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Armed Conflict, Community-based Cash Transfers, and Social Cohesion: Evidence from a Randomized Intervention in Ethiopia

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Abstract

Amid a surge in armed conflicts in Africa, the impact of armed conflicts on social cohesion and potential avenues to rebuild social cohesion in conflict-affected settings remain active areas of inquiry. Most importantly, identifying instruments and interventions that can effectively strengthen social cohesion in conflict-affected settings can inform and facilitate peace-building efforts. We examine whether community-based cash transfer and social protection programs can strengthen social cohesion in settings grappling with the adverse effects of armed conflict. We answer this question using the 2020 civil war in Ethiopia and combining this with a randomized community-based cash transfer program rolled out after the conflict. Exploiting temporal variation in the spread of large-scale armed conflicts (battles) across a two-wave panel survey, we show that battles are associated with a deterioration in social cohesion. Reassuringly, we demonstrate that a modestly sized community-based cash transfer can rebuild and restore social cohesion in communities grappling with armed conflict and deterioration in social cohesion. Heterogeneity analysis shows that households who belong to a minority ethnic group in each community reported a higher loss in social capital associated with their exposure to armed conflict and that the community-based cash transfer appears to be more effective in rebuilding social cohesion among these households.

Keywords

Armed conflict, community-based cash transfer, social cohesion, social interaction

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1. Introduction

Armed conflicts, including civil wars, have immense implications for the functioning of nations and economies (Blattman and Miguel, 2010; Collier et al., 2003; Collier, 1999; Corral et al., 2020; De Groot et al., 2022). In addition to well-documented economic repercussions (De Groot et al., 2022; Collier et al., 2003; Justino, 2009; Blattman and Miguel, 2010), armed conflicts and civil wars can also affect the social fabric of communities (Stein, 1976; Collier et al., 2009; De Luca and Verpoorten, 2015b; Verwimp et al., 2019; Moyer, 2023). Whether armed conflicts increase social cohesion is an active area of inquiry that is receiving global attention given the rise of conflicts around the world. While one strand of literature remains optimistic about the positive impacts of conflicts on social cohesion (Bauer et al., 2016), this optimism has recently come into question by some studies and scholars who underscore the negative social costs of conflicts. Recent reviews have highlighted the overlapping negative impacts of conflicts on horizontal and vertical dimensions of social cohesion (Fiedler, 2023; Langlotz et al., 2025). Two major factors may contribute to this mixed evidence. First, the multifaceted nature of social cohesion (Friedkin, 2004), along with the lack of a universally accepted definition or measurement, allows for alternative measurements and interpretations (Easterly et al., 2006; Fearon et al., 2009; Alan et al., 2021; Mousa, 2020; Gelfand et al., 2024).¹ Second, these mixed findings are indicative of the important role of context, including the impact of different types of actors and conflict events (Humphreys and Weinstein, 2006; Nigus and Abay, 2024) as well as the different dimensions of social cohesion (Friedkin, 2004; Schiefer and Van der Noll, 2017; Fiedler, 2023; Langlotz et al., 2025).²

How policymakers can recover and rebuild social cohesion in conflict-affected settings characterized by deteriorating social capital remains elusive. Identifying policy options and instruments that can either rebuild or strengthen social cohesion in fragile and conflict-affected settings can inform peace-building efforts and, ultimately, contribute to ensuring sustainable peace and development. Cash transfers, among other related social protection programs, are being rolled out as key policy instruments to support and stabilize households facing different kinds of shocks, including climate and weather shocks (Hou, 2010; Premand and Stoeffler, 2022; Haile, 2022;

¹Some studies define social cohesion as “the nature and extent of social and economic divisions within society” while others define and measure social cohesion through community-level trust, cooperation, prosocial behavior and collective action (Fearon et al., 2009; Bauer et al., 2016) while others associate it with altruism, fairness, reciprocity and charitable donations (Gilligan et al., 2014; Albarosa and Elsner, 2023; Alan et al., 2021).

²Nigus and Abay (2024) show that different types of conflict events can trigger varying responses and have various implications for cooperation among community members. For example, conflict events such as battles and political violence affect the whole community and may trigger higher cooperation compared to other types of conflict events such as demonstrations and riots which can divide opinions and hence lower cooperation.

Hirvonen et al., 2023), pandemics such as COVID-19 (Abay et al., 2023a; Alloush et al., 2024; Banerjee et al., 2020) and armed conflict (Tranchant et al., 2019; Caeiro et al., 2025). These different types of shocks, including armed conflicts, impose immense economic, social, and psychological burdens on individuals (Voors et al., 2012; Charlson et al., 2019; Moya and Carter, 2019; Alloush and Bloem, 2022; De Groot et al., 2022). Cash transfer programs can reduce some of these burdens and mitigate the adverse effects of these shocks (Quattrochi et al., 2022; Ecker et al., 2024; Christian et al., 2019; Bartoš et al., 2022; Dwyer and Dunn, 2022; Hidrobo et al., 2023). However, little is known about the potential of cash transfers and related social protection programs in rebuilding social cohesion and social capital, which are important for facilitating peace-building and development efforts in post-conflict settings (Blattman and Miguel, 2010). Thus, understanding whether cash transfers can restore or strengthen social cohesion is an important endeavor, specifically for contexts experiencing repeated conflict. Similarly, identifying and targeting where and for whom such interventions can effectively restore social cohesion can serve humanitarian and development efforts in fragile and conflict-affected settings. For example, for cash transfer programs involving local actors and community members in their targeting, the implementation and distribution processes can enhance cooperation and social cohesion if these processes are deemed “fair” (Attanasio et al., 2015; Evans et al., 2019; Evans and Kosec, 2023; Mesfin and Cecchi, 2024). On the other hand, such processes can trigger tension if they are poorly executed (Idris, 2017; Cameron and Shah, 2014; Della Guardia et al., 2022; Burchi and Roscioli, 2022; Strupat, 2022).

We investigate the implication of armed conflict on social cohesion and the potential of community-based cash transfers to strengthen or rebuild social cohesion in post-conflict settings characterized by poor governance and weak social cohesion. In the backdrop of the recent civil war in Ethiopia, we build upon and leverage a community-based cash transfer program introduced immediately after the conflict. We exploit temporal variations in the spread of armed conflicts across a two-wave panel survey along with a randomized community-based cash transfer intervention. The randomized cash transfer intervention introduced exogenous variation associated with (i) access to the transfer by randomizing Enumeration Areas into treatment and control groups, (ii) the amount of community-based transfer distributed to each household, and (iii) the variation in the level of discretion given to community leaders (rule-based targeting versus discretionary targeting). Because of the discretion given to community leaders to define “eligible” and “ineligible” households, some households in treatment communities (enumeration areas received cash transfers while others did not. This allows us to assess what happens to

those deemed “eligible” and “ineligible”. The case of Ethiopia offers a unique setting to study the implication of a devastating civil war which involved multiple actors organized across ethnic lines in a context characterized by ethnic and religious diversity. The recent civil war, which started in November 2020, broke out along ethnic lines, and many argue that, as a result, the war has aggravated existing ethnic divisions with some negative implications for social ties and interactions (U.S Department of State, 2023; EHRC-OHCHR, 2021). We focus on the horizontal dimension of social cohesion, where we measure social cohesion through social interactions and participation in community-level activities and associations (Schiefer and Van der Noll, 2017; Fiedler, 2023). Some of these outcomes capture communication with others, participation in social gatherings, engagement in churches and mosques, following advice from the elderly, and experience of discrimination, as well as participation in community-level associations such as water user associations, forest user associations, trade and business groups, religious groups, and women’s groups. Our measure of exposure to conflict relies on geo-location of conflict events, which we collate from the Armed Conflict Location and Event Data (ACLED) (Raleigh et al., 2010). By combining temporal variations in the spread of armed conflict and spatial variation in access to cash transfers, we then estimate difference-in-difference models accounting for two-way fixed effects. We explore the implications of variations in the transfer sizes and targeting mechanisms. Relatedly, we also perform some heterogeneity checks across different types of households, including among those deemed “eligible” and “ineligible” for the community-based cash transfer, as well as heterogeneity by poverty, gender and ethnic and religious minority (Bastagli et al., 2019; Scarlato and d’Agostino, 2019).

We report four main results. First, armed conflicts are negatively associated with alternative measures and indicators of social cohesion. For instance, we observe that armed conflict is associated with a reduction in social interaction among community members as reflected by: (i) a reduction in the share of individuals attending social gatherings, churches and mosques and (ii) an increase in the share of individuals reporting experiencing ethnic or religious discrimination. Second, and related to the first, we also show that households exposed to armed conflict are more likely to reduce participation in community-level associations. Third, and reassuringly, we find that cash transfers play an important role in rebuilding and strengthening social cohesion lost as a result of conflict. Indeed, a modestly sized, community-based cash transfer intervention can help recover a large share of social capital and social cohesion lost due to the armed conflict. These results are consistent across the different indicators of social cohesion, as well as an aggregated index and disaggregated indicators of social interaction and participation in

community-level associations. We offer some discussions of the potential mechanisms through which civil wars can erode social cohesion as well as how community-based cash transfers involving grassroots-level participation can alleviate some of the negative effects of armed conflict. Finally, we explore the potential heterogeneity in the impact of the cash transfer across different transfer sizes and targeting mechanisms as well as across different types of households, including among those deemed “eligible” and “ineligible”. Our heterogeneity analysis shows that while households who do not belong to the majority ethnic group in each community report a higher loss in social capital associated with their exposure to armed conflict, the community-based cash transfer appears to be more effective in rebuilding social cohesion among these households.

We offer two main contributions to the literature studying the interaction between armed conflicts and social cohesion as well as the potential of social protection programs to strengthen social cohesion among communities. First, we contribute to a growing literature examining the social legacies of conflicts, a topic that has received less empirical attention (Blattman and Miguel, 2010). The literature here is somewhat divided on whether armed conflicts stimulate or reduce social cohesion. In some contexts, conflicts have been shown to induce social cohesion (Bellows and Miguel, 2009; Blattman, 2009; Voors et al., 2012; Bauer et al., 2016; Coutts, 2024). However, recent reviews suggest that different dimensions and elements of social cohesion may respond to armed conflicts differently. In other words, whereas political participation is positively affected by conflicts (Fiedler, 2023), other dimensions of social cohesion such as trust and cooperation decline after conflicts (Nunn and Wantchekon, 2011). We offer evidence on the implication of armed conflict in shaping horizontal social cohesion, depicting aspects of social interactions and collective action.

Secondly, we contribute to the strand of literature about the potential of social protection and cash transfers to improve economic, social, and psychological well-being (Bastagli et al., 2019; Christian et al., 2019; Dwyer and Dunn, 2022; Bartoš et al., 2022; Pega et al., 2022; Hidrobo et al., 2023; Bossuroy et al., 2022; Hamad et al., 2025). Despite evolving efforts and studies on the potential of social protection programs to contribute to social cohesion, the literature has so far focused on social cohesion between refugees and displaced populations and their host communities and existing findings remain mixed: while some studies show that cash transfers increase social cohesion, especially among refugees and host communities (Hamad et al., 2025; Valli et al., 2019)³, other studies show that cash transfers could harm communal social cohesion

³Some related studies also show that cash transfers can trigger cooperation (Attanasio et al., 2015) and trust in both community members and leaders (Evans et al., 2019; Evans and Kosec, 2023; Mesfin and Cecchi, 2024).

(Idris, 2017; Cameron and Shah, 2014; Della Guardia et al., 2022; Burchi and Roscioli, 2022; Strupat, 2022; Premand and Rohner, 2024).⁴ However, whether these programs can recover and restore social cohesion affected by armed conflict remains understudied. We add new evidence to this literature by showing that cash transfers can also restore lost social legacies, including those eroded by conflicts.

2. Context and Conceptualization

2.1. Civil War and Armed Conflict in Ethiopia

Ethiopia, a diverse country, is home to more than 80 distinct ethnic groups. The current constitution of the country organizes most administrative structures and government bureaucracies across Ethiopia’s ethnically organized regional states, and most political parties in the country are also organized across regional and ethnic lines. Throughout its history, Ethiopia has witnessed several civil wars involving different actors and groups, with many of these civil wars resulting in regime change. For example, from 1974 to 1991, Ethiopia experienced a bloody civil war led by the Ethiopian military (*Derg*) regime and anti-government rebels, which ultimately led to the downfall of the *Derg* regime in 1991. From 1991 to 2018, Ethiopia was led by an alliance of ethnically organized political parties representing the regional states that formed the Ethiopian People’s Revolutionary Democratic Front (EPRDF). Despite the remarkable economic performance and relative stability Ethiopia witnessed over the three decades led by EPRDF (Bachewe et al., 2018; Dercon, 2022; Hirvonen et al., 2024), the regime was known to repress political freedoms (Human Rights Watch, 2014, 2017; Dercon, 2022; Human Rights Watch, 2024). Between 2015 and 2018, the EPRDF regime faced major resistance, ultimately leading to regime change and ushering forth arrival of the current Prime Minister, Abiy Ahmed (Forsén and Tronvoll, 2021; Tronvoll, 2022; Hirvonen et al., 2024). Most of these protests were triggered by a sense of economic marginalization felt by youth from the Oromia and Amhara regions. Following the regime change in 2018, some differences among the political groups forming the EPRDF began to surface, after which the alliance was dissolved and replaced by the current ruling party, the Prosperity Party. However, the Tigray People’s Liberation Front (TPLF), the leading party of the Tigray region and which played a key role in the formation and leadership of the EPRDF, withdrew from the alliance that formed the new Prosperity Party.

⁴One of the plausible mechanisms triggering negative effects of cash transfer programs relates to the targeting of these programs and, hence potential spillover effects to non-beneficiary households (Baird et al., 2013; McGuire et al., 2022; Haushofer et al., 2015).

Ultimately, political differences and escalating confrontations between Prosperity Party-led federal government and the TPLF-led regional government of Tigray culminated into a full-blown war on November 2020. The war initially broke out in Tigray and involved the Federal army and regional forces from the Tigray region, before regional forces from other regions of Ethiopia and neighboring Eritrean forces joined the federal army. Because regions are organized across ethnic lines, divisive messaging circulated by both warring parties transformed the war from one of political differences to one of ethnicity, with Tigray pitted against the rest of Ethiopia. Both parties to the conflict mobilized their constituencies, increasing the scale of the war and the breadth of actors involved. The war in Tigray created a major humanitarian crisis in the region ([World Food Program, 2022](#); [Abay et al., 2023b](#); [OCHA, 2024](#)). After eight months of conflict, the war spilled over to neighboring regions, mainly Amhara and Afar, further aggravating ethnic tensions and causing significant loss of life and displacement ([World Food Program, 2022](#)). The war was also characterized by major human rights violations and accusations of war crimes by all actors involved in the conflict ([U.S Department of State, 2023](#); [Human Rights Watch, 2023](#)). Thus, it can be argued that the war in northern Ethiopia is one of the deadliest conflicts in the 21st century, claiming the lives of more than 600,000 people ([Financial Times, 2022](#)). This conflict, as well as other shocks, have left about 21.4 million Ethiopians in need of humanitarian assistance, and, across Africa, armed conflicts continue to reverse recent gains in poverty reduction efforts ([OCHA, 2024](#); [World Bank, 2024](#)).

The civil war between the Federal army and the regional forces from Tigray ended after both warring parties agreed to a “permanent cessation of hostilities” in November 2022 through the *Pretoria Agreement*. Although the *Pretoria Agreement* has silenced the guns in the Tigray region, Ethiopia continues to grapple with on-going conflicts in the Amhara and Oromia regions. As in Tigray, the current conflicts in Oromia and Amhara are between the Federal army and ethnically organized armed groups from each of these regions. While the conflict in Oromia has been going on for several years now, the conflict in Amhara is more recent, starting after the signing of the *Pretoria Agreement*. At the time of our latest data collection in 2023, these conflicts were still ongoing.

2.2. Conflict and Social Cohesion in Ethiopia

In the last four years, Ethiopia’s devastating civil war has shaken the nation’s social fabric and disrupted social cohesion. First, the number of armed and non-armed actors involved in the conflict has significantly increased the scale of the damage to communities and households. War-

ring parties have called to arms and mobilized their “constituencies”—government structures, local communities, and non-government civil society organizations. As a result, the conflict has displaced millions from their communities and livelihoods. Currently, Ethiopia hosts about 4.5 million internally displaced persons (IDPs) (OCHA, 2024). This displacement will likely lead to a dissolution of social networks and connections, which can effectively change the composition of communities (Gilligan et al., 2014; De Luca and Verpoorten, 2015b).

Second, because warring parties have organized themselves by ethnicity, their actions and (in)actions have the potential to erode social networks and the social fabric of the country, with divisive messaging and mobilization efforts by both the federal government and the TPLF in Tigray shaping the conflict along ethnic lines. Displacement, arbitrary arrests, the proliferation of hate speech, and ethnicity-based harassment by the warring parties further strengthened these (mis)perceptions by engendering mistrust among individuals and ethnic groups, even among those far removed from the conflict (U.S Department of State, 2023; United Nations, 2022; EHRC-OHCHR, 2021).

Third, beyond the loss of livelihoods and social base, the conflict has increased poverty and hence the cost of everyday social interactions, membership in community-based organizations, and other activities have increased, due in large part to the infrastructural damages caused by the civil war. Fourth, the armed conflict in northern Ethiopia has disrupted individuals’ mobility and economic activity, including the functioning of markets and associated livelihoods (Abay et al., 2023b). These disruptions are likely to negatively affect social interactions. Fifth, although the *Pretoria Agreement* successfully led to a ceasefire in the Tigray region, the lack of meaningful economic and social progress may trigger feelings of disappointment and a denunciation of existing social networks by individuals because of their position and role in conflicts (Cassar et al., 2013; Hager et al., 2019; Krakowski, 2020). Finally, because conflict broke out along ethnic lines, the composition of social networks and interactions may increase in-group bonds while reducing out-group interactions as stipulated by social identity theory (Tajfel, 1979). There are several explanations that postulate why in-group cooperation and interaction may increase while cooperation and social cohesion across out-group members can decline following such a devastating civil war (Bowles, 2006; Bauer et al., 2016; Ingelaere and Verpoorten, 2020).⁵

⁵Beyond the in-group and out-group interactions, different types of conflict may trigger varying impacts on cooperation and social cohesion. For example, while battles may trigger cooperation to defend an external threat to existence and hence encourage in cooperation among community members, protests and demonstrations may divide opinions and reduce cooperation (Nigus and Abay, 2024).

Finally, the recent war in northern Ethiopia disrupted the delivery of public services, including existing safety net services such as the flagship Productive Safety Net Program (PSNP) (Lind et al., 2024).⁶ These disruptions in public services can affect social cohesion among community members. For example, disruptions in transport and market services can limit social interaction among community members. Similarly, disruption of safety net programs can limit households' participation in community-based organizations because of financial constraints. In these contexts, rolling out new cash transfer programs can substitute missing safety net services and support social interactions and hence strengthen social cohesion among community members.

3. Experimental Design and Data

3.1. Experimental Design and Procedure

The community-based cash transfer experiment was carried out in about 180 Enumeration Areas (EAs) (communities) in Ethiopia. The cash transfer program involves a one-time, unconditional cash disbursement to deserving households in our sample. The cash transfer intervention builds on a baseline sample first collected in 2019, which includes 180 EAs and about 20 randomly selected households from each community. The experiment employs a clustered randomized control trial (RCT) through which we randomly assigned 180 EAs into four groups: one control group and three treatment arms, which are described below. To assign EAs into either the control group and one of the three treatment arms, specific criteria were considered: (i) whether a community receives an actual cash transfer or not; (ii) the amount of budget or the size of the cash transfer available to the community to be distributed among the households in our sample (a constrained budget involving 10,000 Ethiopian Birr (ETB) versus a relaxed budget of ETB20,000);⁷ and (iii) the level of discretion given to community leaders (rule-based or discretionary) during the targeting and distribution of the cash transfer (see Abay et al., 2024 for detailed discussion regarding the experimental design). The average transfer size reported in Table A1 represents about 27 percent of monthly per capita expenditure in control households. To this end, we selected six community leaders: (i) village (*kebele*)⁸ chief; (ii) village elder; (iii) religious leader; (iv) development agent, teacher, or health extension worker;

⁶The PSNP is a flagship national safety net (cash transfer) program aiming to support chronically food-insecure households by preventing asset depletion while contributing to community asset creation (Gilligan et al., 2009; Berhane et al., 2014; Abay et al., 2022). Most beneficiaries are enrolled in public works, which targets poor but able-bodied households. A smaller group, mainly the elderly or disabled, receive direct support. Targeting combines geographic and community-based approaches to reach chronically food-insecure households in designated districts.

⁷Birr is the Ethiopian currency, and, at the time of the 2023 survey, US\$1 = 56 ETB.

⁸*Kebele* is the smallest administrative unit in the Ethiopian government bureaucracy and governance system.

(iv) women’s representative, and (vi) youth representative.⁹ Community leaders were asked to rank households in their community based on their need for social assistance and allocate the transfer to households deemed “eligible”. Community leaders were provided with either a hypothetical (20,000 ETB) or actual transfers (a relatively constrained budget of 10,000 ETB or a relatively modest budget of 20,000 ETB). Figure 1 below outlines the control and treatment arms generated based on the criteria above.

Control group: Communities (EAs) in the control group did not receive actual funds for distribution. Instead, community leaders were instructed to rank the 20 households in their community based on their need for social assistance and assign a hypothetical budget of 20,000 ETB among those deemed “eligible” for the cash transfer program. This ranking was conducted based on five pre-defined criteria set by the research team, which the community leaders were asked to follow strictly. These criteria were designed to closely resemble the targeting criteria used in Ethiopia’s flagship social assistance program, the Productive Safety Net Program (PSNP). Specifically, community leaders were directed to prioritize households that (i) struggle to meet basic food needs, (ii) own few or no productive assets (e.g., livestock, land), (iii) have limited income-generating opportunities, (iv) have lost productive assets due to shocks such as conflict or drought, and (v) have recently experienced the loss of family members.

Rule-based targeting with relaxed budget (20,000 ETB): Communities (EAs) in this group received an actual cash transfer of 20,000 ETB to be distributed among their members. Community leaders were instructed to strictly follow the same pre-defined targeting criteria outlined earlier. However, beyond adhering to these rules, leaders had the flexibility to determine the number of beneficiaries and the amount allocated to each individual. This approach highlights that, despite being directed to follow the rules, community leaders retained significant discretion in the distribution process, granting them substantial influence over the cash transfer program.

Rule-based targeting with constrained budget (10,000 ETB): Communities (EAs) in this group received an actual cash transfer of 10,000 ETB, with community leaders instructed to strictly follow the same pre-defined criteria. This treatment arm is similar to both the control group and the rule-based arm with relaxed budget in terms of the rules used to rank households and to allocate funds among community members. However, unlike the rule-based 20,000 ETB group, communities in this arm received a smaller, more constrained budget of 10,000 ETB.

⁹The vast majority of youth and women representatives were drawn from existing local institutions. However, a few may be selected directly from the community when such representatives were not present.

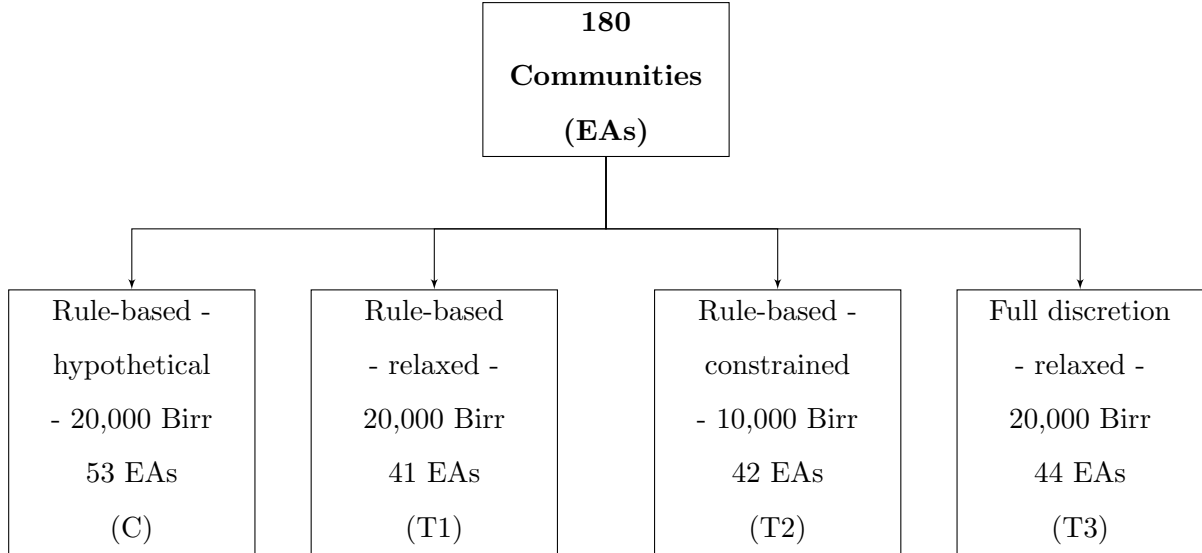


Figure 1: Random assignment of EAs across treatment and control groups

Discretionary targeting (20,000 ETB): Communities (EAs) in this group received an actual cash transfer of 20,000 ETB. Unlike other groups, community leaders established their own targeting criteria for ranking households, determining the number of beneficiaries, and deciding the amount allocated to each household. Apart from this instruction, all other information provided to leaders was the same as in the other treatment arms. This treatment arm was introduced to understand the implications of offering discretion to community leaders on program efficacy.

3.2. Data and Descriptive Statistics

The data for this study come from two primary sources: (i) household panel data collected in 2019 and 2023 and (ii) geo-referenced conflict data from the Armed Conflict Location and Event Dataset (ACLED). The baseline household data collected in 2019 was meant to evaluate the U.S. Agency for International Development (USAID)’s Feed the Future (FtF) program, which was implemented in six regions (Afar, Amhara, Oromia, SNNP, Somali, and Tigray) forming the FtF Zone of Influence (ZOI). It covers about 132 *woredas* (districts). Households were selected following a two-stage stratified sampling process. First, two EAs were randomly selected from each *woreda*, resulting in a total of 264 EAs. In the second stage, 20 households were randomly chosen from a complete list of households in each EA. However, because of the ongoing conflicts in Ethiopia, only 180 of the original 264 EAs were accessible for the follow-up survey conducted in 2023. As a result, approximately 3,081 households were revisited and re-interviewed in 2023; the remaining households were unavailable for interview for a variety of reasons (Figure A1 in the appendix shows the distribution of households in our sample). The household survey

includes a range of modules, covering topics such as demographic characteristics, livelihood activities, food and non-food consumption expenditure, women’s empowerment, agricultural productivity and input use, livestock ownership and income, subjective well-being, and household assets. Additionally, the survey provides detailed information on alternative measures of social cohesion, including social interaction and measures of participation in community-based organizations, associations, and cooperatives. Most of these modules were administered to the household head while some of were administered to the primary male and primary female respondent. For example, the module on participation in community-based organizations and associations was administered to the primary male and female respondent in the household. These administration differences generates some differences in the sample size across outcomes.

Table 1 presents the summary statistics and balance test (pairwise t-test) results at baseline for key household characteristics and outcomes of interest across the four groups: control/hypothetical, discretionary, rule-based 10,000 ETB, and rule-based 20,000 ETB. Most variables, including demographic characteristics (male-headed household, age, and education of the household head), geographic indicators (urban residence and distance to the nearest town), and economic factors (wealth index and PSNP participation), are well-balanced across groups, with no significant differences across the control and treatment arms. Additionally, exposure to battles within varying distances during two time periods (2016–2019 and 2020–2023) is largely balanced. Finally, most of the indicators and measures of social cohesion (described in 3.4) are balanced across treatment and control groups. We also conducted joint significance tests by regressing the treatment dummies on the list of key household characteristics and outcomes using randomized inference (Imbens and Rubin, 2015; McKenzie, 2017; Kerwin et al., 2024).¹⁰ As shown by the p-values reported at the bottom of Table A2, we cannot reject the null hypothesis that all coefficients associated with these observable characteristics and outcomes are jointly zero. The fairly balanced sample reported in Table 1 and Table A2 confirms the validity of our randomization. Table 1 also reports important trends and summary statistics of households included in our sample. For example, Table 1 shows that the number of battle events within a 15-kilometer radius doubled between the 2016–2019 and 2020–2023 periods. Moreover, we check whether attrition systematically differs between the control and treatment groups. Table A3 in the appendix shows that attrition rates are not significantly different between the control and treatment groups.

¹⁰We use the randomization inference for conducting these joint tests following recent studies which demonstrate that conventional F-test of joint orthogonality over-rejects the null (Kerwin et al., 2024).

Table 1: Balance test between treatment and control groups

	(1)	(2)	(3)	(4)	t-test	t-test	t-test
	Control group	Discretionary	Rule-based 10k	Rule-based 20k	P-value	P-value	P-value
	Mean(SE)	Mean(SE)	Mean(SE)	Mean(SE)	(1)-(2)	(1)-(3)	(1)-(4)
Male headed household	0.76 (0.01)	0.77 (0.01)	0.75 (0.02)	0.77 (0.02)	0.80	0.28	0.75
Age of the household head	46.55 (0.93)	46.28 (0.99)	46.75 (0.77)	45.69 (0.76)	0.81	0.84	0.45
Education of household head	2.83 (0.26)	2.53 (0.25)	2.66 (0.28)	2.85 (0.31)	0.64	0.74	0.87
Urban	0.15 (0.05)	0.11 (0.05)	0.13 (0.05)	0.08 (0.04)	0.60	0.83	0.20
Distance to nearest town (km)	6.87 (0.31)	7.06 (0.37)	6.82 (0.32)	6.58 (0.32)	0.91	0.69	0.34
Poor household (national PV)	0.31 (0.03)	0.27 (0.04)	0.35 (0.04)	0.28 (0.03)	0.41	0.33	0.48
Wealth index	2.95 (0.15)	2.81 (0.17)	3.00 (0.18)	3.17 (0.17)	0.58	0.68	0.22
Tropical Livestock Unit	3.48 (0.36)	4.13 (0.42)	3.85 (0.41)	3.13 (0.32)	0.28	0.53	0.38
PSNP status	0.28 (0.04)	0.24 (0.05)	0.30 (0.04)	0.26 (0.04)	0.17	0.88	0.52
Per capita expenditure	47.48 (2.46)	55.19 (3.77)	45.65 (3.05)	52.14 (3.35)	0.10*	0.63	0.22
Battles - 2016 - 2019							
Number of battle events 15km (in 10s)	0.08 (0.04)	0.06 (0.02)	0.07 (0.04)	0.13 (0.05)	0.42	0.82	0.26
Number of battle events 20km (in 10s)	0.13 (0.06)	0.09 (0.03)	0.09 (0.05)	0.22 (0.08)	0.34	0.56	0.28
Battles - 2020 - 2023							
Number of battle events 15km (in 10s)	0.41 (0.11)	0.64 (0.17)	0.70 (0.22)	0.57 (0.24)	0.26	0.21	0.57
Number of battle events 20km (in 10s)	0.76 (0.19)	0.81 (0.20)	1.02 (0.30)	0.95 (0.30)	0.69	0.56	0.63
Outcomes							
Participation in associations index (std)	-0.05 (0.09)	-0.07 (0.09)	-0.12 (0.10)	0.15 (0.14)	0.94	0.63	0.15
Social interactions index (std)	0.03 (0.07)	-0.20 (0.07)	-0.17 (0.09)	-0.17 (0.09)	0.01**	0.06*	0.05*

Notes. This table reports the distribution of household baseline characteristics, exposure to battle, and outcome variables across the control and three treatment arms. Columns (1) through (4) report mean values and standard errors. The last three columns report p-values from pairwise comparisons and t-tests. Standard errors are clustered at village (kebele) level (the level at which the randomization was conducted), *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

3.3. Measuring Exposure to Armed Conflict

We compile data on different types of conflict events using the ACLED database, which provides detailed information on different types of conflict events, including battles, protests, riots, explosions/remote violence, violence against civilians, and strategic developments. The ACLED database is widely used to analyze the implications of armed conflict on various outcomes (Raleigh et al., 2010). In Panel (a) of Figure 2, we show the distribution of different types of

conflict events in the three years prior to our 2019 survey (2016–2019), while Panel (b) shows the distribution of conflict events in the three years prior to our latest post-conflict survey (2023). Panel (a) shows that protests and violence against civilians were the dominant conflict events during the 2016–2019 period—when battles were sparsely and evenly distributed. These protests and riots are likely associated with the youth-led resistance against the EPRDF regime, which were concentrated in Amhara and Oromia regions. On the other hand, Panel (b) shows that battles were the dominant type of conflict events in the three years (2020–2023) preceding our follow-up survey. Indeed, this graph shows dramatic spike in battle events, the vast majority of which were confined to northern Ethiopia (Tigray and Amhara), although other regions such as Oromia also experienced battles. Because of this concentration in battles in the three years preceding our follow-up survey, we focus on battles and hence measure exposure to armed conflict using the number of battles realized within 15 kilometer radius of households’ residence. Focusing on large scale conflicts and hence battles helps to circumvent reverse causality effects arising from poor social cohesion that can trigger low intensity intra-community conflicts as well as protests and disputes.

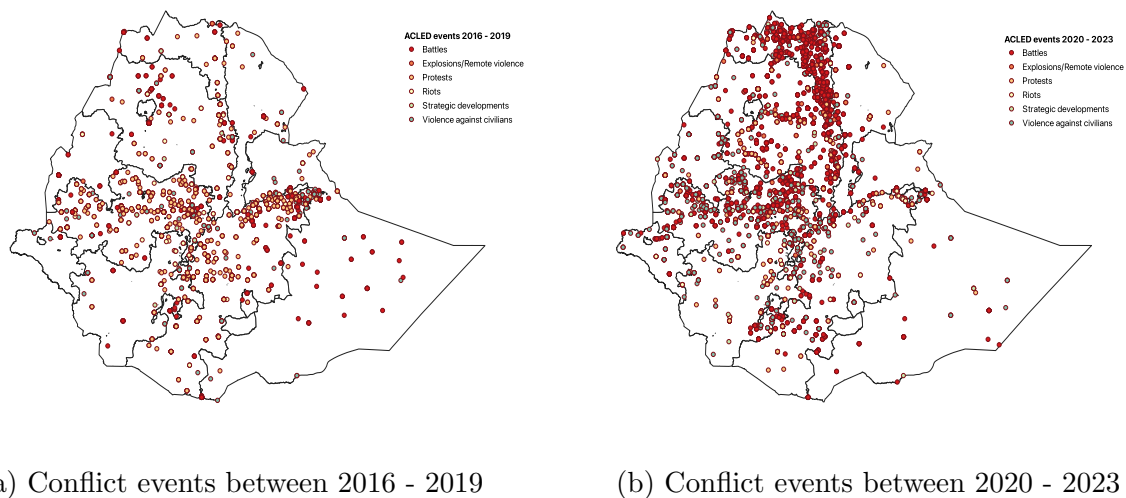


Figure 2: Distribution of conflict events. Source: Authors’ compilation based on ACLED data.

3.4. Measuring Social Cohesion

Social cohesion remains an active area of inquiry by sociologists and psychologists (Friedkin, 2004). Many argue that social cohesion is an essential ingredient for fostering harmonious and resilient communities, especially in post-conflict settings and contexts characterized by ethnic diversity. However, despite the extensive literature on this topic, there is no universal definition and measurement of social cohesion (Friedkin, 2004; Fiedler, 2023; Alan et al., 2021).

Despite this, however, it is widely recognized as a multifaceted concept encompassing horizontal (relationships among individuals and groups within a society) and vertical (relationships between individuals or groups and the state or public institutions) dimensions (Bauer et al., 2016; Leininger et al., 2021; Fiedler, 2023).¹¹ However, disputes mainly revolve around the specific elements or attributes that constitute social cohesion. Because of these differences, social cohesion has been defined and measured in several ways (Friedkin, 2004; Easterly et al., 2006; Fearon et al., 2009; Alan et al., 2021; Mousa, 2020; Gelfand et al., 2024; Myers et al., 2024; Barron et al., 2025). For instance, Friedkin (2004) defines social cohesion as an indicator of “individuals’ behavior and attitudes that demonstrate a person’s attraction or attachment to a group or to other members of a group”. Similarly, Easterly et al. (2006) defines social cohesion as “the nature and extent of social and economic divisions within society” and emphasizes the minimization of social divisions and the ability of societies to constructively manage diversity. Albarosa and Elsner (2023) define social cohesion as the presence of social bonds and the absence of social conflict, measured through indicators such as trust, fairness, helpfulness, caution toward foreigners, concerns about crime, and charitable donations. According to Fiedler (2023) and Leininger et al. (2021) social cohesion is the vertical and horizontal relationships that hold society together, with the vertical dimension reflecting trust in institutions and governance, connecting individuals and the state, and the horizontal dimension emphasizing trust, cooperation, and social bonds among individuals and groups.

Most of the above definitions of social cohesion emphasize that it is a multidimensional phenomenon or a latent construct with multiple indicators (Friedkin, 2004), implying that operationalizing and measuring social cohesion should consider multidimensional structural and behavioral indicators and attributes. Common structural attributes include social interaction, participation in community activities and associational life. Behavioral attributes that define the cohesion of entities should consider interpersonal trust, inter-group social ties, and the reduction of social exclusion or victimization (Alan et al., 2021). Building on these attributes, several studies have deployed experimental measures to capture these behavioral attributes and social cohesion. Fearon et al. (2009) and Bauer et al. (2016) highlight the importance of trust, cooperation, and prosocial behaviors, while Gilligan et al. (2014) focus on specific components like altruism and trust and trustworthiness among community members. These perspectives collectively underscore the significance of social interactions, the quality of social interactions as measured by trust and cooperation, and the ability to manage diversity.

¹¹See the reviews by Friedkin (2004), Bauer et al. (2016), Fiedler (2023), and Langlotz et al. (2025) for detailed discussions on the definition and measurement of social cohesion.

Social cohesion has been measured through both surveys and incentive-compatible lab-in-the-field experiments. Some studies proxied social cohesion as the behavior and attitudes of people revealed in incentivized behavioral games, including trust, reciprocity, and cooperation (Fearon et al., 2009; Gilligan et al., 2014; Alan et al., 2021). Other studies measure social cohesion using survey questions capturing social interactions and attachment to a group (Friedkin, 2004); participation in community leadership, religious, and social groups (Calvo et al., 2020; De Luca and Verpoorten, 2015b; Barceló, 2021; Langlotz, 2021); participation in voting and civic engagement (Dorff, 2017; Harada et al., 2024; Kage, 2021); ethnic fractionalization, the share of middle class, and quality of institutions (Easterly et al., 2006); trust in individuals and institutions (Easterly et al., 2006; Nunn and Wantchekon, 2011; Dragolov et al., 2013; Bauer et al., 2016; Schiefer and Van der Noll, 2017; Fiedler, 2023; Langlotz, 2021); and cooperation (Bauer et al., 2016; Schiefer and Van der Noll, 2017; Fiedler, 2023; Langlotz et al., 2025).

In this paper, we adopt the definition of social cohesion provided by Friedkin (2004), Leininger et al. (2021) and Fiedler (2023), focusing on its horizontal dimension, that is, relationships among individuals and groups within a society. We gauge social cohesion through households' social interactions as well as active participation in various social, economic, and religious associations. To elicit social interactions, we asked about households' engagement with other community members in economic, social and religious activities. Similarly, we elicited households' participation in community-based organizations by asking whether households are active members of different groups. Table A4 provides a complete list of the questions we used for measuring social interaction and participation in community-based organizations.

Using the various indicators of social interaction and participation in community-based organizations, we construct two indices to measure social cohesion, a *Social Interaction Index* and *Participation Index*, each constructed through *factor analysis* to create a unidimensional social cohesion measure.¹² The *Social Interaction Index* reflects broader social engagement and interactions, incorporating indicators such as attendance at community gatherings, absence of discrimination experiences, communication or economic engagement with others, adherence to elders' advice, and regular attendance at religious services such as church or mosque. The *Participation Index* captures active membership in various social, economic, and religious groups in

¹²While constructing these indexes using factor analysis, we followed the usual recommendations and rule of thumb, including in assessing factor loadings as well as internal consistency checks (using Cronbach's α). However, we also used raw values of the different components of these indexes to probe and ensure that the results are not driven by the way we construct these indexes.

a community, including water and forest users' groups, trade and business associations, as well as religious and women's groups. These indices collectively provide a comprehensive measure of social cohesion, encompassing both *organizational participation* and *interpersonal interactions*. To facilitate interpretation, we demean and standardize these indexes, so that they assume a mean of 0 and standard deviation of 1.

4. Empirical Strategy

Our analysis combines two sources of variation to address the two linked research questions described above. To examine the impact of armed conflicts on social cohesion, we exploit temporal variations in the spread of armed conflicts across the two rounds of surveys. We focus on exposure to battles as they are the dominant and most consequential form of conflict in Ethiopia in the last five years (Abay et al., 2023b). Battles are relatively large-scale conflicts involving major armed conflict, implying that they are more likely to be exogenous to households' decisions and actions. Theoretically, poor social cohesion can trigger intra-communal conflicts, we are not focusing on these events, rather on battles, which in the case of Ethiopia involved large-scale confrontations and fight among armed state-actors. Despite households taking positions either for or against warring parties in ways that can affect social cohesion, they are less likely to influence the intensity and duration of large-scale battles. Moreover, some districts and communities affected by the conflict may have specific characteristics which make them more vulnerable to armed conflict, attributes which should be captured through household fixed effects, the variation in the timing of battles is broadly beyond the households' control. Thus, conditional on household fixed effects, which capture any time-invariant differences in the vulnerability of households to armed conflict, the temporal variation in the spread of battles can be plausibly exogenous. However, to be conservative, we interpret the relationship between exposure to armed conflict (battles) and social cohesion as associational instead of causal.

To quantify the potential of community-based cash transfers in rebuilding social cohesion among households, we rely on the random assignment of the community-based cash transfers. The community-based cash transfer followed a cluster randomized control trial (RCT) to create exogenous variation in (i) access to the transfer by randomizing communities (EAs) into treatment and control groups, (ii) the amount of the community-based transfer and hence the level of transfer households can receive, and (iii) the variation in the level of discretion given to community leaders (rule-based targeting versus discretionary targeting). Introducing different sources of exogenous variation allows us to test alternative hypotheses related to the potential

of community-based cash transfers, including whether access to as well as the level of cash transfer matters for rebuilding social cohesion and trust among community members affected by armed conflict. As described in Section 3, we used community leaders, including members of *kebele* leadership, religious leaders, elderly men/women, local teachers or development agents, and youth and women representatives to create a committee that targets the cash transfer program in each community. We note that these community leaders may have been involved in or supported the armed conflict in some form, including mobilizing human and financial resources. Their potential participation in the conflict could not only adversely affect social cohesion, but their involvement in the targeting of the cash transfer can also counteract these adverse effects.

To jointly test the implication of exposure to armed conflict and cash transfers, we combine both temporal variations in the spread of battles and spatial variations in access to cash transfers and hence estimate a fully-interacted difference-in-differences model in a two-way fixed effects setting as shown below:

$$Y_{it} = \alpha_i + \alpha_1 Round_t + \alpha_2 Battle_{it} + \alpha_3 T_i * Round_t + \alpha_4 T_i * Battle_{it} + \Phi_{it} \quad (1)$$

where Y_{it} represents measures of social cohesion, including indicators of social interaction as well as participation in community-based organizations. As described in Section 3.4, we use aggregated indicators of social interaction and participation in community organizations as well as separate indicators of interaction with community members and participation in different types of community organizations. α_i stands for household fixed effects capturing all time-invariant factors and differences in our measures and indicators of social cohesion. $Round_t$ stands for the time dummy assuming a value of 1 for the post-conflict and 0 for the pre-conflict survey rounds. $Battle_{it}$ is a measure of exposure to armed conflict compiled from the ACLED database (Raleigh et al., 2010). We focus on exposure to armed conflict in the three years preceding each survey round. The ACLED database records event-based information for different types of conflicts, including battles, attacks against civilians, remote violence, and protests and riots. As described in Section 3.3, we focus on exposure to battles because they are the dominant and most consequential form of conflict in Ethiopia over the last few years. For capturing household-level exposure to battles, we combine the geo-location of conflict events and households' residence. We then count the number of battles which occurred within each of these buffer zones. For this analysis, we use the number of battles within a 15 km radius of household residence to reduce potential measurement errors in the geo-location of conflict events. A slightly larger buffer zone (20 km radius) is used to test for the robustness of our results. T_i is a binary indicator assuming

a value of 1 for communities (EAs) and households assigned to receive an actual transfer and 0 for communities (EAs) assigned to the control group. To facilitate interpretation, T_i is defined as time-invariant, implying that once we control for household fixed effects through α_i , they also capture differences in exposure to treatment. Φ_{it} represents other unobservable factors which may affect social cohesion. α_1 captures the overall temporal trend in social cohesion across rounds while α_2 captures the implication of temporal change in exposure to battles on social cohesion. On the other hand, α_3 captures the impact of assignment to the cash transfer on social cohesion while α_4 quantifies the protective role of the community-based cash transfers in rebuilding social cohesion affected by armed conflict.

To explore potential differential effects associated with transfer size or targeting methods, we expand the empirical specification in equation 1 by disaggregating the treatment assignment as follows:

$$Y_{it} = \alpha_i + \beta_1 Round_t + \beta_2 Battle_{it} + \beta_3 R20_i * Round_t + \beta_4 R10_i * Round_t + \beta_5 D20_i * Round_t + \beta_6 R20_i * Battle_{it} + \beta_7 R10_i * Battle_{it} + \beta_8 D20_i * Battle_{it} + \epsilon_{it} \quad (2)$$

where $R20_i$ and $R10_i$ are indicator variables for communities (and households) assigned to receive the relaxed budget (20,000 ETB) and constrained budget (10,000 ETB) using rule-based criteria, respectively. $D20_i$ is an indicator variable for EAs assigned to the discretionary targeting arm where community leaders were given full discretion to decide on the criteria to distribute the cash transfer to community members. β_3 and β_4 capture the overall impact of exposure to the relatively modest (20,000 ETB) and small transfers (10,000 ETB), respectively. β_6 - β_8 capture the impact of the cash transfer in rebuilding social cohesion among communities affected by armed conflict under varying levels of transfer and conditionality of targeting. Comparing the size of β_6 and β_8 can inform whether discretionary or rule-based targeting of cash transfers are more effective for strengthening social cohesion in conflict-affected settings.

Although we randomly assign EAs into control and treatment groups, whether a household assigned to the treatment group receives transfer depends on the decision of community leaders. Following the community-based targeting process, some households assigned into the treatment group may not actually receive the transfer if they are deemed “ineligible” by community leaders. This implies that the estimates associated with the empirical specification in equations 1 and 2 should be interpreted as intention to treat (ITT). The fact that some households in the treatment communities (EAs) did not receive the transfer allows us to test impacts for those

who did receive transfers as well as households deemed “ineligible” by community leaders. This is an important hypothesis given that a majority social protection programs primarily target poor households, leading to the exclusion of “non-poor” households. Previous studies have shown that social protection programs can trigger negative spillover effects to non-beneficiary households (Baird et al., 2013; McGuire et al., 2022; Haushofer et al., 2015). More specifically, poor targeting of social protection programs can erode social cohesion (Cameron and Shah, 2014; Della Guardia et al., 2022).

Both armed conflicts and cash transfers can trigger varying impacts across households with different attributes and characteristics. For example, the impact of the cash transfers may vary across poor and non-poor households or across communities with varying size and composition. Although the average size of transfers reported in Table A2 is not large enough, especially for richer households, these transfers represent a significant share of poor households’ consumption expenditure—cash transfers make up 27 percent of monthly per capita consumption expenditure for control households, and this share doubles for poor households. To uncover these heterogeneities, we estimate equation 1 and 2 by disaggregating the sample by poverty rates (and hence national poverty line) as well as gender of household head. Similarly, households belong to majority ethnic and religious groups in each community (EA) may fare better than minorities as they may be more likely to benefit from the cash transfer and can more easily capitalize on their existing social capital. Finally, to account for the spatial correlation of unobserved effects (error terms) across households from the same community, we cluster standard errors at the EAs level (the level of treatment) and hence the usually recommended level of clustering for standard errors (Abadie et al., 2023).

5. Empirical Results and Discussion

In this section, we present and discuss the implication of armed conflict, more specifically battles, on our two main measures of social cohesion: social interaction among community members and participation in various community-based organizations. Following this, we highlight insights from the impacts of the randomized community-based cash transfer on social cohesion in the face of conflicts.

5.1. Conflict and Social Cohesion

Table 2 presents the estimated results using equation 1. Column (1) reports results using a standardized index of social interaction constructed using factor analysis. The findings indicate

that any additional 10 battle events within a 15-km radius is associated with a 0.22 standard deviations decrease in social interactions. Similarly, Columns (2) through (6) present similar implications of battle events on various dimensions and indicators of social interaction. For instance, 10 additional battle events is associated with an 11-percentage point decrease in attending community gatherings (Column (2)) and an 8-percentage point decline in church or mosque attendance (Column (6)). Furthermore, the results in Table 2 show that exposure to battle events is associated with an increase in the likelihood of experiencing identity-based discrimination. For example, Column 3 suggests that exposure to 10 additional battle events within a 15-km radius is associated with a 7-percentage point increase in the probability of experiencing discrimination based on ethnic or religious backgrounds. This is unsurprising given that the recent war in northern Ethiopia has triggered ethnic tensions.¹³ The final column of Table 2 shows that armed conflicts are associated with the deterioration of social and religious norms as exhibited by a decline in following elders' advice and religious practices.

¹³The recent civil conflicts in Ethiopia, including the war in northern Ethiopia, were fueled by ethnically organized claims and counterclaims over land (Azadi et al., 2024; Bekele et al., 2022).

Table 2: Conflict, cash transfer and social interactions

	Social interactions index	Attended community gathering	Experience no discrimination	Communicate or engage with others	Follow elderly advice	Church or Mosque attendance
	(1)	(2)	(3)	(4)	(5)	(6)
Number of battle events 15km (in 10s)	-0.224*** (0.065)	-0.111*** (0.037)	-0.066*** (0.021)	-0.033 (0.031)	-0.045*** (0.016)	-0.080*** (0.024)
Treatment X Number of battle events 15km	0.207*** (0.071)	0.109*** (0.039)	0.035 (0.024)	0.071** (0.034)	0.020 (0.019)	0.046* (0.026)
Post-conflict (Year = 2023)	0.121 (0.076)	0.064 (0.043)	-0.012 (0.014)	-0.110*** (0.041)	0.018 (0.019)	0.134*** (0.029)
Treatment X Post-conflict (Year = 2023)	0.209** (0.097)	0.020 (0.051)	0.007 (0.017)	0.094** (0.047)	0.079*** (0.026)	0.032 (0.036)
Constant	-0.377*** (0.087)	0.370*** (0.042)	0.972*** (0.015)	0.481*** (0.042)	0.807*** (0.026)	0.673*** (0.034)
R-squared	0.050	0.020	0.041	0.016	0.036	0.078
Household FE	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES
Observations	5,670	5,691	5,691	5,691	5,691	5,670

Notes. This table reports results from fixed-effects regressions of a standardized social interaction index (column 1), attend village gathering or community meeting (column 2), experience no discrimination (column 3), communicate or engage in any economic activities with others (column 4), agree with the statement that one should always follow elderly advice (column 5), and attend Church or Mosque in the past month. Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: time-varying characteristics such as household size and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3 presents results using measures of participation in community-based organizations, our second measure of social cohesion, which are estimated using equation 1. The results show that exposure to battles is significantly associated with a decline in social cohesion. Column (1) shows that additional 10 battle events within a 15-km radius are associated with a 0.40 standard deviations reduction in households' participation in community-based associations and organizations. Likewise, every 10 additional battle events are associated with 11 percentage points reduction in participation in water user groups. Although conflict exposure is associated with a decline in participation in trade and business groups and religious groups, the estimated coefficients are not statistically significant.

These insights about the negative implications of armed conflict on social cohesion corroborate one strand of the literature that underscores the negative and adverse effects of armed conflicts on social cohesion (Fiedler, 2023; Langlotz et al., 2025). As previously mentioned, this is in con-

trast with some studies that highlight that armed conflicts can increase social cohesion (Bellows and Miguel, 2009; Blattman, 2009; Voors et al., 2012; Bauer et al., 2016). Yet, our findings deviate from this literature and demonstrate that civil wars and armed conflicts can affect the social fabric of communities by reducing social cohesion (Cassar et al., 2013; De Luca and Verpoorten, 2015b; Kijewski and Freitag, 2018; Conzo and Salustri, 2019; Ingelaere and Verpoorten, 2020). When it comes to membership and participation in various groups and associations, the negative association illuminated by our results bolster some extant studies that underscored a similar relationship (De Luca and Verpoorten, 2015b; Cecchi and Duchoslav, 2018; Conzo and Salustri, 2019). For instance, De Luca and Verpoorten (2015b) shows that membership in community and religious associations decreased following armed conflicts and violence in Uganda. Again, this contrasts with some existing studies that have shown that conflicts improve participation in social and political groups, community meetings, school meetings, and overall engagement with activities around local public goods (Bellows and Miguel, 2009). Violent conflicts have also been shown to enhance political discussions and participation in local meetings (Blattman, 2009; De Luca and Verpoorten, 2015a). These insights are further confirmed in Sierra Leone where survivors of sexual violence tend to participate more in community organizations where they contribute and support others (Koos, 2018). In Ethiopia, however, our study shows that armed conflict is associated with a decline in collective action and participation in associations and group activities. This erosion in social cohesion can be attributed to the conflict's multidimensional implications, including the breakdown of social trust, arbitrary arrest, and ethnic-based harassment as well as the disruption of social fabric and networks (Gesese et al., 2021; U.S Department of State, 2023; Abay et al., 2023b).

Table 3: Conflict, cash transfer and active participation in community associations

	Participation in associations index (1)	water users group (2)	forest users group (3)	credit or micro group (4)	trade business group (5)	religious group (6)	women group (7)
Number of battle events 15km (in 10s)	-0.403** (0.156)	-0.111* (0.064)	-0.070** (0.035)	-0.027 (0.030)	-0.014 (0.016)	-0.064 (0.057)	-0.051* (0.027)
Treatment X Number of battle events 15km	0.448*** (0.170)	0.119* (0.066)	0.065* (0.039)	0.013 (0.033)	0.047** (0.019)	0.109* (0.061)	0.058** (0.029)
Post-conflict (Year = 2023)	0.275*** (0.086)	0.099*** (0.030)	-0.007 (0.020)	-0.018 (0.016)	0.083*** (0.022)	0.080 (0.066)	0.072*** (0.021)
Treatment X Post-conflict (Year=2023)	-0.143 (0.114)	-0.082** (0.038)	-0.033 (0.026)	0.021 (0.020)	0.007 (0.029)	0.015 (0.077)	0.001 (0.027)
Constant	-0.242** (0.099)	0.087** (0.035)	0.056** (0.023)	0.012 (0.021)	0.044* (0.026)	0.318*** (0.057)	-0.003 (0.025)
R-squared	0.031	0.017	0.022	0.009	0.089	0.041	0.048
Household FE	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES
Observations	8,740	8,740	8,740	8,740	8,740	8,740	8,740

Notes. This table reports results from fixed-effects regressions of a standardized active participation in associations index (column 1), active participation in water users group (column 2), forest users group (column 3), credit and microfinance group (including SACCOs and VSLAs) (column 4), trade and business associations (column 5), religious group (column 6), and other women’s group (column 7). Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: time-varying characteristics such as household size and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

While context could explain these differences, the use of different measures and proxies for social cohesion could also justify these differences, given the multidimensional nature of social cohesion (Fiedler, 2023; Langlotz et al., 2025). Our measures of social cohesion are more likely to capture the horizontal dimension of interactions and relationships among community members. That said, our outcomes of interest somewhat overlap and cover the different aspects of social cohesion such as trust, cooperation, and identity (Schiefer and Van der Noll, 2017; Fiedler, 2023; Langlotz et al., 2024).

Although we lack detailed data on the potential mechanisms through which armed conflict can erode social cohesion, one or more of the mechanisms described in Section 2.2 may explain these adverse effects. The devastating damage and displacement caused by the war to existing physical and social infrastructure, along with the ethnic-based organization of actors, are important features of the conflict that can shake social fabric and networks. Moreover, both

displacement and the hostilities instilled by warring parties can dissolve social networks and connections. From a psychological standpoint, these significant damages to physical, social, and emotional well-being caused by the civil war could lead to what [Fiedler \(2023\)](#) refers to as the “post-traumatic withdrawal theory”, which builds on the established link between exposure to trauma and post-traumatic stress disorder (PTSD) ([Frans et al., 2005](#)). Persisting conflict-related distress or PTSD may cause individuals to pull away from others, harming social cohesion ([Kijewski and Freitag, 2018](#)). Beyond the psychological, however, conflicts may also cause individuals to distrust others, especially during communal and ethnic battles ([Cassar et al., 2013](#); [De Luca and Verpoorten, 2015b](#)). This is particularly plausible in our context, where the war was characterized by hate speech, divisive messaging, and misinformation ([United Nations, 2022](#)).

The denunciation mechanism, another possible pathway identified in the literature, is common in communal conflicts wherein victims of conflicts may avoid any interaction with “perceived” perpetrators as a way of signaling their disassociation with the conflict ([Cassar et al., 2013](#); [Hager et al., 2019](#); [Krakowski, 2020](#)). This is particularly intuitive and plausible in contexts where perpetrators and supporters of conflict feel guilt or regret in post-conflict settings. Although the civil war in northern Ethiopia was supported by many—reflected by the number of combatants who participated and lost their lives—the ultimate outcome of the war and the damage it caused is unlikely to please many of those supporters.

Sociologically, beyond eroding social cohesion, civil wars like Ethiopia’s can also reorganize and change the nature and composition of social cohesion. This relates to the evolutionary mechanism and social identity theory ([Tajfel, 1979](#)) whereby conflicts could induce more intra-group cooperation and bonding as well as reduce inter-group cooperation based on altruistic motives ([Bowles, 2006](#)). Conflicts could increase prosocial behavior towards members in some groups while reducing membership in others, especially if these groups are opponents in the conflict ([Bauer et al., 2016](#); [Ingelaere and Verpoorten, 2020](#); [Nigus and Abay, 2024](#)). This pathway is more relevant in societies where cultural and ethnic identities play a crucial role and could signify group membership. When this is the case, social cohesion may increase intra-group dynamics, but it may also reduce inter-group dynamics and cooperation, which may lead to an overall negative impact on social cohesion ([Fiedler, 2023](#)). Unfortunately, our data do not allow us to unpack social cohesion along these detailed dimensions and interactions.

Finally, in addition to the psychological and sociological pathways described above, large-scale conflicts are associated with increased poverty. Participation in social interactions and community-based organizations usually entails some monetary cost along with substantial opportunity cost (Montero et al., 2024). Conflict and disruptions in economic and livelihood activities associated with it can increase the opportunity cost of these engagements, which can ultimately force households to reduce these engagements and interactions.

5.2. Conflict, Cash Transfer, and Social Cohesion

Tables 2 and 3 present key findings on the potential of community-based cash transfers in restoring social cohesion in conflict-affected settings. The interaction effects between access to the community-based cash transfers and the post-conflict dummy reported in Table 2 suggest that access to cash transfers improves social interaction. For example, impacts reported in Column 1 of Table 2 suggest that the community-based cash transfer increased social interaction by 0.21 standard deviations. Similarly, the interaction effects between exposure to battles and access to cash transfers in Table 2 show that the community-based cash transfer is more effective in improving social interaction in conflict-affected settings. The impacts reported in Column (1) of Table 2 show that while an additional 10 battles within a 15-km radius is associated with a 0.22 standard deviation decrease in social interactions, households assigned to the community-based cash transfer recovered a roughly 0.21 standard deviation loss in social interactions. These effects are consistent across most of the indicators of social interaction reported in Table 2.

Similarly, Column (1) of Table 3 indicates that the cash transfer program increased participation in community-based organizations among households affected by battles. Exposure to an additional 10 battles is associated with about a 0.4 standard deviation reduction in participation in community-based organizations, while assignment to the cash transfer program increases participation in community-based organizations and associations by 0.45 standard deviations for households in conflict-affected settings. Again, as shown in Columns 2–6 of Table 3, these patterns are consistent across all indicators of participation in specific community-based organizations. Overall, the results reported in Table 2 and Table 3 consistently suggest that the cash transfer intervention significantly increases multiple dimensions of social cohesion, including those capturing social interactions and participation in community-based associations.

To probe the robustness of the findings in Tables 2 and 3, we perform some robustness checks by

changing our measure of households' exposure to battle events. For this purpose, we measure exposure to armed conflict by the number of battle events (in 10s) which occurred within a 20-km radius of the household's residence instead of a 15-km radius. The findings reported in Tables A5 and A6 are consistent with those reported in Tables 2 and 3. More specifically, Column (1) of Tables A5 and A6 show that 10 additional battle events are associated with a 0.11 and 0.29 standard deviations decline in social interactions and participation in associations, respectively. On the other hand, assignment to the cash transfer program increases social interactions and participation in associations by 0.09 and 0.28 standard deviations, respectively. Our results on the positive impacts of cash transfers on social cohesion corroborate some existing literature in this direction. For instance, cash transfers have been shown to increase social cohesion among refugees and host communities (Valli et al., 2019; Hamad et al., 2025). To further probe the robustness of our findings, we measure households' exposure to conflict by the total number of conflict events realized within a 15 kilometer radius of households' residence, which includes battles, explosions, protests, riots, and violence against civilians. Tables A7 and A8 in the appendix show that exposure to conflict is associated with a deterioration in social interactions and participation in associations.

Some of the same mechanisms driving the negative relationships between armed conflict and social cohesion outlined above could also justify the role of cash transfers to cushion the adverse effects of armed conflict on social cohesion. First, inclusion in the cash transfers program may improve community members' perceptions about their community leaders and neighbors. This is particularly important as households receiving the cash transfer may not have sufficient information about why they were deemed "eligible". In the absence of perfect information about targeting, the cash transfers may signal local leaders' social preferences and be perceived as support and responses to household shocks (Manacorda et al., 2011; Chen, 2013). Second, cash transfers can enhance personal agency and promote confidence in institutions, which can ultimately encourage social interaction and participation in local institutions (Valli et al., 2019; Hamad et al., 2025). Moreover, cash transfers have been shown to increase cooperation and trust both among individuals and with their leaders (Evans et al., 2019; Evans and Kosec, 2023; Mesfin and Cecchi, 2024). Finally, access to cash transfers can alleviate some liquidity and cash constraints that may inhibit participation and engagement in social activities.

However, our findings contrast with some extant studies which highlight that cash transfers have little to no negative effects on social cohesion (Burchi and Roscioli, 2022; Della Guardia

et al., 2022; Strupat, 2022; Premand and Rohner, 2024). This could be attributed to targeting practices and other organizational challenges associated with cash transfers, which may significantly alter various aspects of trust, cooperation, and community cohesion. For example, Cameron and Shah (2014) shows that mis-targeting of a cash transfer program in Indonesia eroded social cohesion and led to a significant decline in participation in community groups. Individuals who do not receive cash transfers may feel excluded from the community’s social fabric. These feelings may evoke tension and shatter some existing bonds of social connectedness (Della Guardia et al., 2022). Our experimental design offers two important sources of exogenous variation to test some of these patterns. First, the exogenous variation in the type of targeting (rule-based or discretionary) offers an important setting to test whether such variations can affect social cohesion. Second, the fact that final (in)eligibility to the cash transfer relies on the decision of community leaders, along with the application of similar processes in the control (hypothetical) and treatment arms, offers variation in eligibility and actual access to the cash transfer. This design facilitates comparison among those households deemed “eligible” across control and treatment arms, which can offer important insights on spillover effects to non-beneficiary households in treatment communities (EAs). We explore these hypotheses in Section 5.3.

5.3. Targeting, Transfer Size, and Social Cohesion

In this subsection, we assess the implications of different types of targeting methods as well as transfer sizes. As outlined in Section 3, the targeting of the community-based cash transfers involved rule-based targeting following specific criteria for prioritizing and identifying beneficiary households in one treatment arm, while another arm offered community leaders the discretion to define targeting criteria. Similarly, we also exogenously vary the amount of total budget available to communities (EAs): with some receiving a constrained budget of 10,000 ETB while others received a slightly relaxed budget of 20,000 ETB. To explore the implications of these variations, we disaggregate the treatment group into the three different arms capturing variations in targeting process and transfer size, and then estimate equation 2. Tables 4 and 5 summarize the impacts of rule-based versus discretionary targeting approaches, as well as constrained versus relaxed transfer sizes, on social cohesion. Column (1) of Table 4 shows that assignment to each of the three treatment arms—discretionary, constrained-budget, and relaxed-budget—increases social interactions, especially among households affected by battles. The size of the coefficients associated with the interaction terms between exposure to battles and the three treatment arms are comparable, as reflected by the pairwise t-tests reported at

the bottom of Table 4. Similarly, Column (1) of Table 5 shows similar results using our second indicator of social cohesion, participation in associations.

Table 4: Conflict, cash transfer and social interactions: Disaggregated treatment arms

	Social interactions index (1)	Attended community gathering (2)	Experience no discrimination (3)	Communicate or engage with others (4)	Follow elderly advice (5)	Church or Mosque attendance (6)
Number of battle events - 15km (in 10s)	-0.224*** (0.065)	-0.111*** (0.037)	-0.066*** (0.021)	-0.033 (0.031)	-0.045*** (0.016)	-0.080*** (0.024)
Discretionary X Number of battle events 15km	0.231** (0.096)	0.121** (0.052)	0.013 (0.024)	0.115** (0.046)	-0.008 (0.023)	0.042 (0.035)
Rule based 10k X Number of battle events 15km	0.175** (0.075)	0.121*** (0.041)	0.041 (0.028)	0.053 (0.037)	0.009 (0.021)	0.034 (0.028)
Rule based 20k X Number of battle events 15km	0.223*** (0.073)	0.095** (0.040)	0.041 (0.028)	0.064* (0.034)	0.046** (0.018)	0.059** (0.026)
Post-conflict (Year = 2023)	0.121 (0.076)	0.064 (0.043)	-0.012 (0.014)	-0.110*** (0.041)	0.018 (0.019)	0.134*** (0.029)
Discretionary X Post-conflict (Year = 2023)	0.218* (0.119)	0.040 (0.062)	0.018 (0.021)	0.063 (0.056)	0.093** (0.036)	0.046 (0.046)
Rule based 10k X Post-conflict (Year = 2023)	0.159 (0.133)	-0.031 (0.062)	0.017 (0.024)	0.088 (0.062)	0.085** (0.033)	0.029 (0.051)
Rule based 20k X Post-conflict (Year = 2023)	0.247* (0.135)	0.042 (0.067)	-0.010 (0.019)	0.122** (0.059)	0.072** (0.035)	0.023 (0.043)
R-squared	0.051	0.021	0.045	0.018	0.039	0.078
Household FE	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES
P-value (Discretionary vs Rule based 10k)	0.487	0.994	0.191	0.128	0.416	0.801
P-value (Discretionary vs Rule based 20k)	0.918	0.495	0.169	0.184	0.003	0.530
P-value (Rule based 10k vs Rule based 20k)	0.342	0.272	0.997	0.673	0.025	0.189
Observations	5,670	5,691	5,691	5,691	5,691	5,670

Notes. This table reports results from fixed-effects regressions of a standardized social interaction index (columns 1), attending public village gathering or community meeting (column 2), faced no discrimination (column 3), communicate or engaged in any economic activities with others (column 4), agreed with the statement that one should always follow elderly advice (column 5), and attended Church or Mosque in the past month. Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. "Discretionary" is an indicator variable for those households assigned to the discretionary targeting with a budget of 20,000 ETB while "Rule-based 10k" captures those communities and households assigned to the rule-based targeting with constrained budget of 10,000 ETB. "Rule-based 20k" is another indicator variable for those households assigned to the rule-based targeting with relaxed budget of 20,000 ETB. Controls include: household size and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The results in both Tables 4 and 5 suggest that the assignment of households to the cash transfer program promotes social cohesion regardless of the targeting rule or transfer size, with the impacts being statistically significant and more pronounced for households in conflict-affected settings. Additionally, pairwise t-test statistics at the bottom of the tables indicate that the estimated coefficients for different targeting rules and transfer sizes are not statistically different from one another. The equivalent impact of the cash transfer program on social cohesion, irrespective of the targeting rules or transfer sizes, may stem from its universal benefits. Extensive existing literature has documented that cash transfers reduce financial stress and restore lost psychological traits (Bossuroy et al., 2022; Quattrochi et al., 2022) and signal a sense of inclu-

sion (Manacorda et al., 2011), all of which contribute to improved social cohesion. Moreover, the unconditional nature of the cash transfer program may grant beneficiaries the autonomy to allocate the funds toward their highest priorities (Mesfin and Cecchi, 2024), including contributions to various social and economic associations, which in turn might strengthen social cohesion.

Table 5: Conflict, cash transfer and participation in community associations: Disaggregated treatment arms

	Participation in associations index (1)	water users group (2)	forest users group (3)	credit or micro group (4)	trade business group (5)	religious group (6)	women group (7)
Number of battle events - 15km (in 10s)	-0.403** (0.156)	-0.111* (0.064)	-0.070** (0.035)	-0.027 (0.030)	-0.014 (0.016)	-0.064 (0.057)	-0.051* (0.027)
Discretionary X Number of battle events - 15km	0.527*** (0.166)	0.138** (0.069)	0.068* (0.039)	0.027 (0.031)	0.034 (0.023)	0.185** (0.083)	0.040 (0.031)
Rule based 10k X Number of battle events - 15km	0.511*** (0.179)	0.135** (0.066)	0.085** (0.042)	0.015 (0.033)	0.070*** (0.023)	0.088 (0.068)	0.054* (0.030)
Rule based 20k X Number of battle events - 15km	0.351 (0.234)	0.096 (0.073)	0.046 (0.051)	0.001 (0.047)	0.038** (0.018)	0.082 (0.060)	0.070** (0.030)
Post-conflict (Year = 2023)	0.275*** (0.086)	0.099*** (0.030)	-0.007 (0.020)	-0.018 (0.016)	0.082*** (0.022)	0.081 (0.066)	0.073*** (0.021)
Discretionary X Post-conflict (Year = 2023)	-0.125 (0.143)	-0.098* (0.052)	-0.011 (0.028)	0.024 (0.022)	0.006 (0.040)	0.017 (0.093)	0.003 (0.036)
Rule based 10k X Post-conflict (Year = 2023)	-0.072 (0.156)	-0.089* (0.049)	-0.027 (0.037)	0.055** (0.027)	-0.020 (0.037)	0.073 (0.094)	0.027 (0.036)
Rule based 20k X Post-conflict (Year = 2023)	-0.280 (0.180)	-0.069 (0.056)	-0.069* (0.039)	-0.023 (0.031)	0.035 (0.043)	-0.067 (0.098)	-0.020 (0.039)
Constant	-0.234** (0.103)	0.083** (0.035)	0.057** (0.023)	0.018 (0.021)	0.037 (0.026)	0.331*** (0.056)	-0.000 (0.025)
R-squared	0.042	0.019	0.031	0.020	0.093	0.053	0.051
Household FE	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES
P-value (Discretionary vs Rule based 10k)	0.878	0.927	0.564	0.470	0.118	0.173	0.494
P-value (Discretionary vs Rule based 20k)	0.340	0.356	0.592	0.484	0.830	0.110	0.162
P-value (Rule based 10k vs Rule based 20k)	0.413	0.327	0.381	0.714	0.084	0.891	0.420
Observations	8,740	8,740	8,740	8,740	8,740	8,740	8,740

Notes. This table reports results from fixed-effects regressions of a standardized active participation in associations index (column 1), active participation in water users group (column 2), forest users group (column 3), credit and microfinance group (including SACCOs and VSLAs) (column 4), trade and business associations (column 5), religious group (column 6), and other women’s group (column 7). Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. ”Discretionary” is an indicator variable for those households assigned to the discretionary targeting with a budget of 20,000 ETB while ”Rule-based 10k” captures those communities and households assigned to the rule-based targeting with constrained budget of 10,000 ETB. ”Rule-based 20k” is another indicator variable for those households assigned to the rule-based targeting with relaxed budget of 20,000 ETB. Controls include: time-varying characteristics such as household size and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Another important question related to the impact of (mis)targeting is what happens to non-beneficiary households in treatment communities (EAs) and whether the impacts of cash transfer vary across those who actually benefit out of the cash transfer program and those excluded. To facilitate this comparison, we tasked community leaders to first rank households and iden-

tify “eligible” and “ineligible” households in their communities (EAs). For this purpose, we asked community leaders in the control group to assume a hypothetical budget of 20,000 ETB. Whereas “eligible” households in the treatment group receive actual cash transfers, those in the control group do not. On the other hand, “ineligible” households in both the treatment and control communities (EAs) received no transfer, and, in the treatment communities (EAs), these households know that some of their neighbors have received the transfer. By comparing what happens to “ineligible” households in treatment and control group communities (EAs), we can infer and identify potential spillover effects to non-beneficiary households.

Table 6: Conflict, cash transfer, and social cohesion by eligibility status

	Social interactions index		Participation in associations index	
	Eligible	Ineligible	Eligible	Ineligible
Number of battle events 15km	-0.232*** (0.069)	-0.183 (0.120)	-0.450** (0.190)	-0.132 (0.194)
Treatment X Number of battle events 15km	0.223*** (0.083)	0.146 (0.127)	0.466** (0.203)	0.255 (0.202)
Post-conflict (Year = 2023)	0.147* (0.078)	0.022 (0.156)	0.327*** (0.083)	0.262* (0.145)
Treatment X Post-conflict (Year=2023)	0.172 (0.104)	0.352* (0.182)	-0.198* (0.117)	-0.195 (0.206)
Constant	-0.415*** (0.098)	-0.224 (0.176)	-0.316*** (0.112)	0.217 (0.242)
R-squared	0.049	0.055	0.035	0.047
Household FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
P-value (Eligible vs Ineligible)		0.606		0.342
Observations	4,573	1,097	6,935	1,805

Notes. This table reports results from fixed-effects regressions of standardized social interaction index (columns 1 and 2) and participation in associations index (columns 3 and 4). Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: time-varying characteristics such as household size and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 6 reports the effect of cash transfers on social cohesion for eligible and ineligible households. The estimated coefficients in Columns (1) and (3) show that conflict is significantly associated with a reduction in social cohesion for eligible households, while cash transfers mitigate these negative effects. Specifically, for conflict-affected households, additional 10 battle events are associated with a 0.23 and 0.45 standard deviation decrease in social interactions and participation in associations, respectively; assignment to the cash transfer program increases social interactions and participation in associations by 0.22 and 0.47 standard deviations, respectively. The results in Table 6 highlight the potential of cash transfers to promote social

cohesion, particularly among conflict-affected communities. Interestingly, the findings presented in Tables 4 through 6 suggest that while assignment to the cash transfer programs promotes social cohesion, the effects are more pronounced among eligible households. This is not surprising, as eligible households, which are more vulnerable or in need, are more likely to derive greater relative benefits from cash transfers compared to ineligible households. The assistance may alleviate their financial stress, enhance their sense of inclusion, and enable them to engage more in social and economic activities, thereby fostering social cohesion. However, although the impact of cash transfers on social cohesion is significant for the eligible households, the pairwise t-test statistics at the bottom of Table 6 also show that the estimated coefficients are not statistically different from each other.

5.4. Heterogeneity analyses

In this section, we report a battery of heterogeneity analyses that aim to uncover potential differences in the impact of the cash transfers by gender, poverty status, and demographic characteristics of the households. First, we perform heterogeneity analyses based on households' demographic and ethnic affiliations. As discussed in Section 2, the conflict in Ethiopia quickly took ethnic lines, and many argue that the conflict has aggravated ethnic divisions (U.S Department of State, 2023; European Parliament, 2022). We hypothesize that ethnic minorities may have suffered more because of the armed conflict compared to those households belonging to the majority ethnic groups. Similarly, the cash transfer may be more effective for households belonging to minority ethnic groups because of the disproportionately higher effect of the conflict they experience and hence larger need for humanitarian and social assistance among these households. To test these joint hypotheses, we create an indicator variable capturing whether a specific household belongs to a majority ethnic group in the community or not and split the sample accordingly. Thus, we first identify the most dominant (modal) ethnic group in a given community. We then create an indicator variable for households belonging to that dominant ethnic group and refer to them as belonging to the “majority” ethnic group. Households that do not belong to this dominant ethnic group are referred to as belonging to “minority” groups. This distinction allows us to analyze differences in outcomes between households belonging to the majority and minority groups.

Table 7 shows that exposure to armed conflict is associated with deterioration in social cohesion, especially among households belonging to minority ethnic groups. This is intuitive and consistent with descriptive and anecdotal evidence and media reports published in the after-

math of the conflict (United Nations, 2022; European Parliament, 2022). Similarly, the cash transfer program has stronger implications on households belonging to minority ethnic groups affected by armed conflict. Notably, pairwise t-tests show statistically significant differences in the estimated impacts of the cash transfer program between the two groups. The cash transfers may have been more effective among ethnic minorities due to their marginalization and heightened vulnerability during the armed conflict. Ethnic minorities reportedly faced greater economic hardships, displacement, and targeted harassment after the outbreak of the conflict in northern Ethiopia (U.S Department of State, 2023; United Nations, 2022; EHRC-OHCHR, 2021; European Parliament, 2022), which may have depleted their social capital. At the same time, their marginal utility from receiving support is likely to be higher, as transfers help offset these vulnerabilities more strongly than for those households belonging to majority ethnic groups. Furthermore, the transfers may enhance their social visibility and access to community networks.

Table 7: Conflict, cash transfer, and social cohesion by majority status

	Social interactions index		Participation in associations index	
	Majority	Non-majority	Majority	Non-majority
Number of battle events 15km (in 10s)	-0.072 (0.095)	-0.271*** (0.067)	0.130 (0.202)	-0.517** (0.214)
Treatment X Number of battle events 15km	0.042 (0.102)	0.297*** (0.089)	-0.078 (0.212)	0.517** (0.256)
Post-conflict (Year = 2023)	-0.059 (0.144)	0.208** (0.083)	0.438*** (0.095)	0.227** (0.107)
Treatment X Post-conflict (Year=2023)	0.373** (0.177)	0.123 (0.113)	-0.129 (0.144)	-0.214 (0.143)
R-squared	0.040	0.062	0.084	0.031
Household FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
P-value (Non-majority vs Majority)		0.057		0.077
Observations	2,218	3,452	3,411	5,329

Notes. This table reports results from fixed-effects regressions of standardized social interaction index (columns 1 and 2) and participation in associations index (columns 3 and 4) by minority status of respondents. Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: time-varying characteristics such as household size and livestock ownership. Standard errors, clustered at village (kebele) level, are given in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

We also perform a heterogeneity analysis based on household' gender and poverty status. The results in Table A9 present disaggregated results across the respondents' (or household head's) gender. As described in section 3.2, the module on social interactions was administered only to the head of the household, while the module on participation in community-based associations

was administered to both the primary male and female respondents in the household. Table A9 shows that exposure to armed conflict is negatively associated with social cohesion, regardless of the respondent’s gender. The cash transfer program also appears to be effective for both men and women respondents, primarily for households in conflict-affected settings. The results in Table A10 also show that exposure to battles is associated with a reduction in social cohesion for poor and non-poor households, and the cash transfer mitigates these adverse effects.¹⁴

6. Conclusion

Social cohesion is key to building harmonious and resilient communities as it plays a pivotal role in driving economic growth and development by fostering stability, reducing social tensions, and creating an environment conducive to business and investment. Amid a surge in armed conflicts, there is growing interest and debate on how armed conflict may erode or strengthen social cohesion. Similarly, although social cohesion remains an active area of inquiry by sociologists, psychologists, and economists, the question about how to rebuild and restore social cohesion remains poorly understudied (Alan et al., 2021). Building on the recent large-scale civil war in Ethiopia, this paper examines the effects of armed conflict on social cohesion, focusing on the horizontal dimensions of social cohesion as captured by social interactions and participation in community-based organizations and associations. Most importantly, we also evaluate the potential of a randomized community-based cash transfer to restore social cohesion in conflict-affected settings. Ethiopia provides a compelling case for studying social cohesion because of its diversity and history of prolonged and widespread armed and ethnic conflicts. The prolonged armed conflicts and ongoing efforts to rebuild and foster cohesion offer important lessons on how social cohesion can be strengthened in diverse and conflict-affected societies.

Our findings can be summarized as follows. First, armed conflict is associated with a reduction in interpersonal social cohesion as reflected by: (i) a reduction in the share of individuals attending social gatherings, churches, and mosques, and (ii) an increase in the share of individuals reporting experience of discrimination based on ethnic or religious background. Second, and relatedly, we also show that households exposed to armed conflict are more likely to reduce participation in community-based organizations and associations, including participation in water

¹⁴We use baseline consumption expenditure and the national poverty line to classify poor and non-poor households. Although the estimated coefficients are statistically significant only for the non-poor sample, the pairwise t-tests reported at the bottom of Table A10 show no statistically significant differences in the estimated coefficients between poor and non-poor households.

and forest user groups, women's and youth groups, and religious groups. Third, cash transfers help rebuild social cohesion, as captured by social interactions and participation in community-based organizations. The modestly sized cash transfers recover a large share of social capital and social cohesion lost due to armed conflict. These results are consistent across the different indicators of social cohesion. Finally, we explore potential heterogeneities associated with targeting and transfer size as well as across different types of households. While households who belong to minority ethnic groups reported a higher loss in social capital because of their exposure to armed conflict, the community-based cash transfer appears to be more effective in rebuilding social cohesion among these households.

These findings offer important insights for designing policies to strengthen social cohesion amid conflict and fragility. Our findings offer additional nuance to the evolving literature examining the social legacies of armed conflicts by demonstrating how armed conflict erodes horizontal social capital and relationships among community members. Most importantly, our findings highlight that modestly sized social protection programs can contribute to restoring social cohesion among community members who grapple with deteriorating social and economic infrastructure. While cash transfers and related interventions are known to improve economic and psychological well-being ([Bastagli et al., 2019](#); [Christian et al., 2019](#); [Dwyer and Dunn, 2022](#); [Bartoš et al., 2022](#); [Pega et al., 2022](#); [Hidrobo et al., 2023](#); [Bossuroy et al., 2022](#)), their impacts and contributions to social cohesion are not sufficiently appreciated. Thus, our findings add fresh evidence that contributes to our understanding of the broader implications and impacts of cash transfer programs, which are not typically properly accounted for when computing returns to cash transfer programs ([Leight et al., 2024](#)).

Although we report these positive impacts of cash transfers on social cohesion, it is important to mention that there could also be unintended consequences on the same ([Kosec and Mo, 2025](#)). Some design elements within social transfer programs can inadvertently weaken the bonds that hold communities together and diminish the level of trust people place in institutions. For instance, cash transfers have been shown to erode social capital by reducing participation in community groups ([Cameron and Shah, 2014](#)). Cash transfers have also been highlighted to reduce trust in other village and community members ([Burchi and Roscioli, 2022](#)). The emergence of such negative outcomes appears to be closely linked to the specific ways these programs are structured and the particular contexts in which they operate, suggesting that broader social consequences must be considered when designing and implementing social transfer initiatives.

Moreover, our findings that modestly sized cash transfer programs has social benefits besides economic and welfare implications is relevant when it comes to scaling up cash transfer programs at scale and pace. In the face of dwindling fiscal space and lower financial resources, our findings suggest that even relatively small cash transfers can produce meaningful effects. However, the complex interactions between social protection programming and various dimensions of social cohesion, including vertical and horizontal aspects, merit further research.

Despite the important contributions highlighted above, this study suffers from some limitations. First, we rely on observational temporal variation in the spread of armed conflict to understand the implication of armed conflict on social cohesion, implying that we cannot theoretically rule out potential endogeneity in exposure to battles. Thus, our study shares the limitation of previous studies aiming to quantify the effects of armed conflicts because they are not amenable to randomization. Second, recording details associated with armed conflict is challenging; therefore, our measure of exposure to battles can be prone to measurement errors, including those arising from inaccurate location of battle events ([Rockmore and Barrett, 2022](#); [Weidmann, 2015, 2016](#)). By aggregating the conflict events to a larger area, we anticipate that remaining measurement errors may behave classically. Third, our findings on the impact of the cash transfer should be interpreted as short-term impacts because of the short time gap (about 1-2 months) between our cash transfer intervention and follow-up data collection. Whether the impacts are long-lasting remains an important question worth exploring. Future studies may want to delve into these time dimension and explore the longer term impacts of cash transfers. Finally, social cohesion is a multifaceted and multidimensional phenomenon, and our measures only capture the horizontal dimensions of social cohesion. Future research may uncover impacts on vertical dimensions of social cohesion, which reflect state-citizen interactions ([Kosec and Mo, 2025](#)).

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A. Supplementary Figures

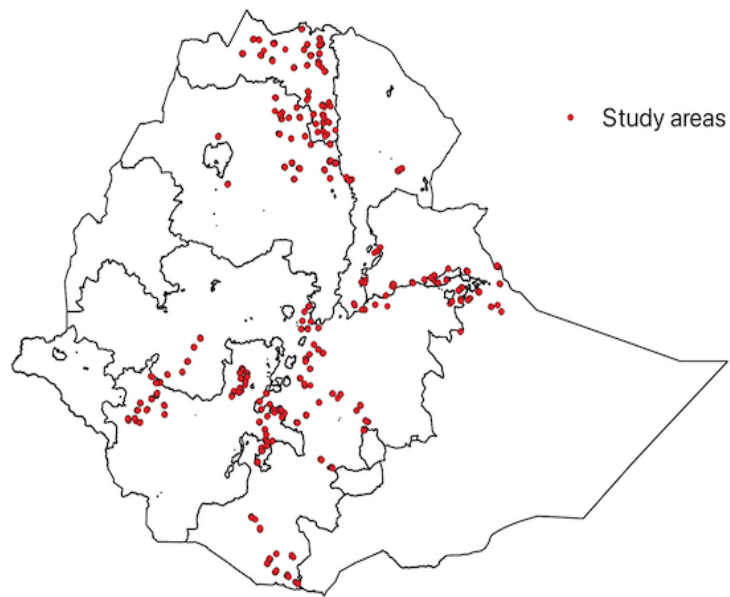


Figure A1: Distribution of sample households. Source: Authors' compilation based on survey data.

B. Supplementary Tables

Table A1: Share of households who received transfers and amount of transfer received

Panel A: Share of total households with access to the cash transfer			
Treatment group	Mean	SD	N
Control group	0.78	0.42	847
Rule-based 10K	0.74	0.44	677
Rule-based 20K	0.82	0.39	661
Discretionary	0.87	0.34	722
Total	0.80	0.40	2,907

Panel B: Average amount of cash transfer allocated to households			
Treatment group	Mean	SD	N
Control group	1241.50	666.27	658
Rule-based 10K	669.43	410.83	501
Rule-based 20K	1134.74	591.78	540
Discretionary	1130.58	859.82	625
Total	1063.54	697.55	2324

Notes. Panel A shows the share of households who received cash transfer across the control (hypothetical transfer) and three treatment arms. Columns (1) and (2) report mean values (with standard errors), while the last column reports the number of observations who received cash transfer. Panel B reports the average amount of transfer received by households across the control (hypothetical transfer) and three treatment arms. Columns (1) and (2) report mean values (with standard deviations).

Table A2: Balance test of outcome variables at baseline

	Control vs Discretionary		Control vs Rule-based 10k		Control vs Rule-based 20k	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Social interactions						
Male headed household	-0.013 (0.030)	-0.012 (0.030)	-0.021 (0.062)	-0.022 (0.061)	0.016 (0.095)	0.017 (0.095)
Age of the household head	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.002)	0.000 (0.002)	-0.002 (0.004)	-0.002 (0.004)
Education of household head	-0.002 (0.005)	-0.002 (0.005)	-0.004 (0.010)	-0.004 (0.010)	-0.002 (0.017)	-0.003 (0.017)
Urban	-0.106 (0.166)	-0.114 (0.167)	-0.105 (0.333)	-0.100 (0.335)	-0.935* (0.496)	-0.931* (0.497)
Distance to nearest town (km)	0.007 (0.028)	0.006 (0.028)	-0.034 (0.058)	-0.038 (0.058)	-0.057 (0.079)	-0.057 (0.079)
Poverty at national level	0.000 (0.049)	-0.001 (0.049)	0.114 (0.092)	0.106 (0.092)	-0.081 (0.147)	-0.085 (0.146)
Wealth index	-0.011 (0.026)	-0.012 (0.026)	0.046 (0.055)	0.042 (0.055)	0.144* (0.076)	0.142* (0.075)
Tropical Livestock Unit	0.003 (0.006)	0.003 (0.006)	0.008 (0.008)	0.008 (0.008)	-0.009 (0.015)	-0.009 (0.015)
PSNP status	-0.086 (0.071)	-0.078 (0.069)	-0.007 (0.135)	0.011 (0.129)	-0.173 (0.198)	-0.156 (0.195)
Per capita expenditure	0.001*** (0.000)	0.001*** (0.000)	0.000 (0.001)	0.000 (0.001)	0.002 (0.001)	0.002 (0.001)
Number of battle events 15km (in 10s)	-0.065 (0.237)	-0.045 (0.234)	0.313 (0.53)	0.315 (0.496)	0.338 (0.968)	0.431 (0.962)
Number of battle events 20km (in 10s)	-0.117 (0.141)	-0.136 (0.142)	-0.404 (0.267)	-0.465* (0.266)	0.205 (0.53)	0.152 (0.538)
Outcomes						
Social interactions index (std)	-0.066*** (0.021)		-0.101* (0.054)		-0.151** (0.074)	
Attend community - level gathering		-0.071* (0.040)		-0.016 (0.085)		-0.091 (0.120)
Experience no discrimination		-0.130 (0.174)		-0.412* (0.230)		0.045 (0.327)
Communicate or engage with other hhs		-0.079* (0.044)		-0.164* (0.090)		-0.264** (0.131)
Follow elderly advice		-0.108* (0.062)		-0.255** (0.123)		-0.346** (0.163)
Church or Mosque attendance		0.014 (0.044)		-0.013 (0.103)		0.125 (0.124)
R-squared	0.07	0.070	0.04	0.050	0.09	0.100
Observations	1484	1484	1462	1462	1440	1440
Joint F-test (P-Value) from Randomized inference	0.420	0.554	0.902	0.794	0.582	0.492
Panel B: Active membership in associations						
	Control vs Discretionary		Control vs Rule-based 10k		Control vs Rule-based 20k	
	(1)	(2)	(3)	(4)	(5)	(6)
Participation in associations index (std)	-0.002 (0.029)		-0.031 (0.064)		0.137 (0.087)	
Member of water users group		0.13 (0.087)		0.092 (0.182)		0.255 (0.288)
Member of forest users group		-0.075 (0.086)		-0.012 (0.216)		0.194 (0.281)
Member of credit/microfinance group		-0.124 (0.075)		-0.125 (0.129)		0.317 (0.246)
Member of trade business associations		-0.061 (0.134)		-0.248 (0.238)		0.478 (0.38)
Member of religious group		-0.089 (0.066)		-0.141 (0.141)		0.011 (0.234)
Member of women group		-0.008 (0.126)		-0.238 (0.228)		0.081 (0.349)
R-squared	0.01	0.03	0.02	0.02	0.02	0.03
Observations	2597	2597	2538	2538	2527	2527
Joint F-test (P-Value) from Randomized inference	0.956	0.450	0.612	0.738	0.15	0.548

Notes. Standard errors are clustered at village (kebele) level (the level at which the randomization was conducted), *** p<0.01, ** p<0.05, * p<0.1.

Table A3: Distribution of attrition across control and treatment groups

	Probability of response	
	(1)	(2)
Rule-based 10k	0.014 (0.036)	0.009 (0.033)
Rule-based 20k	0.016 (0.048)	0.006 (0.045)
Discretionary	0.040 (0.045)	0.037 (0.042)
Constant	0.793*** (0.029)	0.792*** (0.041)
R-squared	0.001	0.036
Region FE	NO	YES
Observations	3,591	3,591

Notes. Differential attrition between treatment and control groups. Effect of treatment assignment on attrition is estimated with a simple linear probability model with attrition (non-response) as the dependent variable. Regression is conducted without controlling for region fixed effects. Standard errors, clustered at village (kebele) level, are given in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4: Indicators of social cohesion

Panel A: Social interactions

Variable description	Mean	SD
Q1. In the past month, have you gotten together with friends, family, neighbors, to discuss issues or share food/drinks?	0.44	0.50
Q2. Do you regularly communicate or engage in any economic activities with other villages?	0.57	0.50
Q3. Do you agree that one should always follow the advice of the elders?	0.87	0.34
Q4. Has this household faced discrimination in the last 12 months?	0.02	0.14
Q5. In the past month, have you attended a church/mosque or other religious service?	0.75	0.44
Observations		3040

Panel B: Active membership in associations

Variable description	Mean	SD
Q1. Are you an active member of water users' group?	0.13	0.34
Q2. Are you an active member of forest users' group?	0.06	0.23
Q3. Are you an active member of credit or microfinance group (e.g., SACCOs and VSLAs)?	0.05	0.23
Q4. Are you an active member of trade and business association?	0.01	0.11
Q5. Are you an active member of religious group?	0.40	0.49
Q6. Are you an active member of women's group	0.03	0.16
Observations		8776

Notes. This table reports mean values and standard deviations of social interaction (Panel A) and participation in community-based organizations and associations (Panel B) indicators. While the data for the social interaction indicators were collected from the households heads, the data for the participation in associations were collected from primary male and female respondents in the household. The mean values and standard deviations are based on the baseline (2019) dataset.

Table A5: Conflict, cash transfer, and social interactions - Number of battles in 20km radius

	Social interactions index (1)	Attended community gathering (2)	Experience no discrimination (3)	Communicate or engage with others (4)	Follow elderly advice (5)	Church or Mosque attendance (6)
Number of battle events - 20km (in 10s)	-0.108*** (0.038)	-0.048* (0.024)	-0.046*** (0.016)	-0.020 (0.016)	-0.028** (0.012)	-0.039** (0.015)
Treatment X Number of battle events - 20km	0.094** (0.043)	0.045* (0.027)	0.022 (0.018)	0.048** (0.020)	0.011 (0.013)	0.013 (0.017)
Post-conflict (Year = 2023)	0.115 (0.079)	0.057 (0.045)	-0.005 (0.012)	-0.108*** (0.041)	0.020 (0.019)	0.132*** (0.031)
Treatment X Post-conflict (Year = 2023)	0.216** (0.101)	0.028 (0.053)	0.001 (0.015)	0.091* (0.048)	0.076*** (0.025)	0.036 (0.038)
R-squared	0.049	0.018	0.050	0.016	0.035	0.077
Household FE	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES
Observations	5,670	5,691	5,691	5,691	5,691	5,670

Notes. This table reports results from fixed-effects regressions of a standardized social interaction index (column 1), attend village gathering or community meeting (column 2), experience no discrimination (column 3), communicate or engage in any economic activities with others (column 4), agree with the statement that one should always follow elderly advice (column 5), and attend Church or Mosque in the past month. Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 20km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: household size and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A6: Conflict, cash transfer and participation in associations - Number of battles in 20km radius

	Participation in associations index (1)	water users group (2)	forest users group (3)	credit or micro group (4)	trade business group (5)	religious group (6)	women group (7)
Number of battle events - 20km (in 10s)	-0.293*** (0.110)	-0.093** (0.042)	-0.056** (0.024)	-0.012 (0.021)	-0.015 (0.014)	-0.022 (0.047)	-0.027 (0.020)
Treatment X Number of battle events - 20km	0.278** (0.131)	0.088* (0.045)	0.040 (0.029)	-0.003 (0.024)	0.040** (0.017)	0.048 (0.052)	0.031 (0.022)
Post-conflict (Year = 2023)	0.304*** (0.084)	0.113*** (0.031)	0.000 (0.020)	-0.020 (0.016)	0.086*** (0.023)	0.074 (0.065)	0.072*** (0.021)
Treatment X Post-conflict (Year = 2023)	-0.136 (0.113)	-0.087** (0.040)	-0.030 (0.025)	0.026 (0.020)	0.003 (0.031)	0.026 (0.077)	0.002 (0.028)
R-squared	0.035	0.023	0.030	0.011	0.088	0.037	0.047
Household FE	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES
Observations	8,740	8,740	8,740	8,740	8,740	8,740	8,740

Notes. This table reports results from fixed-effects regressions of a standardized active participation in associations index (column 1), active participation in water users group (column 2), forest users group (column 3), credit and microfinance group (column 4), trade and business associations (column 5), religious group (column 6), and women's group (column 7). Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 20km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: household size, gender of the respondent and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A7: Conflict, cash transfer, and social interactions - Number of conflict events in 15km radius

	Social interactions index	Attended community gathering	Experience no discrimination	Communicate or engage with others	Follow elderly advice	Church or Mosque attendance
	(1)	(2)	(3)	(4)	(5)	(6)
Number of conflict events - 15km (in 10s)	-0.130*** (0.045)	-0.063** (0.024)	-0.033** (0.014)	-0.016 (0.020)	-0.023** (0.009)	-0.051*** (0.016)
Treatment X Number of battle events - 15km	0.118** (0.050)	0.063** (0.027)	0.008 (0.017)	0.042* (0.022)	0.005 (0.011)	0.025 (0.018)
Post-conflict (Year = 2023)	0.095 (0.072)	0.050 (0.041)	-0.022 (0.016)	-0.114*** (0.039)	0.011 (0.019)	0.126*** (0.027)
Treatment X Post-conflict (Year = 2023)	0.234** (0.093)	0.033 (0.049)	0.015 (0.019)	0.103** (0.046)	0.084*** (0.025)	0.037 (0.034)
R-squared	0.049	0.019	0.042	0.016	0.035	0.079
Household FE	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES
Observations	5,670	5,691	5,691	5,691	5,691	5,670

Notes. This table reports results from fixed-effects regressions of a standardized social interaction index (column 1), attend village gathering or community meeting (column 2), experience no discrimination (column 3), communicate or engage in any economic activities with others (column 4), agree with the statement that one should always follow elderly advice (column 5), and attend Church or Mosque in the past month. Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 20km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: household size and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A8: Conflict, cash transfer and participation in associations - Number of conflict events in 15km radius

	Participation in associations index (1)	water users group (2)	forest users group (3)	credit or micro group (4)	trade business group (5)	religious group (6)	women group (7)
Number of conflict events - 15km (in 10s)	-0.163* (0.085)	-0.045 (0.030)	-0.032** (0.016)	-0.012 (0.014)	-0.001 (0.009)	-0.023 (0.030)	-0.019 (0.012)
Treatment X Number of conflict events - 15km	0.219** (0.093)	0.055* (0.031)	0.030 (0.019)	0.003 (0.017)	0.026** (0.011)	0.061* (0.034)	0.023 (0.014)
Post-conflict (Year = 2023)	0.258*** (0.089)	0.083*** (0.032)	-0.016 (0.022)	-0.022 (0.016)	0.079*** (0.021)	0.070 (0.063)	0.065*** (0.021)
Treatment X Post-conflict (Year = 2023)	-0.149 (0.116)	-0.069* (0.040)	-0.026 (0.027)	0.022 (0.020)	0.013 (0.028)	0.025 (0.074)	0.010 (0.027)
R-squared	0.030	0.014	0.019	0.008	0.091	0.042	0.046
Household FE	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES
Observations	8,740	8,740	8,740	8,740	8,740	8,740	8,740

Notes. This table reports results from fixed-effects regressions of a standardized active participation in associations index (column 1), active participation in water users group (column 2), forest users group (column 3), credit and microfinance group (column 4), trade and business associations (column 5), religious group (column 6), and women's group (column 7). Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 20km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: household size, gender of the respondent and livestock ownership. Standard errors, clustered at village (*kebele*) level, are given in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A9: Conflict, cash transfer, and social cohesion by gender

	Social interactions index		Participation in associations index	
	Male-headed	Female-headed	Male	Female
Number of battle events 15km (in 10s)	-0.214*** (0.074)	-0.245** (0.118)	-0.407** (0.187)	-0.388** (0.188)
Treatment X Number of battle events 15km	0.205** (0.079)	0.202 (0.127)	0.465** (0.196)	0.443** (0.197)
Post-conflict (Year = 2023)	0.164* (0.084)	-0.019 (0.121)	0.311*** (0.078)	0.323*** (0.077)
Treatment X Post-conflict (Year=2023)	0.197* (0.105)	0.257* (0.151)	-0.199* (0.109)	-0.201* (0.108)
R-squared	0.058	0.035	0.033	0.034
Household FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
P-value (Male vs Female)		0.313		0.583
Observations	4,242	1,428	4,239	4,501

Notes. This table reports results from fixed-effects regressions of standardized social interaction index (columns 1 and 2) and participation in associations index (columns 3 and 4) by gender. Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: time-varying characteristics such as household size and livestock ownership. Standard errors, clustered at village (kebele) level, are given in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A10: Conflict, cash transfer, and social cohesion by poverty status

	Social cohesion index		Participation in associations index	
	Poor	Non-poor	Poor	Non-poor
Number of battle events 15km (in 10s)	-0.187 (0.118)	-0.227*** (0.070)	-0.525 (0.390)	-0.357*** (0.095)
Treatment X Number of battle events 15km	0.187 (0.125)	0.202*** (0.077)	0.643 (0.397)	0.370*** (0.129)
Post-conflict (Year = 2023)	0.251** (0.098)	0.058 (0.092)	0.289** (0.122)	0.268*** (0.093)
Treatment X Post-conflict (Year=2023)	0.103 (0.132)	0.265** (0.113)	-0.117 (0.158)	-0.152 (0.126)
R-squared	0.059	0.049	0.060	0.025
Household FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
P-value (Poor vs Non-poor)		0.458		0.913
Observations	1,713	3,957	2,750	5,990

Notes. This table reports results from fixed-effects regressions of a standardized social interaction index (columns 1 and 2) and active participation in associations index (columns 3 and 4) by poverty status. Exposure to armed conflict is measured by the number of battle events (in 10s) realized within 15km radius of the household residence. Treatment is a binary variable taking a value of 1 for those communities and households assigned to the cash transfer intervention and 0 otherwise. Controls include: time-varying characteristics such as household size and livestock ownership. Standard errors, clustered at village (kebele) level, are given in parentheses, *** p<0.01, ** p<0.05, * p<0.1.