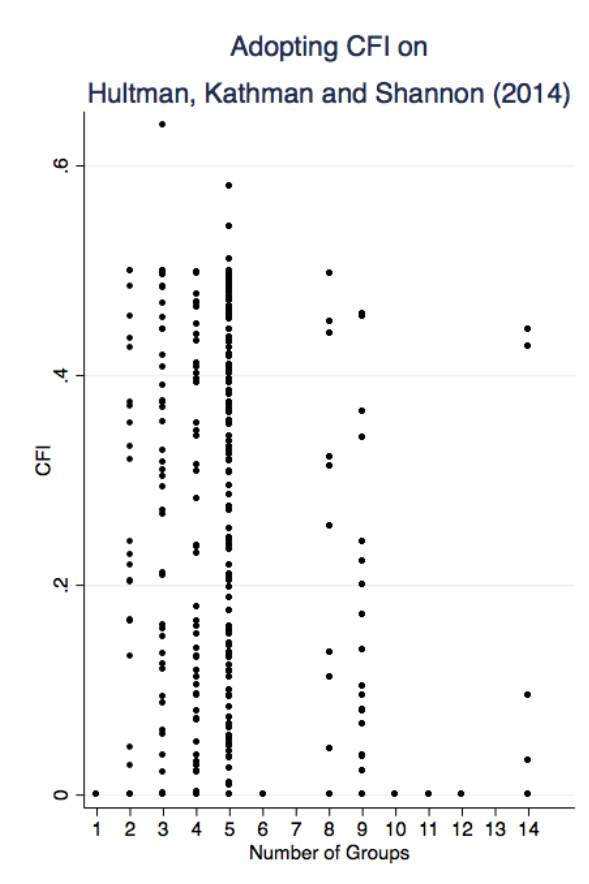


Figure 1: Conflict Fragmentation Index and Number of Rebel Groups

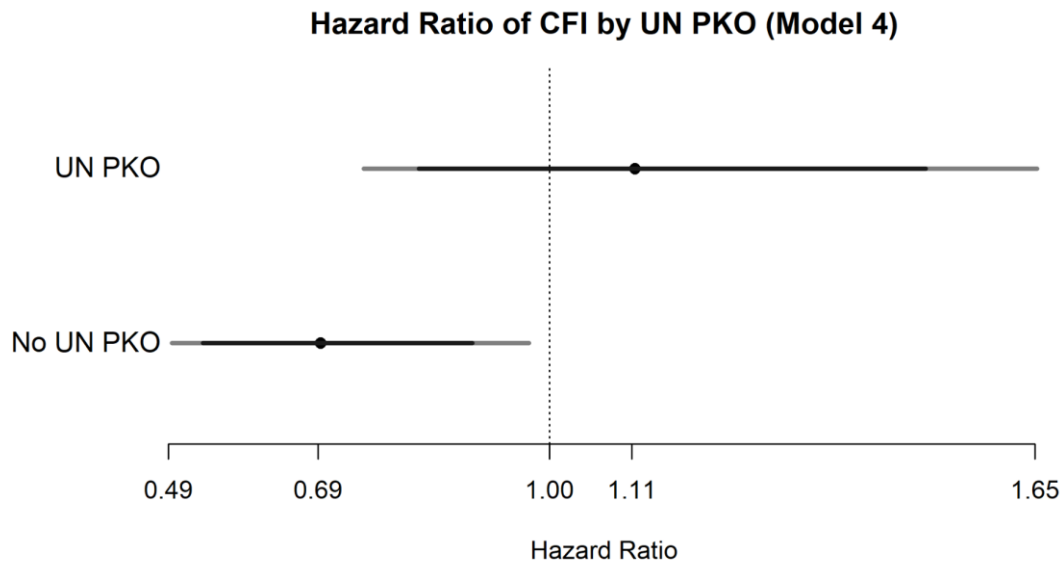


Figure 2: Hazard Ratio of CFI Conditional on UN Peacekeeping

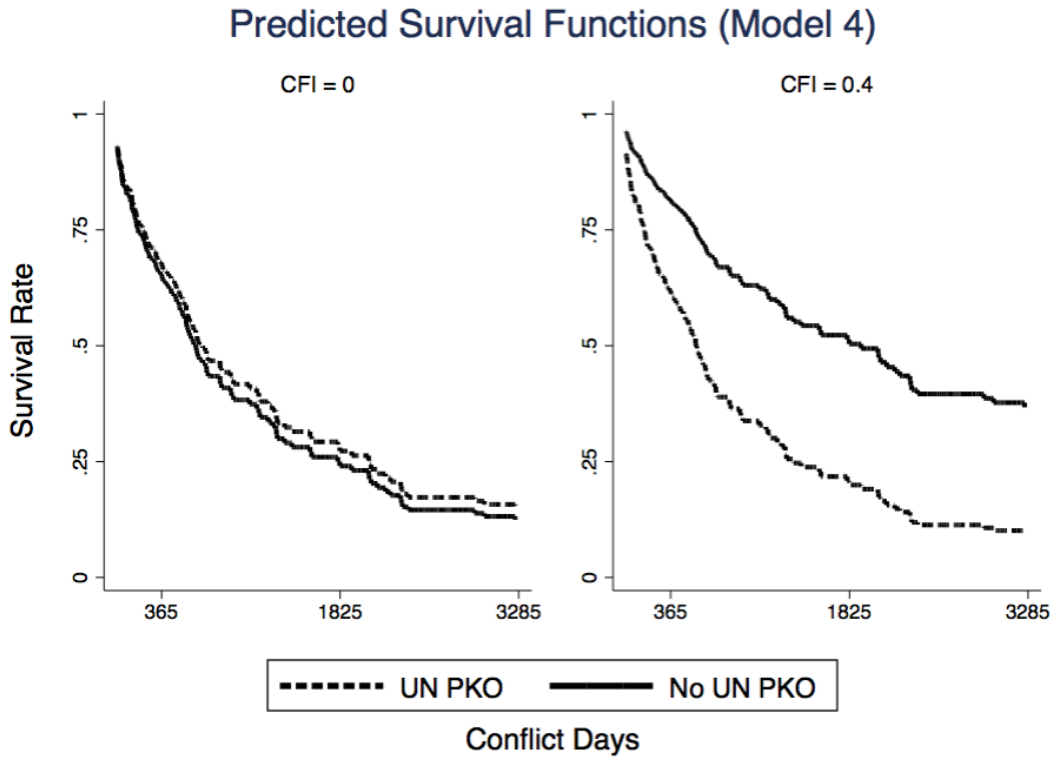


Figure 3: Predicted Survival Functions

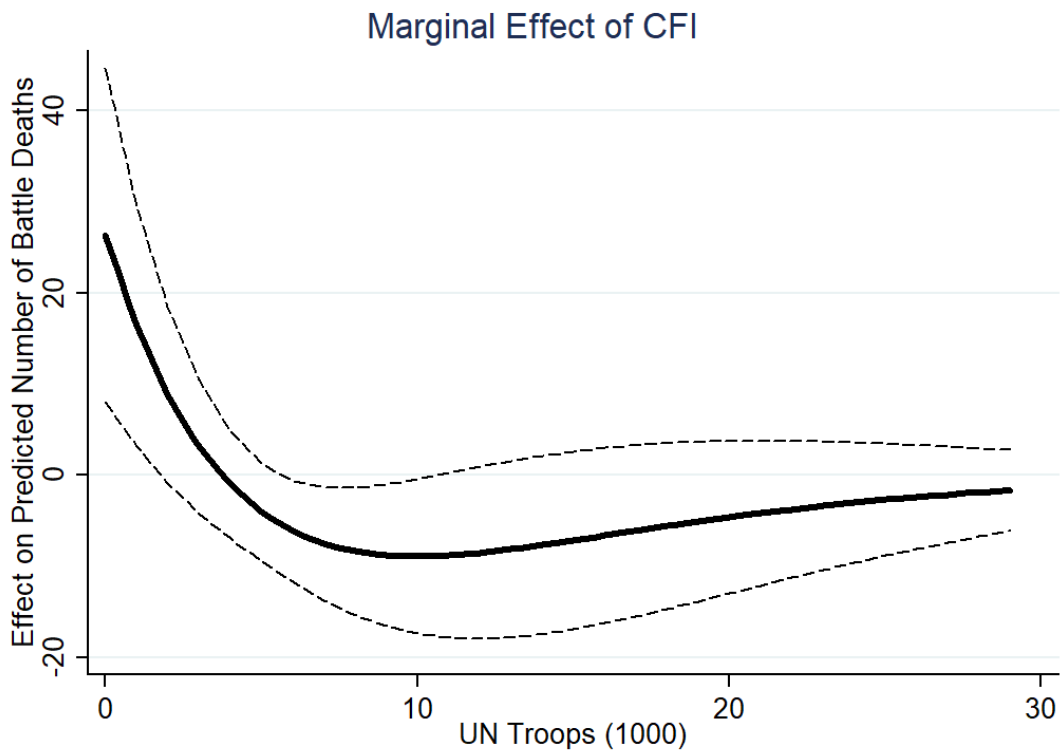


Figure 4: Marginal Effect of Fragmentation Conditional on UN Troop Deployment

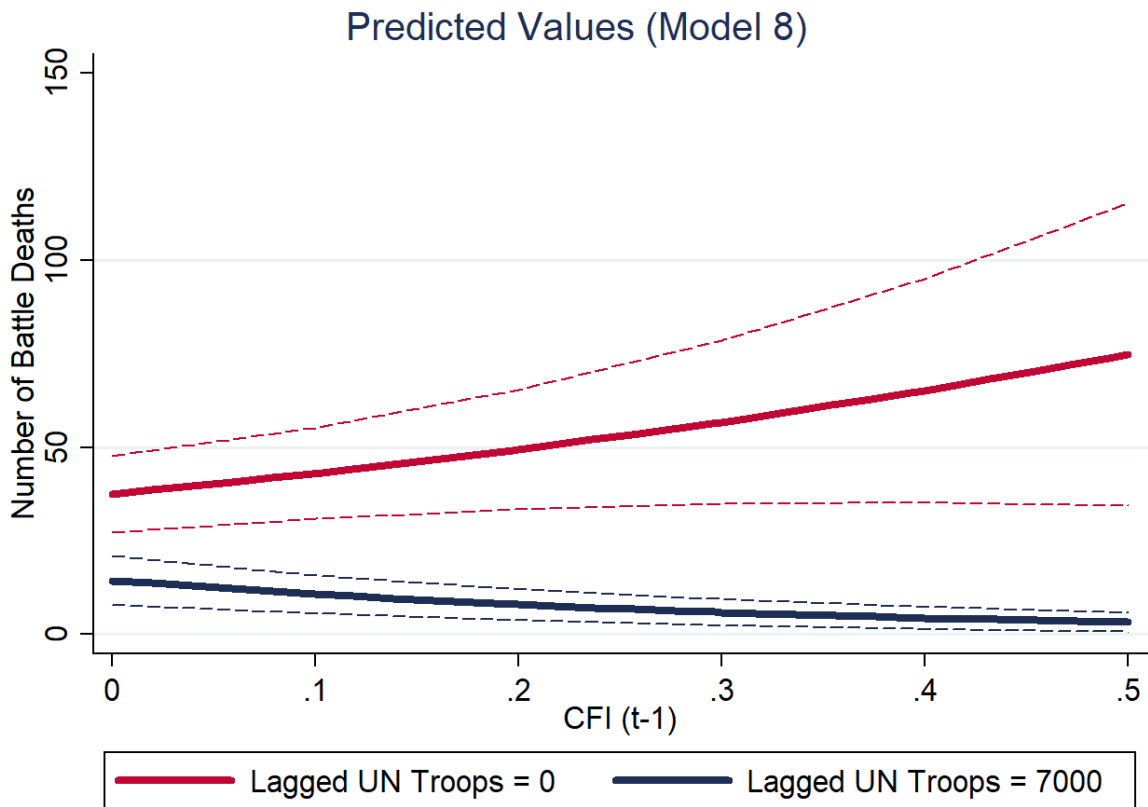


Figure 5: Predicted Number of Battlefield Deaths