

# Timing Matters: The Impact of DDR Implementation on Non-State Conflicts

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## Abstract

How do peacekeeping operations influence non-state conflicts, and does the timing of their implementation matter? While prior studies have examined the role of peacekeeping missions in addressing various forms of violence, the impact of the timing of their implementation remains underexplored. This paper investigates how the implementation of Demilitarization, Demobilization, and Reintegration (DDR) programs affects non-state conflicts and examines the role of timing. We argue that DDR programs often fail to adequately address ex-combatants' needs and distribute benefits equitably, thereby increasing the likelihood of non-state conflicts. However, early DDR implementation mitigates these effects by promoting stabilization and enhancing the perceived commitment of peacekeepers and governments.

Using data from 1989 to 2019 on peacekeeping activities and non-state conflicts, we find that DDR programs increase the likelihood of non-state conflicts, but early implementation significantly reduces this risk. These findings highlight the crucial role of timing in peacekeeping strategies, providing valuable insights for reducing non-state conflicts in postwar contexts.

## 1 Introduction

How do peacekeeping operations affect the likelihood of non-state conflicts? Does the timing of implementation have any effect? Although a considerable number of studies have

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demonstrated the role of different peacekeeping missions in various forms of violence, the impact of when these missions are implemented has rarely been addressed. Additionally, the literature on peacemaking efforts has largely focused on international conflicts or civil wars involving state forces, often overlooking non-state conflicts between communal groups, rebel groups, or militias (Duursma 2022).

In this paper, we examine the impact of the implementation of Demilitarization, Demobilization, and Reintegration (DDR, hereafter) by peacekeeping operations on the occurrence of non-state conflicts. We further investigate the effect of *when* DDR is implemented. We argue that DDR programs often fail to address the needs of ex-combatants and distribute benefits unequally both within and across groups, thereby increasing the likelihood of non-state conflicts. However, we contend that the early implementation of DDR programs mitigates these negative impacts by fostering quick stabilization and enhancing the perceived commitment and capacity of both peacekeepers and the government.

We test our hypotheses using a dataset on peacekeeping mission implementations and non-state conflicts from 1989 to 2019. The results from our logistic regression analyses support our hypotheses that DDR programs within UN peacekeeping operations increase the likelihood of non-state conflicts, but this effect can be mitigated if the programs are implemented early in the operations.

The structure of this paper is as follows. The next section reviews the literature on the relationship between peacekeeping operations and postwar violence. Following this, we develop our theoretical expectations regarding the implementation of DDR programs during UN peacekeeping operations and their impact on non-state conflicts. The subsequent section presents our research design and empirical findings. Finally, we conclude by discussing the implications and future directions of our study.

## 2 Literature Review

The existing peacekeeping literature has demonstrated the diverse effects of peacekeeping on various forms of violence, including civilian victimization, electoral violence, and other types of postwar violence (e.g., [Kathman and Wood 2016](#); [Bara 2020](#); [Bove and Brauner 2016](#); [Bove and Ruggeri 2019](#); [Haass and Ansorg 2018](#); [Fjelde et al. 2019](#); [Fjelde and Smidt 2022](#)).

[Kathman and Wood \(2016\)](#) examined the relationship between different types and numbers of UN peacekeeping operations and civilian victimization during post-conflict stages. Using the UCDP Conflict Termination Dataset and Georeferenced Events Dataset, their study suggests that a greater number of UN troops can effectively reduce political violence against civilians during the post-conflict period. However, an increasing number of UN observers may exacerbate political violence toward civilians.

[Bara \(2020\)](#) also investigated the impacts of different types and numbers of UN peacekeeping operations on postwar violence. Using the UCDP/PRIO Armed Conflict Dataset, the author found that UN police are the only type of peacekeeping operation that consistently reduces postwar violence.

[Bove and Brauner \(2016\)](#) and [Bove and Ruggeri \(2019\)](#) explored whether the composition of peacekeeping forces influences the degree of political violence. [Bove and Brauner \(2016\)](#) measured the diversity of peacekeeping operations using fractionalization and polarization, finding that diversity among peacekeepers contributes to lower levels of violence against civilians. Meanwhile, [Bove and Ruggeri \(2019\)](#) incorporated various indices to measure social and cultural distances between peacekeepers and local populations, using UCDP conflict data. Their findings are mixed: cultural and geographical distances are associated with higher levels of civilian and battle-related violence, while economic and institutional distances appear to reduce violence against civilians.

[Haass and Ansorg \(2018\)](#) highlighted that UN peacekeepers are effective in protecting civilians from violence by non-state actors. More importantly, the authors showed that the

quality of UN troops significantly affects their ability to protect civilians. This quality was assessed by combining military spending with troop size.

[Fjelde et al. \(2019\)](#) demonstrated that the presence of UN peacekeepers significantly reduces one-sided violence against civilians, particularly from attacks initiated by rebel groups. Lastly, [Fjelde and Smidt \(2022\)](#) showed the protective effects of UN peacekeeping in reducing electoral violence. Using data from all Sub-Saharan African countries from 1994 to 2017, the authors employed two-way fixed effects models and matching techniques to show that local UN peacekeeper presence reduces the risks of electoral violence. However, these protective effects are stronger for violence committed by non-state actors than by governments.

Although existing studies provide valuable insights into the role of peacekeeping operations in addressing various forms of violence, they remain incomplete. First, many studies fail to differentiate the impact of specific mandates within peacekeeping operations and often overlook the importance of timing in their implementation. Peacekeeping operations differ across countries not only in the content and types of mandates they include but also in the sequence and timing of their implementation. For example, UN peacekeeping operations in Honduras prioritized DDR and ControlSALW, while those in East Timor focused initially on mandates such as civil society assistance, local reconciliation, and border control ([Blair et al. 2022](#)). Despite these variations, there remains a significant gap in understanding how the timing of mandate implementation affects levels of violence.

Second, while many studies have examined sexual violence, one-sided violence, or civil war recurrence in postwar environments, less attention has been given to non-state conflicts involving communal groups, rebels, or militias ([Duursma 2022](#)). Yet, these conflicts often represent a major source of insecurity in areas where UN peacekeepers are deployed ([Duursma 2021](#); [Krause 2020](#); [Smidt 2020](#)). To address these challenges, more research is needed to understand what makes non-state conflicts more or less likely during peacekeeping operations.

In this paper, we address these gaps by examining the impact of DDR mandates during peacekeeping operations on non-state conflicts and how the timing of such mandates affects conflict dynamics. By doing so, we contribute to the study of conflict management and peacebuilding efforts by demonstrating the critical importance of implementation timing in shaping postwar security outcomes. We also offer insights into how peacekeeping strategies can be tailored to reduce non-state conflicts effectively.

### 3 Theory

Disarmament, Demobilization, and Reintegration (DDR) is a process designed to support members of armed forces and groups as they lay down their weapons and transition back into civilian life.<sup>1</sup> Since the end of the Cold War era, DDR programs have become a standard component in post-conflict peacebuilding, particularly within UN peacekeeping operations (Sisk 2014; Berdal 1996). This process involves collecting weapons, demobilizing military units, and providing former combatants with training and resources to reintegrate into communities and pursue nonviolent livelihoods (Kirschner 2010). Does this process, aimed at reducing violence, always lead to peace?

We argue that DDR inadvertently increases the likelihood of conflicts between non-state actors. First, DDR programs do not always fully address the needs of ex-combatants, which increases their incentives to join or form new armed groups. In many DDR campaigns, up to 20 percent of combatants who complete demobilization report receiving no transitional or reintegration benefits.<sup>2</sup> For example, in Liberia, after disarmament and demobilization were completed in November 2004, many ex-combatants did not receive the promised reintegration support (Jennings 2007). The prospect of losing employment or economic stability following disarmament and demobilization can motivate ex-combatants to join

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<sup>1</sup><https://unitar.org/sustainable-development-goals/peace/our-portfolio/disarmament-demobilization-and-reintegration>

<sup>2</sup><https://www.files.ethz.ch/isn/158581/AfricaBriefFinal24.pdf>

criminal gangs, form new armed factions, or return to conflict. When ex-combatants cannot envision a stable role for themselves in the post-conflict order, they may turn to banditry (Özerdem 2022). Consequently, these unmet needs and uncertain prospects often lead ex-combatants to participate in non-state conflicts, creating additional layers of instability.

Second, the unequal distribution of DDR benefits can incentivize ex-combatants to re-arm and engage in violence. In some cases, seeing other groups benefit more than their own increases the incentive to rearm. For instance, in the Democratic Republic of Congo (DRC), combatants led by Congolese militia commander Kakule Sekuli LaFontaine were initially demobilized and reintegrated into the armed forces, but later formed another armed group after discovering that other militias had received more favorable concessions (NzekaNi zeNa 2013).

Furthermore, DDR programs frequently exclude some active armed groups. In the Central African Republic (CAR), the 2015 Bangui Forum following the Khartoum Accord included only 14 groups in the DDR process, leaving out others involved in the conflict. This exclusion led to dissatisfaction and a refusal to participate in the peace process by factions not included in the agreement (Duarte and Souza 2024). The rearmament of these under-benefited groups can also erode trust in the DDR process among those initially included, potentially prompting them to rearm as well. In Mali, the deployment of MINUSMA and the subsequent DDR process excluded jihadist groups, which in turn intensified their attacks. This escalation led to growing mistrust between the Malian government, MINUSMA, and other armed groups, such as the Platform and CMA, resulting in violent clashes between CMA and GATIA, a faction of the Platform (Albrecht et al. 2017). Thus, the unequal distribution of DDR benefits and the exclusion of some groups can generate resentment, incentivizing these factions to rearm and engage in non-state conflicts. This fragmentation and competition among non-state actors contribute to cycles of violence and undermine the stability DDR programs aim to achieve.

**Hypothesis 1** *During peacekeeping operations, the implementation of DDR increases non-state*

*conflicts.*

### **3.1 How does the early implementation of DDR mitigate its negative impact on non-state conflicts?**

Then, what role would the *timing* of DDR implementation play in non-state conflict? We argue that the early implementation of DDR during peacekeeping operations mitigates the negative impact of DDR programs on non-state conflicts by reducing both opportunities and incentives to rearm and engage with violence.

Early implementation of DDR allows peacekeepers and the state to establish stability quickly, before the non-state actors have the opportunity to mobilize and exploit the situation. Rapid disarmament and reintegration of ex-combatants help prevent power vacuums from developing, making it less likely that non-state actors will seize the opportunity to expand their control.

Following the prolonged armed conflict in Guatemala since 1982, the implementation of MINUGUA began swiftly after the signing of the Accord for a Firm and Lasting Peace. In January 1997, MINUGUA initiated several peacekeeping mandates, including disarmament and demobilization, control of small arms and light weapons, and humanitarian relief (Blair et al. 2023). Military observers from sixteen states were deployed across six regions to oversee the demobilization of nearly 3,000 rebel personnel, the collection of weapons, and limited demining activities (Koops et al. 2015, 557). MINUGUA successfully completed the disarmament and demobilization processes in Guatemala within three months, which left little room for ex-combatants to remobilize or engage with violent activities.

Early DDR implementation can also build trust among various actors by demonstrating the commitment and capacity of the state and peacekeepers to a structured and timely peace process. When DDR is delayed, security concerns among ex-combatants may increase, potentially leading them to rearm or join insurgent or criminal groups. Early DDR

fosters community buy-in, reducing incentives to engage in violence and strengthening local support for peace.

Based on the discussions so far, here is another hypothesis.

**Hypothesis 1a** *If DDR programs are implemented in the early stages, their impact on non-state conflicts is mitigated.*

## 4 Research Design

The above hypotheses are tested using Peacekeeping Activities dataset (PACT) 1.0 (Blair et al. 2022) and 2.0 (Otto and Honda 2024) and UCDP Non-state Conflict dataset (Davies et al. 2024; Sundberg et al. 2012). PACT data record peacekeeping operations' different level of engagement<sup>3</sup> with missions (Blair et al. 2022). PACT 1.0 codes all UNPKOs that are related to civil war context and were mandated after 1988 in African contexts, while PACT 2.0 covers UNPKOs in Europe, the Americas, and Asia (codebook). We combine these two datasets to see the global peacekeeping activities.

### Response Variable

The response variable is the occurrence of non-state conflict. UCDP defines non-state conflicts as "the use of armed force between two organized armed groups, neither of which is the government of a state, which results in at least 25 battle-related deaths in a year."<sup>4</sup> We use two different measures for the occurrence of non-state conflicts. The first measure is a binary indicator of non-state conflicts. If the country experienced any non-state conflict in a given year and month, it is coded as 1; otherwise, it is coded as 0. The second measure is also binary but tracks non-state conflicts over a three-month period.

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<sup>3</sup>Monitoring, outreach, meeting, advocating, assisting, providing material support, implementing, and sanctioning.

<sup>4</sup>Pettersson, Therese (2024) UCDP Non-state Conflict Codebook v 24.1 (<https://ucdp.uu.se/downloads/>)



If the country experienced any non-state conflict during any three-month span, it is coded as 1; otherwise, it is coded as 0.

## **Explanatory Variable**

To capture the impact of the UN PKO-led security measures on non-state conflicts, we created a *DDR implementation* measure. If the country saw the implementation of one of the followings – Disarmament & Demobilization, Reintegration, or Demilitarization – in a given year and month, the variable is coded as 1; otherwise, it is coded as 0. The data come from PACT 1.0 (Blair et al. 2022) and 2.0 (Otto and Honda 2024).

To examine the mitigating impact of early program implementation, we use two measures: *Six months* and *One year*. If the given year and month fall within six months or one year from the deployment of peacekeeping operations in the country, the respective variable is coded as 1; otherwise, it is coded as 0.

## **Control Variables**

Several additional variables were included in the analyses to control for factors that may affect the relationship between peacekeeping operations and non-state conflicts. We included country-level variables such as *GDP per capita* and *Level of democracy*, which have been regarded to contribute to UN peacekeeping operations (Ari and Gizelis 2020). Both also decrease the likelihood of non-state conflicts by contributing to the state's willingness and ability to prevent conflicts (Eck 2014). The data on *GDP per capita* come from *World Bank*. The data on *Level of democracy* come from the measure of electoral democracy from the *V-Dem* (Coppedge et al. 2024).

We also control for *Exclusion*. Ethnic exclusion can increase the risk of non-state conflicts (Böhmelet et al. 2019) but also increase the effectiveness of peacekeeping missions (Di Salvatore 2020). The data come from the *Ethnic Power Relations (EPR)* dataset (Vogt

et al. 2015). Exclusion includes 1) elite representatives lacking political power nationally, 2) active, targeted state discrimination to exclude group members from political power, and 3) groups self-excluding by controlling territories declared independent from the central government. The variable is coded 1 if any of the ethnic groups is excluded. Otherwise, it is coded as 0.

Negotiations and peace agreements can increase the implementation of peacekeeping operations by providing a framework for peacekeeping missions to operate more effectively by offering clear mandates. Peace processes often produce multiple forms of violence (e.g., Stedman 2003; Duursma and Fliervoet 2021), which can also increase non-state conflicts. To capture peace processes, we use *Negotiation* and *Peace agreement*. The data come from *Peace Negotiations in Civil Conflicts (PNCC)* dataset (Ari 2023). This dataset documents instances of peace negotiations and their dates in civil conflicts from 1975 to 2013, encompassing all civil wars recorded by the *UCDP Armed Conflict Dataset*. We have collapsed the data into country-month. If a country engages in negotiations with any rebel groups in a given month, the variable *Negotiation* is coded as 1; otherwise, it is 0. The data on *Peace agreement* come from *UCDP Peace Agreement Dataset* (Pettersson et al. 2019). If the country saw any agreements with any rebel groups in a given month, the variable *Peace agreement* takes 1. Otherwise, it is 0.

Lastly, we address temporal dependence by including cubic polynomials of time from peacekeeping deployment, following (Carter and Signorino 2010).

The unit of analysis is the country-month. The data covers 23 countries from 1989 to 2019. The variables are summarized in Table A1.<sup>5</sup>

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<sup>5</sup>Due to data availability for the variable *Negotiation*, the analysis including this variable spans from 1989 to 2013.

## 5 Results

Table 1: Logit Models: DDR Implementation and Non-state Conflict (One Month Lagged)

	Model 1	Model 2	Model 3
Intercept	-0.89 (0.73)	-0.70 (1.04)	0.88 (1.50)
DDR implementation	2.55*** (0.49)	2.41*** (0.40)	2.22*** (0.41)
One year	0.13 (0.41)	0.13 (0.41)	-0.27 (0.59)
Time	-0.02 (0.03)	-0.02 (0.03)	-0.05 (0.06)
Time <sup>2</sup>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Time <sup>3</sup>	-0.00 (0.00)	-0.00 (0.00)	-0.00* (0.00)
DDR implementation X One year	-1.57** (0.61)	-1.52** (0.57)	-1.38** (0.48)
GDP per capita		-0.00 (0.00)	-0.00 (0.00)
Exclusion		1.03 (1.09)	0.73 (1.19)
Peace agreement		0.58 (0.61)	1.20 (0.92)
Level of democracy			-2.80 (3.44)
Negotiation			-1.13 (0.78)
Num. obs.	2154	1865	1601

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

Table 1 presents the logit models that examine the relationship between DDR implementation and non-state conflicts. All analyses use robust standard errors clustered by country to address potential non-independence of observations within each country.

Model 1 includes the main explanatory variables and cubic polynomials of time. Model 2 adds covariates such as GDP per capita, exclusion, and peace agreements, while Model 3 includes all covariates, including level of democracy and negotiation.

The results support Hypotheses 1 and 1-a. Following DDR implementation, the like-

likelihood of non-state conflicts increases across all models. However, when DDR is implemented within one year, its negative impact on non-state conflicts is mitigated.

Table 2: Logit Models: DDR Implementation and Non-state Conflict (Three Months)

	Model 1	Model 2	Model 3
Intercept	-0.79 (0.72)	-0.55 (1.02)	0.83 (1.51)
DDR implementation	2.44*** (0.47)	2.29*** (0.38)	2.19*** (0.39)
One year	0.12 (0.41)	0.13 (0.40)	-0.14 (0.59)
Time	-0.02 (0.03)	-0.02 (0.03)	-0.05 (0.06)
Time <sup>2</sup>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Time <sup>3</sup>	-0.00 (0.00)	-0.00 (0.00)	-0.00* (0.00)
DDR implementation X One year	-1.55* (0.60)	-1.51** (0.57)	-1.46** (0.50)
GDP per capita		-0.00 (0.00)	-0.00 (0.00)
Exclusion		0.95 (1.06)	0.69 (1.17)
Peace agreement		0.65 (0.61)	1.22 (0.91)
Level of democracy			-2.75 (3.40)
Negotiation			-1.02 (0.78)
Num. obs.	2182	1890	1620

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

Table 2 presents the logit models examining non-state conflicts within three months, with results remaining consistent. Tables 3 and 4 incorporate the variable *Six months* and its interaction with *DDR implementation*. The results remain consistent. Although the implementation of DDR during peacekeeping operations increases the likelihood of non-state conflicts, the effect is mitigated when the missions are implemented in the early stages.

Table 3: Logit Models: DDR Implementation and Non-state Conflict (One Month Lagged)

	Model 1	Model 2	Model 3
Intercept	-1.08 (0.66)	-0.88 (0.96)	0.35 (1.41)
DDR implementation	2.27*** (0.46)	2.11*** (0.39)	1.91*** (0.43)
Six months	0.23 (0.38)	0.19 (0.37)	0.03 (0.45)
Time	-0.01 (0.02)	-0.01 (0.03)	-0.02 (0.05)
Time <sup>2</sup>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Time <sup>3</sup>	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
DDR implementation X Six months	-1.28* (0.64)	-1.15* (0.57)	-1.00 (0.56)
GDP per capita		-0.00 (0.00)	-0.00 (0.00)
Exclusion		1.04 (1.09)	0.73 (1.18)
Peace agreement		0.64 (0.60)	1.25 (0.92)
Level of democracy			-2.90 (3.46)
Negotiation			-1.10 (0.77)
Num. obs.	2154	1865	1601

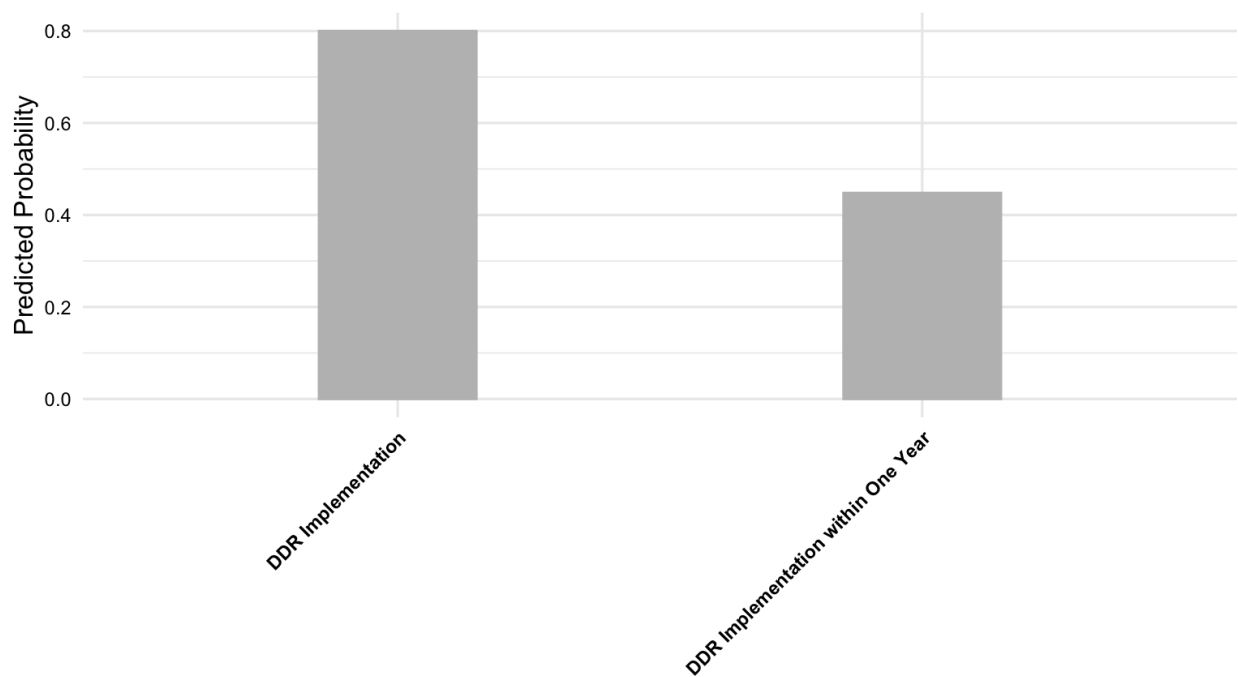
\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

Table 4: Logit Models: DDR Implementation and Non-state Conflict (Three Months)

	Model 1	Model 2	Model 3
Intercept	-0.97 (0.64)	-0.71 (0.94)	0.42 (1.41)
DDR implementation	2.17*** (0.45)	2.00*** (0.38)	1.87*** (0.41)
Six months	0.21 (0.37)	0.16 (0.37)	0.06 (0.45)
Time	-0.01 (0.02)	-0.01 (0.03)	-0.02 (0.05)
Time <sup>2</sup>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Time <sup>3</sup>	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
DDR implementation X Six months	-1.31* (0.65)	-1.17* (0.57)	-1.08 (0.57)
GDP per capita		-0.00 (0.00)	-0.00 (0.00)
Exclusion		0.95 (1.06)	0.69 (1.17)
Peace agreement		0.70 (0.60)	1.27 (0.91)
Level of democracy			-2.84 (3.42)
Negotiation			-1.00 (0.77)
Num. obs.	2182	1890	1620

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

Figure 1: Predicted Probabilities of Non-state Conflicts



## 6 Robustness check

One challenge of observational studies is the bias that can arise from the non-random assignment of explanatory variables, potentially leading to inaccurate estimates of treatment effects. Unlike experimental research, the decision to implement DDR is not randomly assigned. Consequently, estimating the precise treatment effects of DDR implementation on the occurrence of non-state conflicts becomes challenging. One way to address the challenge of non-random assignments is by using matching techniques (Gilligan and Sergenti 2008). Matching “creates a sample of the data in which the difference between the treated distribution and the non-treated distribution is reduced” (Gilligan and Sergenti 2008, 96). For robustness checks, we applied both full matching and nearest neighbor matching to mitigate potential biases arising from non-random assignments of DDR implementation. Figure A1 in the APPENDICES shows the covariate balance after applying full matching and nearest neighbor matching.

Table 5 presents the logit models using matched pairs. Model 1 and Model 2 present the results of logit models using full matching (caliper = 0.1 and caliper = 0.5, respectively). Model 3 presents the results of logic models using nearest neighbor matching (caliper = 0.3). The results of all three models presented in Table 5 are consistent with those in the preceding tables.



Table 5: Logit Models with Matched Data: DDR Implementation and Non-state Conflict (Three Months)

	Full Matching (Caliper = 0.1)	Full Matching (Caliper = 0.5)	Nearest Neighbor Matching (Caliper = 0.3)
Intercept	0.42 (1.34)	0.51 (1.37)	0.10 (1.26)
DDR implementation	2.27*** (0.47)	2.39*** (0.43)	0.81* (0.39)
One year	-0.15 (0.57)	-0.21 (0.56)	0.25 (0.55)
Time	-0.04 (0.05)	-0.04 (0.05)	-0.05 (0.05)
Time <sup>2</sup>	0.00 (0.00)	0.00 (0.00)	0.00* (0.00)
Time <sup>3</sup>	-0.00* (0.00)	-0.00* (0.00)	-0.00** (0.00)
GDP per capita	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
Exclusion	0.55 (1.07)	0.55 (1.09)	-0.06 (1.04)
Peace agreement	1.21 (0.89)	1.25 (0.90)	0.34 (0.80)
Level of democracy	-2.49 (3.18)	-2.49 (3.18)	-0.41 (3.04)
Negotiation	-0.70 (0.80)	-0.71 (0.81)	-0.18 (0.89)
DDR implementation X One year	-1.35* (0.57)	-1.42** (0.53)	-1.39* (0.59)
Num. obs.	1687	1832	1016

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

## 7 Discussion and Conclusion

In this article, we posit that the implementation of DDR programs during peacekeeping operations increases the likelihood of non-state conflicts. We also argue that early implementation can mitigate this negative impact of DDR. A series of logistic regression models support these arguments.

This study has significant theoretical and policy implications. First, we emphasize not only the type of peacekeeping missions but also the timing of their implementation on peace and conflict dynamics. Few studies have addressed the order or timing of peacekeeping mission implementation. Our findings suggest that timing may significantly influence the outcomes of peacekeeping operations. Second, we shed light on the impact of peacekeeping on a previously overlooked type of conflict—non-state conflicts. Our study urges more scholarly attention to the causes and consequences of non-state conflicts and their interaction with other forms of violence.

These theoretical insights have direct policy implications. Practitioners should consider not only the types of missions or the combination of different missions to reduce violence, but also the timing of their implementation. Additionally, efforts to reduce one type of violence can inadvertently increase the occurrence of another. Therefore, a comprehensive understanding of the interconnected effects of peacekeeping on different forms of violence is essential. Given that non-state conflicts are often a primary source of insecurity in areas where UN peacekeepers are deployed ([Duursma 2021](#); [Krause 2020](#); [Smidt 2020](#)), measures to adequately reduce the incentives for non-state conflicts should also be accompanied by efforts to address state-based conflicts.

Future studies can build upon this research in several directions. First, more attention should be given to identifying the timing and sequence of peacekeeping missions that most effectively reduce violence and contribute to sustained peace. While this approach has been emphasized previously (e.g., [Diehl 2022](#); [2023](#)), we still know little about when and in what order peacekeeping missions should be implemented and which missions

should be prioritized over others.

Second, demilitarization and demobilization may be implemented simultaneously with reintegration, yet the timing of each component might produce different effects on postwar violence. For instance, if demilitarization and demobilization are completed early while reintegration lags, this delay may exacerbate ex-combatants' security concerns and commitment issues, potentially undermining peace processes. Therefore, future studies can investigate the nuanced impact of the timing of each DDR component on postwar violence and whether better alignment of these stages could enhance peacebuilding outcomes.

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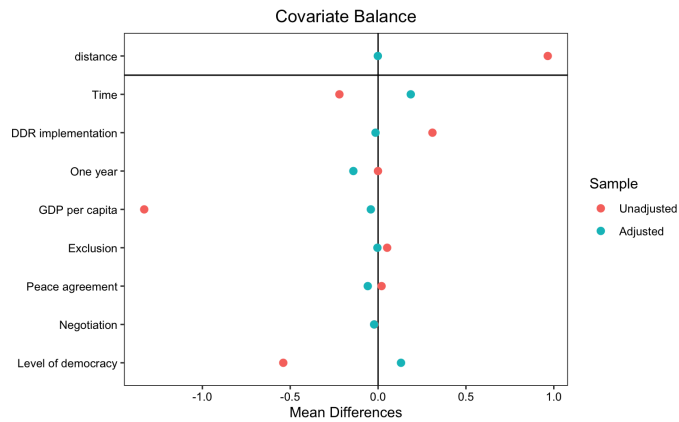
# APPENDICES

Table A1: Summary Statistics

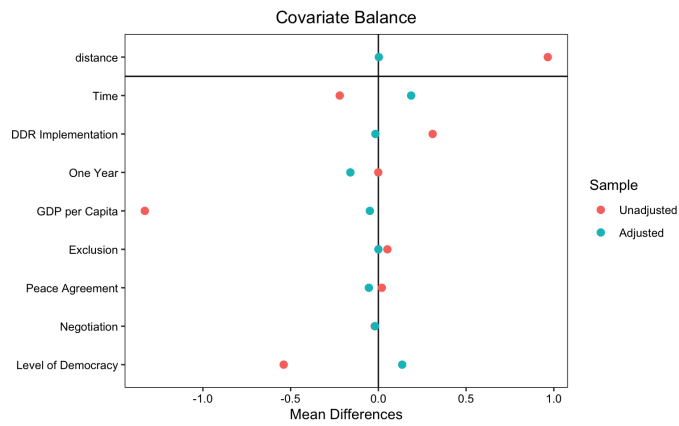
Statistic	N	Mean	St. Dev.	Min	Max
Non-state conflicts (3 months)	2,182	0.390	0.488	0	1
Non-state conflicts	2,154	0.389	0.488	0	1
DDR implementation	2,182	0.194	0.396	0	1
Six months	2,182	0.077	0.266	0	1
One year	2,182	0.150	0.357	0	1
Time	2,182	61.538	52.494	1	243
GDP per capita	1,917	1,137.829	1,163.451	128.538	6,219.644
Exclusion	2,076	0.698	0.459	0	1
Peace agreement	2,182	0.023	0.150	0	1
Level of democracy	2,103	0.416	0.151	0.112	0.774
Negotiation	1,832	0.120	0.325	0	1



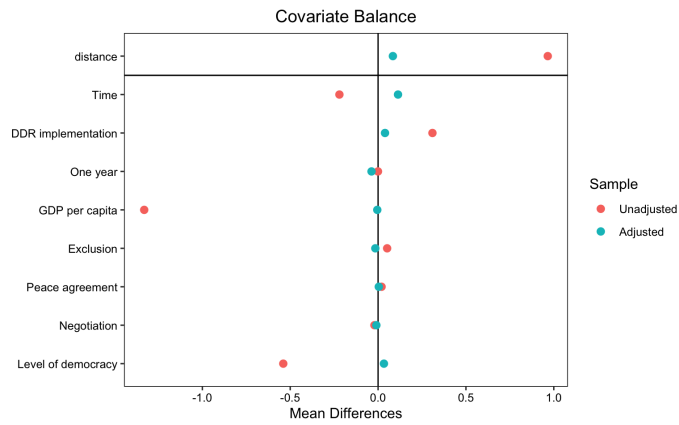
Figure A1: Covariate Balance After Matching



(a) Full Matching with a 0.1 Caliper



(b) Full Matching with a 0.5



(c) Nearest Neighbor Matching with a 0.3 Caliper