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# Killing social leaders for territorial control: the unintended consequences of peace

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## ABSTRACT

Incomplete peace agreements may inadvertently increase insecurity if they trigger violent territorial contestation. We study the unintended consequences of the Colombian peace process and find that the permanent ceasefire declared by the FARC insurgency during peace negotiations with the government triggered a surge in the targeting of local community leaders. Leaders were killed by armed groups excluded from the peace process to thwart collective action and civilian mobilization, thus consolidating their dominance in formerly FARC-controlled areas. These results are exacerbated in places with judicial inefficiency and where peasants dispossessed during the conflict have started administrative process to reclaim their land.

JEL Classification: D72, D74.

Keywords: Social leaders, Peace process, Armed conflict, Territorial control.

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## 1. Introduction

Peace agreements are usually imperfect and far from comprehensive. They need to address the specificities of particular conflicts, and are shaped by both internal and external political constraints (Doyle and Sambanis, 2000). This constitutes a magnificent challenge. Indeed, the concept of 'peace' goes well beyond the absence of war and should "incorporate the conditions under which states have little need or incentive to use violence against their citizens, and conversely citizens have little motivation or incentive to challenge the state by force of arms" (Regan, 2014).

The limitations of peacemaking are likely to be exacerbated when, in internal conflicts with multiple actors, peace deals are made with only a fraction of the active armed groups. In such circumstances, there is no guarantee that violence will end, and in fact conflict levels may even *increase*.[1] The fragility and short duration of peace in countries such as the Democratic Republic of Congo constitutes an eloquent example of this observation.[2]

This paper studies the unintended consequences of partial peacemaking in Colombia. After over five decades of civil war, at the end of 2016 the government signed a peace agreement with the country's largest and oldest guerrilla, the *Revolutionary Armed Forces of Colombia* (FARC from the Spanish acronym). While the conflict with FARC ended as a result of the agreement, other groups such as the *National Liberation Army* (ELN from the Spanish acronym), criminal bands of former paramilitary groups, and FARC dissidences that opposed an agreement with the government, were excluded from the negotiations. Moreover, as government forces largely failed to occupy and build institutional capacity in FARC's former strongholds, a vacuum of power was created in these valuable territories that other armed groups rushed to fill. Looking at the recent experience of Colombia as a case study, we argue that incomplete peace building efforts can have unintended negative consequences.[3]

Specifically, we study the systematic killing of local social leaders that has taken place in Colombia in the last few years. From January 2009 to December 2017 over 550

[1] Franke and Öztürk (2015) and König et al. (2017) show theoretically that, when there are more than two parties involved in conflicts with complex network structures, partial peace deals may backfire.

[2] See *DR Congo: Peace Process Fragile, Civilians at Risk*, Human Rights Watch, 07/27/2008. Available from: https://www.hrw.org/news/2008/07/27/dr-congo-peace-process-fragile-civilians-risk-updated-version-august-28-2008 (last accessed June 22, 2018).

[3] Steele and Schubiger (2018) show that past attempts to negotiate peace in Colombia under the Betancur administration (1982-1986) also backfired and led to more violence.

social leaders were killed in Colombia.[4] Using a triple differences strategy, we find that the permanent ceasefire introduced at the end of 2014 by FARC in the context of the peace negotiations encouraged the targeting of local community leaders by illegal armed groups not involved in the peace process, who sought to occupy valuable territories, previously controlled by FARC.[5]

The final peace agreement, signed at the end of 2016, is probably the most important political achievement of a country that faced over five decades of internal armed conflict. However, the simultaneous unprecedented surge in the assassination of social leaders, which we study in this paper, casted shadow over the euphoria generated by the end of the conflict with FARC.

A vast academic literature agrees that state capacity is an important determinant of economic development.[6] Thus, a relevant question is how to build capable states. A key element of state formation, emphasized at least since the work of Weber (1946), is the consolidation of the monopoly of violence within a given territory (see also Huntington, 1968; Tilly, 1990). This function, however, is not limited to a central institutionalized authority. Specifically, in the context of internal conflict, non-state actors with long-term horizons can also establish social order within specific peripheral territories, regulating most public and private affairs and enforcing specific commands, thus *de facto* establishing a local "state" (Arjona, 2016).

In this type of situations, the *de facto* withdrawal of the ruling actor –due for instance to a peace agreement followed by disarmament or a permanent ceasefire – generates a vacuum of power that other armed groups often rush in to fill. In turn, consolidating territorial dominance often entails the use of violence against civilians due to their strategic role in sharing information, providing resources and services, mobilizing supporters to increase a group's military strength, prevent defections, etc. (Kalyvas, 2006).[7] Winning over the cooperation of the local population thus encourages the use

[4]Social leaders are local activists representing citizens' organizations of various sources, including local community councils, ethnic groups, unionists, environmental activists, etc. Section 3 describes this variable as well as all other variables used in this study.

[5]The ceasefire was declared on December $20^{th}$ 2014 and resulted from the peace negotiations that FARC held with the Government of Colombia since October 2012. The ceasefire was largely met and extremely comprehensive, as it included the avoidance of disputes against other illegal armed groups.

[6]See for instance Amsden (1992), Evans (1995), Migdal (1998), Herbst (2000), Gennaioli and Rainer (2007), Acemoglu (2005), Besley and Persson (2011, 2009), Acemoglu and Robinson (2012) and Acemoglu et al. (2015).

[7]Other incentives may explain the killing of civilians in different contexts. For instance, Alesina et al. (forthcoming) and Robinson and Torvik (2009) emphasize the electoral incentives that motivate the use of violence against civilians.

of selective civilian killings.[8] Indiscriminate violence is usually ineffective in achieving this objective as it generally backfires.[9]

Consistent with this, we show that the killing of social leaders increased disproportionally after the start of FARC's permanent ceasefire in places previously dominated by this insurgency and located in the proximity of areas with presence of other armed groups. The killing of social leaders is not driven by a differential trend of the overall homicide rate, and thus it is not explained by either a strategy of indiscriminate killings of civilians or a differential change of reporting rates in previously FARC-controlled areas after the ceasefire.[10] In addition, we show that the killing of leaders is exacerbated in areas with a weaker state capacity in the form of an inefficient local judiciary, and in places with demands for land restitution.[11] Our results are driven by the window of opportunity for territorial control given by the permanent ceasefire, but are not exacerbated (or attenuated) during the implementation stage of the peace agreement that started at the beginning of 2017.

This paper contributes to the existing literature in several ways. First, we emphasize how peace agreements may backfire if they generate territorial vacuums of power that are not quickly filled by the legitimate state. In particular, our results suggest that partial pacification processes can exacerbate violence by other existing armed groups, aimed at controlling pacified territories. Indeed, the killing of social leaders in Colombia has largely undermined the legitimacy of the peace agreement. Second, we identify how civilians may be differentially targeted according to their role in society. Our data allows us to identify the scope of selective targeting according to the victims' activities. Specifically, we study the killing of local community activists, who represent vulnerable groups. Third, we contribute to the recent literature about the factors that help

[8]This has been recognized at least since the work of Galula (1964), Clutterbuck (1966) and Thompson (1966). See also, Kalyvas (2006); Humpreys and Weinstein (2006); Mason and Krane (1989); Goodwin (2001); Wood (2003); Downes (2007); Kalyvas and Kocher (2007); Lyall (2009); Kocher et al. (2011); Condra and Shapiro (2012); Lyall and Imai (2013); Christensen et al. (forthcoming); and Toft and Zhukov (2015) among several scholars who have studies this phenomenon. Berman and Matanoc (2015) provide a recent thorough review.

[9]According to Eck and Hultman (2007), most civilian killings are deliberately planned by both state and non-state actors, and by and large are not the result of indiscriminate killings or collateral damage. See Steele (2009) for a discussion on collective targeting compared to selective and indiscriminate killings in terms of different types of strategic violence that armed groups can opt for against civilians.

[10]Within a year of the peace agreement, Colombia's homicide rate fell to its lowest level since 1975.

[11]A salient feature of the Colombian conflict has been the dispossession of land to smallholders and peasants from right-wing paramilitary groups. This has resulted in high levels of land concentration in conflict-affected areas. In the context of Law 1448 of 2011 (called the *victims and land restitution law*), formerly dispossessed agents can claim back their land, and the law places the burden of the proof on current title holders.

the success of violence reduction security programs[12] by exploring what mechanisms exacerbate or attenuate the killing of social leaders following the cease fire. Specifically, we emphasize the importance of state capacity, judicial effectiveness and well-specified land property rights in reducing the incentives of other armed groups to target social leaders for territorial domination. Fourth, our paper also relates to the literature studying how policies aimed at reducing illegal activities can increase violence in the form of armed territorial disputes (see for example Werb et al., 2011 and Dell, 2015). We also contribute to the literature that highlights how changes in the expected rents of armed groups can exacerbate conflict (Angrist and Kugler, 2008). In our case the cost of controlling a previously FARC controlled area is reduced after the ceasefire, making these strtegic territories more attractive to other armed groups.

The rest of the paper is organized as follows. Section 2 provides some context on the Colombian conflict and the recent peace process, section 3 describes the data sources, section 4 discusses the identification strategy, section 5 reports the main results, robustness and potential mechanisms and section 6 concludes.

## 2. Background

2.1. **The Colombian conflict and the recent peace process.** The Colombian civil war started with the foundation of left-wing guerrillas FARC and ELN in the mid 1960s. Both groups claim to represent the rural poor and have fought for over 50 years with the stated aim of overthrowing the government. In order to finance the protracted war, both groups have been profiting from several forms of illegal activities localized within the Colombian territory (Richani, 1997). This implies that sub-national territorial dominance is an important intermediate objective of the armed groups.

The conflict was a Cold War proxy until the end of the 1980s, but escalated during the 1990s fueled by the involvement of the guerrillas in illegal drug trafficking and the consolidation of right wing paramilitary groups. The formation of paramilitary groups dates back to the late 1960s. As part of the war against "internal enemies," the US *National Security Doctrine* legitimized the military as the force ultimately responsible for security and development in Latin America. In Colombia, this encouraged the enactment of Decree 3398 of 1965 and Law 48 of 1968, which allowed civilians to be trained and armed by the military to fight the newly created communist insurgencies.[13]

[12]See for instance Fearon et al. (2009); Berman et al. (2013); Blair et al. (2018)

[13]An additional small number of paramilitary groups emerged as self-defense forces, organized by rural elites to oppose guerrilla extortion.

In the mid 1990s, the paramilitaries effectively became a third force in the conflict, when splintered paramilitary armies colluded under the umbrella organization of the *United Self-Defense Groups of Colombia* (AUC by its Spanish acronym). Through the end of the 1990s and the first half of the 2000s, the counterinsurgency strategy of paramilitaries was based on perpetrating massacres targeted at civilians, thought to constitute the local 'infrastructure of guerrillas' (Restrepo et al., 2004; Aranguren, 2001).

In 2003, the AUC declared a partial ceasefire and a started conversations with the government of Alvaro Uribe that ultimately led to its demobilization between 2005 and 2007. However, this process did not effectively disarm all paramilitary units of the country, as some factions did not lay down all their weapons. In many aspects, the reintegration of former paramilitaries was largely ceremonial, and many combatants reconvened to form criminal bands and neo-paramilitary groups, that exist to date (Human Rights Watch, 2010).

In October 2012 the Colombian government and FARC started peace negotiations in Havana, with the oversight of the Norwegian and Cuban government. While the four-year long process was characterized by constant ebb and flow, one of the most significant milestones was the establishment of a permanent ceasefire by FARC on December 20th, 2014. In fact, as a result of the ceasefire, FARC withdrew their troops to more remote areas where military contact with government security forces and other armed groups was unlikely to take place. Likewise, although the ceasefire involved primarily the government security forces, a clash with another armed structure, in the midst of a ceasefire, would have impacted the negotiations and the public opinion greatly. This explains why FARC's offensive activities drop by 98% during this period (CERAC, 2016). Indeed, the ceasefire was largely met until followed by the bilateral definitive ceasefire and then by the final disarmament in 2016.[14]

We argue that FARC's inability to respond violently during the ceasefire constituted a window of opportunity for other armed groups (specifically the ELN and former paramilitary criminal bands) to try to establish their dominance in previously FARC-controlled territories.

The 5-decade long, three-sided Colombian conflict resulted in the largest number internally displaced persons (IDPs) globally (United Nations High Commissioner for Refugees, 2017). To date, over 8.5 million people are formally registered with the

[14]The final peace agreement was endorsed by Congress on November 30th, 2016 after a previous version of it got rejected by a 0.5% vote margin in a referendum that took place on October $2^{nd}$ that year.

state as victims of the conflict.[15] Local social leaders have contributed their share to these figures. Given the high number of social leaders assassinated during the armed conflict, the *Victims' Unit* (a government's institution in charge of keeping a registry and providing assistance and reparations to victims) established a specific program for the collective reparation of social groups systematically victimized through killings, threats, and forced disappearances. This included unionists, journalists, and human rights defenders.

2.2. **The killing of social leaders in Colombia.** The persecution of social leaders dates back at least to the emergence of the paramilitary groups, when leaders were seen as an instrument of the communits "subversion" (Gallón et al., 2013). Steele (2017) argues that, historically, leaders were selectively assassinated in Colombia at the same time that "regular" people were collectively displaced as complement strategies used especially by paramilitaries to facilitate territorial control.[16] During Uribe's administration (2002-2010) violence against union members was at the center of the public debate. For instance, union leaders argued against the free trade agreement with the US because of the incapacity of the government to curbing violence against trade unionists.[17] The government, in turn, argued that most of the violence was a byproduct of the armed conflict (Mejía and Uribe, 2011).

The targeting of social leaders was exacerbated by the territorial dispute triggered by FARC's *de facto* withdrawal from its former strongholds after the start of the permanent ceasefire.[18] This encouraged community leaders and activists to raise their voices

[15]Source: Victims' Registry, from the Unit for the Victims Assistance and Reparation (herein the Victims' Unit), March 2018 figure (https://www.unidadvictimas.gov.co/en).

[16]One important difference with the wave of killings studied in this paper is that, during the late 1980s and the first half of the 1990s most of the targeting wast directed at a specific (and quite visible) group, namely members of the *Patriotic Union* (UP from the Spanish acronym) political party. A second important difference is that the current wave of killings has taken place after the ceasefire and posterior demobilization of FARC, which took place for the first time since the group was founded in the mid 1960s. This implies that the killings are likely not driven by the alleged support of civilian leaders to an insurgent opponent.

[17]This argument was even picked up by US democratic presidential candidate Barack Obama in the final presidential debate with John McCain, to oppose the free trade agreement with Colombia. See: "Candidates Obama and McCain disagree on Colombian FTA agreement in final presidential debate", *Semana* magazine, 10/16/2008, available from https://www.semana.com/international/headlines/articulo/candidates-obama-and-mccain-disagree-on-colombian-fta-agreement-in-final-presidential-debate/96274-3 (last accessed June 2018).

[18]In recent years, almost all of the killings have taken place in the regions that FARC abandoned. See "Peacetime Spells Death for Colombia?s Activists", by Nicholas Casey. Published by *The New York Times* on 10/13/2028. Available from: https://nyti.ms/2QQp2Rb (last accessed November 30, 2018).

to demand basic services and infrastructure from the government as they thought the conflict has ended. Formerly dispossessed peasants who fled the conflict also returned to claim their lands and re-unite with family and friends. But the central state failed to take control over these areas and brought neither development projects nor security.[19]

Instead, other armed groups stepped in to replace FARC's rule and take over its illegal activities. Local leaders and activists constitute a threat for the interests of these groups as they mobilize people, attract attention, and demand services that would ultimately increase access and state presence in their territories. This is especially the case of the leaders of local community councils, which constitute the primary organizational structure of local communities in both rural hamlets and urban neighborhoods. These councils are the main intermediary between peasant and the government, and are key in helping the state implementing micro-level policies, including those agreed in the peace settlement with FARC, such as illegal crops substitution and the promotion of local development initiatives. Council leaders channel the demands of the community, oversee the execution of projects and report cases of corruption and criminal activity affecting the community.[20]

Since the start of the ceasefire, the category of leaders that has been targeted the most are local community council leaders (37%), and most of them have been killed in former FARC territories disputed by other armed groups. The next section describes the source of these and other data used in our empirical analysis.

## 3. Data

3.1. **Killing of social leaders.** The killings of social leaders comes from a Colombian Human Right NGO called *Somos Defensores*. This NGO was created in 1999 with

[19]For instance, the *Special Administrative Unit for Territorial Consolidation* (UACT from its Spanish acronym) was created in 2011 with the objective of promoting the institutional presence of the state in the territories formerly controlled by armed groups, in order to foster their consolidation and reconstruction. However, UACT never had enough leverage to address its mission. Shapiro et al. (2019) evaluate the impacts of the national territorial consolidation policy and find no significant effects on almost any outcome.

[20]The Ministry of Interior estimates that the circa 64,000 local community councils in Colombia affiliate about 7 million people. Councils are present throughout the entire country except in the indigenous territories, which feature other type of organizations (albeit also targeted by armed groups seeking territorial control). See "Si no protegen a los líderes comunales el Acuerdo de Paz fracasa", *La Silla Vacía*, 08/13/2018. Available from: https://m.lasillavacia.com/si-no-protegen-los-lideres-comunales-el-acuerdo-de-paz-fracasa-67442?utm_source=newsletter&utm_medium=email&utm_campaign=Las2520cuatro2520patas2520de2520La2520Silla (last accessed November 30, 2018).

the aim of protecting social leaders in Colombia by reporting the abuses targeted at them in the context of the armed conflict. A *social leader* is defined by the NGO as an activist that represents the interests of local vulnerable communities. Social leaders include local community council members, representatives of ethnic (indigenous and Afro-Colombian) communities, unionists and environmental advocates among others.

Since 2006, *Somos Defensores* created an information system that records all the killings of social leaders, with the objective of producing permanent statistics about this type of violence in order to lobby national authorities and generate awareness on what they call a systematic (and intentional) practice.[21] The registry is filled with the input of a large network of Human Rights organizations (over 500) with presence throughout the Colombian territory (especially in conflict-affected areas) and supplemented with fieldwork carried out by *Somos Defensores* to verify that assassinations of alleged leaders are indeed so. Efforts are made to avoid double counting.

*Somos Defensores* uses these data to publish bi-annual reports with details of each one event. For each murder case the report includes: the date and place of the event, the victim's name, the organization represented by the leader, and the presumed perpetrator. The NGO records a total of 563 killings up to the first semester of 2018, 91% of which remain unresolved by the judicial system.[22] Most of the murdered leaders were part of local community councils (33%), indigenous communities (22%), or peasant organizations (12%), see table 1. For the purpose of our statistical analysis, we aggregate this information at the municipality-bi-annual level.

Our analysis covers the period 2011:1 to 2017:2, since the start Juan Manuel Santos' presidential term.[23] During this period, 490 leaders were murdered (35 per semester). Before the ceasefire (until 2014:2), 250 killing cases are recorded (31 per semester). After the ceasefire there are 240 cases recorded (40 per semester). This increase can be seen in Panel A of Figure 1, that shows the evolution of the number of leaders killed during our sample period. In turn, Figure 2 presents the spatial distribution of assassinations by municipality during the entire period of analysis. Overall, killings are concentrated in the periphery of the country, in places relatively far from the big cities and characterized by a rather weak presence of the state. This is consistent with

[21]See Programa Somos Defensores - PNGPDDH (2008).

[22]See "La mayoría de asesinatos de líderes sociales quedan impunes: ONG Somos Defensores", *El Espectador*, 11/13/2018. Available from: https://www.elespectador.com/noticias/judicial/la-mayoria-de-asesinatos-de-lideres-sociales-quedan-impunes-ong-somos-defensores-articulo-823451 (last accesses November 30, 2018).

[23]Event-level data is not available after the second semester of 2017.

our interpretation that leaders are targeted in areas that are being violently disputed by armed groups after the *de facto* withdrawal of FARC.

3.2. **Armed groups presence and exposure.** Turning to our measures of armed groups presence, we use the violence dataset originally compiled by Restrepo et al. (2004), and updated through 2014 by Universidad del Rosario. This dataset codes violent events recorded in the *Noche y Niebla* reports from the NGO *Centro de Investigación y Educación Popular* (CINEP) of the Company of Jesus in Colombia, which provides a detailed description of the violent event, date, the municipality in which it occurred, the identity of the perpetrator, and the count of victims involved in the incident.[24] Specifically, we create a dummy for *FARC presence* if there was at least one violent case by FARC in the period 2011:1–2014:2, after president Juan Manuel Santos took office and before the beginning of the ceasefire.

Measuring the influence exercised by an armed group over a specific location is extremely challenging. Indicators of presence and non-violent coercion over a large set of municipalities cannot be systematically recorded in an objective way. Violence, on the other hand, while more easily observed, is only imperfectly correlated with territorial dominance. However, non-violent dominance is unlikely to occur without any violence inflicted in the past, either as a way to legitimize influence with the citizenry or to oust any contesting (legal or illegal) group. It is thus reasonable to assume that the ability to inflict localized violence over a certain period could be expected to translate into influence in different ways. We thus follow a growing empirical literature on the Colombian conflict (see e.g. Ch et al., 2018; Acemoglu et al., 2013; Fergusson et al., 2018a,b), and use past violence over a period of years as an (imperfect) indicator of influence.[25]

To measure the intention of other armed groups to dispute the control of a specific area, we follow Acemoglu et al. (2015) to create a measure of *exposure to other armed groups* (neo-paramilitary criminal bands and the ELN guerrilla). This is obtained from the interaction of a presence dummy equivalent to that of FARC (and during the same

[24] *Noche y Niebla* sources include (Restrepo et al. 2004, p. 404) "1. Press articles from more than 20 daily newspapers of both national and regional coverage. 2. Reports gathered directly by members of human rights NGOs and other organizations on the ground such as local public ombudsmen and, particularly, the clergy." Notably, since the Catholic Church is present in even the most remote areas of Colombia, we have extensive coverage of violent events across the entire country.

[25] Arjona and Otálora (2011) compare existing databases of civil war violence in Colombia to survey evidence on armed groups' presence (for the small subsample of municipalities for which the latter is available) and conclude that while violence is likely to *underestimate* –by roughly the same magnitude- both guerrilla and paramilitary control, there is a non-negligible correlation between both measures.

period, 2011:1–2014:2), and a vector of (distance-penalized) neighboring municipalities. Specifically, we define the matrix $\mathbf{F}$ with entries $f_{ij}$ as:

$$f_{ij} = \frac{1}{1 + d_{ij}(1 + e_{ij})} \tag{3.1}$$

where $d_{ij}$ is the euclidean distance between municipalities $i$ and $j$, and $e_{ij}$ is the difference in altitude between municipality $i$ and $j$ (used to compute the an "effective distance", corrected by terrain ruggedness). Let $N(i)$ be the set of neighbors that share a common border with municipality $i$ and constitutes the $i^{th}$ row of the matrix $\mathbf{N}$, which summarizes all the neighbors of every municipality and has entries:

$$n_{ij} = \begin{cases} 0 & \text{if } j \notin N(i) \\ f_{ij} & \text{if } j \in N(i) \end{cases} \tag{3.2}$$

Note that the resulting measure varies between 0 an 1 and accounts for the differential exposure of other armed groups given the neighborhood of a specific municipality.

Using these definitions we end up with a sample composed by 129 municipalities with FARC presence, 172 municipalities with presence of other armed groups, and 49 with presence of both FARC and other groups. In addition, using the distance-penalized neighboring criterion, there are 564 municipalities *exposed* to the influence of other armed groups, 92 of which have FARC presence.

3.3. **Other data.** We complement these data with a large set of municipality-level characteristics from an annual panel constructed by *Centro de Estudios sobre Desarrollo Económico* (CEDE) at Universidad de los Andes. This dataset includes socioeconomic and geographical information for all the municipalities in Colombia. We gathered information on population, presence of coca plantations, altitude, size of the municipality, distance to the closest mayor city, tax revenue, an index for sound fiscal policy, literacy rate, and an index of rurality.

Table 2 presents summary statistics for our sample of 1,069 municipalities that includes all municipalities with a population of less than 200,000. We drop mayor cities and capitals that are mainly urban and less affected by the conflict.[26] On a given semester 2.1% of the municipalities experience the murder of a social leader, and the

[26]All our results are robust to including all Colombian municipalities.

homicide rate (per 1,000 inhabitants) of this group is on average 0.11 in a given semester.[27] In our sample 9% of the municipalities are exposed to FARC, 52% to other armed groups, and 8% to both of them.

We also present differences in observables between type of armed group presence at the municipality level before the ceasefire in Table 3. We focus our attention on differences between municipalities with only FARC presence and municipalities with both FARC and other armed groups' exposure (column 3). We find that in general both types of municipalities are similar in terms of geographic and socioeconomic characteristics before the ceasefire. There is some evidence that municipalities with FARC presence only had more killings of social leaders before the ceasefire.

Finally we split the evolution of killings by type of armed group presence since 2011. We divide the municipalities in two groups: presence of both FARC and other groups and presence of FARC only (see Figure 1 panel B). In general, we do not see any differential time pattern between these two types of municipalities before the ceasefire. However, there is a large increase in the number of killings in municipalities with presence of both FARC and other armed groups after the ceasefire. This already suggests that FARC areas exposed to the influence of other armed groups experienced an increase in killings after the ceasefire. The next section describes how we explore this idea more formally.

## 4. Empirical strategy

4.1. **Main specification.** Our identification strategy exploits the timing of the permanent ceasefire announced by FARC on December 20, 2014, during the peace negotiations with the Colombian government, and the spatial distribution of illegal armed groups in Colombia prior to the ceasefire. Since we are interested in how the killing of social leaders changed after the ceasefire in places with FARC presence that, in addition, are exposed to the influence of other armed groups, the main empirical strategy is based on a *difference-in-difference-in-differences* or triple differences model. More formally, using the subindex $m$ to denote municipalities and $t$ to denote time, we estimate:

[27]We do not have the universe of social leaders at the municipal level, so we use as denominator the total municipal population.

(4.1)
$$\begin{aligned} y_{mt} =& \alpha_m + \delta_t + \beta_1 \times \text{FARC}_m \times \text{ExposureOthers}_m \times \text{Cease}_t + \beta_2 \times \text{FARC}_m \times \text{Cease}_t \\ &+ \beta_3 \times \text{ExposureOthers}_m \times \text{Cease}_t + \sum_{c \in \mathbf{X_m}} (c \times \alpha_t) + \epsilon_{mt} \end{aligned}$$

where $y_{mt}$ is one of our measures of leaders killed,[28] $\text{FARC}_m$ is a dummy that takes the value one for municipalities with FARC presence as measured before the ceasefire, and $\text{ExposureOthers}_m$ is our measure of exposure to other armed groups which, as explained in the previous section, comes from the interaction of a dummy of presence of other armed groups and the vector $\mathbf{N}_m$ of distance-penalized vicinity. $Cease_t$ is a dummy that takes the value one after the start of the permanent ceasefire, in the first semester of 2015. $\alpha_m$ and $\delta_t$ are municipal and time fixed effects that capture any time-invariant municipal-level heterogeneity and any aggregate time shock, respectively. $X_m$ are municipality characteristics measured before the ceasefire that we interact with the time fixed effects to flexibly control for differential trends parametrized by each one of the municipal attributes. Finally, the error term $\epsilon_{mt}$ is allowed to be spatially and timely correlated, using the structure suggested by Conley (1999) and Conley (2016).

Our coefficient of interest is $\beta_1$ which captures the differential change in the killing of social leaders after the ceasefire in municipalities with FARC presence and that are exposed to the influence of other armed groups, relative to the change in municipalities with only FARC presence (but not exposed) or in municipalities exposed (but without FARC presence), taking into account: i) any differential effects driven by fixed municipality characteristics over time; ii) any aggregate time shock; and iii) differential municipal trends based on a large set of pre-treatment characteristics. The main identification assumption is that, in the absence of the ceasefire, the killing of social leaders in municipalities with FARC presence and exposed to other armed groups would have evolved in a similar way than the killing of leaders in other municipalities.

This "parallel trends" assumption can be asessed by estimating following dynamic version of (4.1):

$$\begin{aligned} y_{mt} =& \alpha_m + \delta_t + \sum_{j \in T} \text{FARC}_m \times \text{ExposureOthers}_m \times \delta_j^1 + \sum_{j \in T} \text{FARC}_m \times \delta_j^2 \\ &+ \sum_{j \in T} \text{ExposureOthers}_m \times \delta_j^3 + \sum_{c \in \mathbf{X_m}} (c \times \delta_t) + \epsilon_{mt} \end{aligned} \tag{4.2}$$

[28]These include the total number of killings, a dummy variable for any leader being killed in a municipality, or the rate of killings per 100,000 municipal inhabitants.

where $T$ includes all semester of our sample period but the second semester of 2014, which is the period right before the ceasefire. The parameters $\delta_j^1$ can be interpreted as the differential killings in municipalities with FARC presence that are exposed to the influence of other armed groups in year-semester $j$, relative to the year-semester right before the ceasefire.

The signature of the final peace agreement at the end of 2016 was followed by a mobilization of FARC fronts away from their areas of operation and into specific zones where, under the monitoring of a UN Peace Mission, FARC disarmed and started their reincorporation process. Thus, one could argue that, while the permanent ceasefire opened a window of opportunity for other armed groups to dispute the control of FARC-dominated territories, the mobilization of FARC personnel during the agreement implementation stage further facilitated the occupation of former FARC areas by other armed groups. If this is the case, then there should be a differential effect on the killing of social leaders starting in 2017:1, relative to that observed during the post ceasefire, pre-implementation period (2015:1 to 2016:2).

However, as mentioned in the introduction, the quest for territorial control by armed groups entails the selective killing of civilians to induce fear and encourage allegiance and support, and this strategy is independent of whether a ceasefire-compliant FARC is present or not. This, on the other hand, argues against any differential effect in the killing of social leaders after the implementation of the agreement relative to the ceasefire period. We take a skeptical view and estimate this potential differential effect across the post cease-fire period through the following model:

(4.3)

$$\begin{aligned} y_{mt} = \alpha_m + \delta_t + \beta_1 \times \text{FARC}_m \times \text{ExposureOthers}_m \times \text{Implementation}_t \\ + \beta_2 \times \text{FARC}_m \times \text{Implementation}_t + \beta_3 \times \text{ExposureOthers}_m \times \text{Implementation}_t \\ + \beta_4 \times \text{FARC}_m \times \text{ExposureOthers}_m \times \text{Cease}_t + \beta_5 \times \text{FARC}_m \times \text{Cease}_t \\ + \beta_6 \times \text{ExposureOthers}_m \times \text{Cease}_t + \sum_{c \in \mathbf{X_m}} (c \times \delta_t) + \epsilon_{mt} \end{aligned}$$

where $\text{Implementation}_t$ is a dummy that takes the value of one after beginning of the peace agreement implementation phase, in first semester of 2017. Relative to $\beta_4$, $\beta_1$ captures the differential change in the killing of social leaders during the implementation stage in comparison with the ceasefire period for the interaction of interest.

4.2. **Testing potential mechanisms.** We can use municipal-level variation across specific characteristics to estimate heterogenous effects that can shed some light regarding the underlying mechanisms of the main effect of interest. In particular, the killing of leaders may be exacerbated in municipalities that are more economically attractive for the controlling armed group. Moreover, municipalities with better state capacity and a more effective judiciary are likely to attenuate the unintended violent incentive provided by the ceasefire in formerly FARC strongholds. We thus divide a set of potential mechanisms into these two categories (attractiveness and state capacity) and test whether the estimated average effects entail some variation across these dimensions.

To that end, we augment the main specification in equation (4.1) by adding a fourth interaction term. Specifically, let the municipality characteristic $Z_m$ (measured before the ceasefire) be a measure of the relative attractiveness or else the relative cost of disputing a FARC stronghold. We estimate:

(4.4)

$$\begin{aligned} y_{mt} = {} & \alpha_m + \delta_t + \beta_1 \times \text{FARC}_m \times \text{ExposureOthers}_m \times Z_m \times \text{Cease}_t + \beta_2 \times \text{ExposureOthers}_m \times Z_m \times \text{Cease}_t \\ & + \beta_3 \times \text{FARC}_m \times Z_m \times \text{Cease}_t + \beta_4 \times \text{FARC}_m \times \text{ExposureOthers}_m \times \text{Cease}_t + \beta_5 \times \text{FARC}_m \times \text{Cease}_t \\ & + \beta_6 \times \text{ExposureOthers}_m \times \text{Cease}_t + \beta_7 \times Z_m \times \text{Cease}_t + \sum_{c \in \mathbf{X_m}} (c \times \alpha_t) + \epsilon_{mt} \end{aligned}$$

Our coefficient of interest, $\beta_1$, captures the differential killing of social leaders in places with FARC presence and exposed to other armed groups in municipalities with characteristic $Z_m$. Note that the results coming from this test are suggestive about potential mechanisms, but not necessarily causal. They have to be interpreted with caution.

Using the above specifications we estimate the impact of the December 2014 permanent ceasefire on the killing of social leaders in areas previously dominated by FARC and exposed to other armed groups (equation 4.1), the dynamic persistence of this effect (equation 4.2), the potential differential effect given by the start of the implementation of the peace agreement at the beginning of 2017 (equation 4.3), and heterogeneous effects given by the relative attractiveness of disputed municipalities as well as their institutional capacity (equation 4.4). The next section reports the estimated results.

## 5. Results

5.1. **Main results.** We start by describing, on Table 4, the empirical estimates of the main specification given by regression model 4.1. Recall that our main coefficient of interest is the (triple) interaction between a (pre-ceasefire) FARC presence indicator, the municipal "exposure" to the influence of other armed groups –given by the (distance penalized) vicinity of either neo-paramilitary criminal bands or ELN strongholds- and a dummy that captures the period after the announcement of the permanent ceasefire.

We measure the killing of social leaders in different ways. Columns 1 and 2 of Table 4 compute the rate of killings by 100,000 inhabitants (of the municipality where the death is recorded). Columns 3 and 4 use the non-normalized count of social leaders killed. Columns 5 and 6 focus on the extensive margin, coding a dummy variable that takes value one if at least one single leader is killed in a municipality-year.[29] While all specifications include both municipality and and time fixed effects, even columns include all the predetermined municipal controls (described in section 3) interacted with the time fixed effects to flexibly control by differential trends parametrized by each one of the municipal attributes.[30]

In all cases, the coefficient of interest is positive and significant. This suggests that social leaders are differentially targeted after the ceasefire in areas both formerly controlled by FARC and exposed to other armed groups. According to the magnitude of the estimate reported in Column 1, in places controlled by FARC prior to the ceasefire, a one standard deviation increase in the average municipal exposure to other armed groups (equal to 0.325, see second Panel from the top of Table 2, Column 2) increases the rate of leaders killed by 0.11 per 100,000 inhabitants ($=0.348 \times 0.325$) after the start of the permanent ceasefire. This effect is statistically significant at 5%, and it implies that the pre-ceasefire mean of the social leaders' homicide rate doubles.[31]

The estimate reported in Column 3 of Table 4, which focuses on the count of leaders killed, implies that in FARC-controlled areas a one standard deviation increase in the average municipal exposure to other armed groups increases the number of leaders killed

[29]This attenuates concerns about potential measurement error in the count of leaders, or the possibility that the results are driven by a higher density of social leaders in places with FARC presence and exposed to other armed groups.

[30]In Table A.1 we estimate the main regression using two models that take into account the count nature of our dependent variable, namely Negative Binomial and Conditional Poisson models. In both cases we find similar results to the ones presented in Table 4.

[31]Adding the differential trends parametrized by the predetermined controls, the equivalent estimated coefficient reported in Column 2 of Table 4 is slightly bigger in magnitude and implies an increase in the rate of leaders killed of 0.12 per 100,000 inhabitants ($=0.377 \times 0.325$). It is also significant at the 5% level.

by 0.03 (=0.09 × 0.325) after the ceasefire. Again, this implies that the pre-ceasefire mean of the count of leaders killed doubles.[32]

Finally, one potential concern given the low average of killings per semester, could be that our results are driven by a few outliers with a large number of killings in a given semester. To deal with this concern we present results on the extensive margin of killings. Column 5 implies that in places where FARC was present prior to the ceasefire a one standard deviation increase in the average municipal exposure to other armed groups increases the probability of a leader being killed in 1.7 percentage points.[33] This is equivalent to an 80% increase in the probability of any leader being killed in a municipality pre-ceasefire and it is significant at the 10% level.[34]

Table 4 also reveals that in municipalities exposed to the violent influence of other armed groups, but not previously controlled by FARC, there is a statistically significant drop in the killing of social leaders after the start of the permanent ceasefire. Moreover, in places dominated by FARC but not exposed to other armed groups, there is no significant differential change in the targeting of leaders. These results are consistent with our interpretation that it is the attempt at controlling territories previously dominated by FARC what drives the targeting of social leaders when the ceasefire provides the opportunity. Moreover, this evidence is also consistent with other armed groups substituting their violent effort to places formerly controlled by FARC and away from other places, after the ceasefire.

To partially test the identification assumption that, in the absence of the ceasefire, the killing of social leaders in municipalities with FARC presence exposed to other armed groups would have evolved in a similar way than the killing of leaders in other municipalities, and at the same time get a sense of how persistent is the differential targeting of leaders during the post ceasefire period, we present the results from estimating equation 4.2. This is a non-parametric version of the main empirical specification (equation 4.1).

The results are shown in Figure 3, where we plot the point estimates associated with the triple interaction of interest, together with the 95% confidence interval. The estimates plotted in Panel A included no controls and those of Panel B include the

[32]Allowing for differential trends parametrized by predetermined controls does not change the magnitude of the estimated coefficient substantially (a 16% of a standard deviation increase in then number of leaders killed), but it does increase statistical precision (see Column 4).

[33]A similar strategy was implemented by Crost et al. (2016) in an empirical setting with a low average of incidents per month.

[34]When the controls are added the estimated coefficient and the significance level remain the same (Column 6).

pre-determined controls interacted with the time fixed effects. Both cases include the municipality and time fixed effects. In neither case are there statistically significant coefficients in the years prior to the ceasefire, and the point estimates move around 0. This supports our choice of our *difference-in-differences* empirical strategy. However, the point estimates increase in magnitude after the start of the permanent ceasefire (with a slight decline in the last two semesters), and most of them are statistically significant.

5.2. **Robustness.** Our measure of exposure to the violent influence of other armed groups, based on a flexible neighborhood definition proposed by Acemoglu et al. (2015), interacts a dummy of presence of either neo-paramilitary criminal bands or the ELN guerrilla with a vector of (distance-penalized) neighboring municipalities (see section 3 fro details). Thus, in our baseline measure a municipality $m$ is more or less exposed to these groups depending on whether (and how many of) its neighboring municipalities experience their presence, and on how far is the centroid of these municipalities from that of $m$ (after controlling for the average slope of the land between the two centroids).

Our results are not driven by using this specific measure of exposure. On the one hand, a simpler alternative measure defines exposure as the share of $m$'s neighbors with presence of other armed groups. On the other hand, a more general measure does not restrict the distance-penalized indicator to $m$'s neighbors, and instead uses all municipalities in Colombia.

Tables A.2 and A.3 in the Appendix are equivalent to Table 4 but use these two alternative measures of exposure, respectively. In all cases the coefficient of interest is positive and significant.[35] Overall, this is reassuring of our territorial dispute interpretation, as the surge in the killing of leaders in former FARC-dominated territories after the permanent ceasefire are driven by the exposition to other armed groups.

Our results are not driven by lumping together neo-paramilitary criminal bands and ELN in the "other armed groups" category. These illegal armed actors have several differences, including their political objectives and their military strategy, which arguably involve different relationships with civilians.[36] Importantly, however, because of the irregular nature of Colombia's internal conflict, controlling valuable municipalities is instrumental to both groups (Berman and Matanoc, 2015).

[35]The only exception is when the dependent variable is the dummy of any leader killed, differential trends parametrized according to pre-determined controls are not included, and the alternative measure of exposure is the share of neighbors with presence of other armed groups (Column 5 of Table A.2).

[36]Some of these differences are discussed in section 2.

Table 5 shows the results from estimating equation 4.1, using the rate of leaders killed as dependent variable, but including in the measure of other armed groups only the neo-paramilitary criminal bands (Columns 1 and 2) or only the ELN guerrilla (Columns 3 and 4). Interestingly, FARC-dominated municipalities experience a differential surge in the rate of leaders killed after the start of the permanent ceasefire when they are exposed to the violent influence of either group, as measured separately. Moreover, in spite of the difference in the size of the reported estimated coefficients in Table 5, the economic magnitude of the effect is essentially equivalent.

Focusing on the even columns, which flexibly control for municipal-specific pre-determined characteristics, we find that in places with FARC presence prior to the ceasefire, a one standard deviation increase in the average municipal exposure to neo-paramilitary criminal bands (to the ELN) increases the rate of leaders killed by $0.353 \times 0.292 = 0.10$ ($0.515 \times 0.178 = 0.09$) per 100,000 inhabitants after the start of the permanent ceasefire. Recall that this effect, which in both cases is significant at the 5% level, is equivalent to doubling the rate of leaders killed relative to its pre-period mean.

At the end of our sample period the peace agreement was signed and its implementation started with the movement of FARC combatants to special hosting areas for disarmament and reincorporation.[37] We estimate equation 4.3 to test whether the implementation of the peace agreement further encouraged the killing of social leaders by armed groups taking advantage of FARC's internal migration. This is picked up by the triple interaction between our FARC presence measure, the exposition to other armed groups, and a time dummy that indicates the implementation period (the two last semesters of our sample period).

Table 6 shows the estimated coefficients from specification. The coefficient of interest is not statistically significant which suggests no differential effect on the rate of leader killed in this sub-period.[38] We interpret this as suggesting that the ceasefire, which was by and large respected by FARC (to credibly signal their willingness of reaching a peace agreement) was a high enough incentive for other armed groups to dispute the control of this group's territorial strongholds, and there was no differential such incentive when the implementation stage of the peace agreement started.

### 5.3. **Potential mechanisms.**

[37]Called *Territorial Spaces for Training and Reincorporation*, ETCR from the Spanish acronym.

[38]The Table also shows that the level effect for this sub-period is positive and statistically significant when the pre-determined controls are added.

5.3.1. *Type of targeted leaders.* The label 'social leader' encompasses several different type activists that represent different 'communities' and hence have different motives and work for different causes. Table 1 lists the different leaders included in the *Somos Defensores* data, such as leaders of community councils, ethnic groups, labor unions, teachers, sexual minorities, etc. Arguably, however, not all such leaders are equally attractive as potential targets of armed groups seeking territorial control. The qualitative discussion of section 2.2, in fact, implies that a specially risky category is that of leaders of local community councils or peasants dispossessed from their land.

To investigate the effect of the ceasefire on the killing of different type of leaders, we repeat Panel B of Figure 1 by splitting the evolution of killings into four categories: leaders of local community councils, leaders of peasant and conflict-related organizations, leaders of ethnic (indigenous or Afro-Colombian) communities, and a residual category of 'other' leaders. This is reported in Figure A.1. We note a stark increase in the killings of the first two categories (Panels A and B) right after the start of the permanent ceasefire, in places with both FARC presence and exposed to other armed groups in the pre-ceasefire period (but not in places with just FARC presence). However, we do not find a similar trend in either the category of ethnic leaders or in the residual category (Panels C and D).

A more formal test is presented on Table A.4 of the appendix, where we re-run the baseline empirical specification and study the effect of the ceasefire on the killing of leaders of different types, in places with both FARC presence and exposed to other armed groups. While the estimated coefficient of interest is positive throughout, it is only statistically significant (at the 5%) for the case of local community council leaders. While this is consistent with the anecdotal discussion provided above, these results have to be interpreted with caution given that splitting the dependent variable by type of leader leaves us with very few events per category.

5.3.2. *Heterogeneous effects.* Having established the type of leaders that are more likely to be targeted, we continue investigating the potential mechanisms of our main result by studying the type of municipalities that either make it more likely that leaders are killed, or else that help attenuate the incentive of other armed groups to selectively kill social leaders in areas previously dominated by FARC. We do so by estimating heterogenous effects for a range of municipal characteristics using equation 4.4.

We look at three broad set of factors: the demand for land restitution, the (lack of) state capacity and the economic attractiveness of the municipality.

First, the lack of land property rights in rural areas has been at the heart of the Colombian conflict since its initial stages (Albertus and Kaplan, 2012; Flores, 2014). Traditionally, left-wing guerrillas have been in favor of communal rural lands and the right of peasants to appropriate idle land and peripheral 'baldios'. On the other hand, right-wing paramilitary groups have helped local landowners and drug lords concentrate and formalize land, often through the use of violence and intimidation (Ch et al., 2018). Indeed, most of the victims of the armed conflict (7.4 out of 8.5 million as recorded by the *Unique Victims' Registry*) are IDPs, and many of them were dispossessed from their land by illegal armed groups, especially the paramilitary.

Law 1448 of 2011 (known as the 'Victims and Land Restitution Law') provided the legal framework for conflict victims to obtain assistance and reparations from the government, including humanitarian aid, psychological assistance and a large set of material reparations. This package notably includes land restitution. To facilitate the latter, the law created the *Land Restitution Unit*, a Presidential special unit in charge of receiving all the land restitution requests and of overseeing the subsequent judicial and administrative restitution processes.[39]

Given the above discussion, we posit that the incentive of illegal armed groups to dispute the territories with prior FARC dominance following the start of the ceasefire is larger in municipalities that, since the enactment of Law 1448, have had a larger share of land claimed for restitution. In addition, we also expect that in this case the perpetrators are more likely to be neo-paramilitary criminal bands, which either directly benefited or represent groups of society who benefited from earlier land dispossession. This goes in line with some anecdotal accounts, which suggest that a non-negligible share of social leader killed in Colombia are leaders of local community councils who specialize in mobilizing land-dispossessed victims to claim their land.[40]

Column 1 of Table 7 reports the estimated coefficient of the four-way interaction term described in equation 4.4. In the case, the potential mechanism $Z_{,}$ is a dummy

[39]Between 2012 and 2017 over 204 thousand hectares of land had been restituted (Unidad Administrativa Especial de Gestión de Restitucioón de Tierras, 2018).

[40]See "Si no protegen a los líderes comunales el Acuerdo de Paz fracasa", *La Silla Vacía*, 08/13/2018. Available from: https://m.lasillavacia.com/si-no-protegen-los-lideres-comunales-el-acuerdo-de-paz-fracasa-67442?utm_source=newsletter&utm_medium=email&utm_campaign=Las2520cuatro2520patas2520de2520La2520Silla (last accessed November 30, 2018).

variable that equals one for municipalities with land restitution claims above the median.[41] We find that municipalities with FARC presence and that are exposed to other armed groups experienced a larger boost in the killing of social leaders after the start of the ceasefire if they also had a relatively large number of land restitution requests. Moreover, as expected, this heterogeneous effect is entirely driven by the killings perpetrated by neo-paramilitary criminal bands, and not by the ELN guerrilla.[42] Again, this result suggests that other armed groups target local leaders whose activity constitutes a threat group's particular interests in a specific territory.

Second, we have argued that the very nature of the peace process with FARC – that excluded other armed groups from the negotiations- constitutes a threat to the sustainability of the achieved 'peace' if not accompanied by state-led efforts to bring its capacity to the territory and consolidate its institutional presence. This argument can be extended to the degree of existing state capacity (prior to the ceasefire) in the municipalities with FARC presence. Areas with existing state institutions would make it more costly for other armed groups to take control of the vacant territories by targeting the local populations.

We explore this idea formally by testing the extent of which different measures of pre-determined state capacity at the municipal level attenuate the targeting of social leaders by other armed groups in previously FARC controlled areas after the start of the ceasefire. Unlawful violence perpetrated by armed groups can be checked either by the military hierarchy or by other branches of the government (such as the judiciary). We thus use a measure of local judicial inefficiency (Column 2 of Table 7) and the distance to the nearest military unit (Column 3) as proxies of state capacity to explore potential heterogeneous effects of our main result according municipal-level variation in state capacity.[43]

The four-way interaction with judicial inefficiency measure is positive and significant, suggesting that when the local judiciary is inefficient (an inverse proxy of state capacity), illegal armed groups find it easier to get away with the killing of local community

[41]Specifically, we measure the intensity of the demand for land restitution using the number of requests for land restitution at the municipal level. Our dataset includes all the requests since the creation of the *Land Restitution Unit* until June 2015. However, our measure is only for the pre-ceasefire period.
[42]Result available upon request.
[43]To measure judicial inefficiency, we follow Acemoglu et al. (2018) and use data from Colombia's *Inspector General Office*, the institution in charge of disciplinary oversight of all public servants. Based on an event-based dataset with all processes arising from complaints against public servants from 1995 to 2010, we compute judicial inefficiency as the ratio between the number of complaints against judicial officials in a specific municipality and all the complaints against any public servant in that same municipality.

leaders.[44] Specifically, we find that a one standard deviation increase in the level of judicial inefficiency (0.08) increases the rate of leaders killed in 0.10 ($=3.893\times0.08\times0.325$). This is equivalent to doubling the sample mean. Moreover, as in the case of land restitution we find that the effect is mainly driven by exposure to paramilitary groups, which are the ones that have been more involved in scandals related to co-opting local judges (see López 2007, Ávila and López 2010).[45] We do not find a significant heterogenous effect related to the vicinity to military units, as measured by the logarithm of the distance between the military base and the municipal centroid.

Third, to test for differential effects based on the availability (or potential) of illegal rents, we add estimate a heterogeneous effect based on the *coca suitability* of each municipality (see Mejía and Restrepo 2015).[46] As reported on column 4, we do not find that more leaders are killed in places with higher cocal suitability. Moreover, this no-result is robust to measuring coca with actual coca availability (the share of municipal land cultivated with coca) or the availability of (legal or illegal) natural-resource mines. Overall our results do not support the idea that the economic value of municipalities exacerbate the killing of social leaders.

5.3.3. *Indiscriminate violence as an alternative explanation.* As a final attempt to identify the potential mechanism explaining our main result we investigate the effect of the ceasefire on the aggregate homicide rate of municipalities. Our story requires that the killing of social leaders is driven by the selective targeting of leaders so as to thwart collective action at the local level, and not by indiscriminate municipal violence. To rule out that our results are explained by an aggregate increase in insecurity in FARC-dominated territories exposed to other armed groups after the ceasefire, that mechanically translates into more leaders killed, Table 8 estimates equation 4.1 using as dependent variable the overall municipal homicide rate. The coefficient of interest, associated with the triple interaction, is not statistically significant. This is reassuring that social leaders are being selectively targeted by other armed groups.

## 6. Conclusions

Territorial contestation by armed groups in the context of civil war often involves the selective killing of civilians. This strategy, which has been documented by a vast literature in political science and economics, is used to encourage allegiance, as well as

[44] Acemoglu et al. (2018) show that one source of local judicial inefficiency is the capture by groups with *de facto* political power to get away with unlawful behavior.
[45] Results available upon request.
[46] We thank the authors for sharing their data.

to achieve informal collaboration, prevent defections, mobilize supporters, and increase military strength. In this paper, we show that the recent surge in the systematic killing of local social leaders in Colombia can be –at least partially- explained by the vacuum of power that FARC's permanent ceasefire left in this group's controlled areas, which encouraged other illegal armed groups seeking to occupy these areas to target local community leaders.

Our estimation strategy exploits the temporal variation given by the ceasefire as well as the cross-sectional variation given by the presence of FARC and the exposure to the influence of other armed groups. We do so in a triple differences model that controls for two-way fixed effects and for differential trends parametrized by a large set of pre-determined municipal controls.

Our results are not explained by the overall municipal homicide rate which suggests that they are not caused by either a differential change in reporting after the ceasefire or by a strategy of indiscriminate violence against civilians, which is in line with the literature. In addition, we show that the killing of leaders is exacerbated in areas with high demand for land restitution and a weaker state capacity in the form of an inefficient local judiciary. We also show that our results are driven by the window of opportunity for territorial control given by the permanent ceasefire, but are not exacerbated (or attenuated) during the implementation stage of the peace agreement, that started at the beginning of 2017.

Overall, the killing of social leaders, we argue, constitutes an unintended negative consequence of a partial pacification process that was not accompanied by an effort to consolidate the state control in former FARC strongholds. Despite the historical importance and the tremendous opportunity of the peace agreement with the FARC, the killing of social leaders may be the beginning of a new and more sophisticated stage of social disruption in Colombia. We hope to be wrong.

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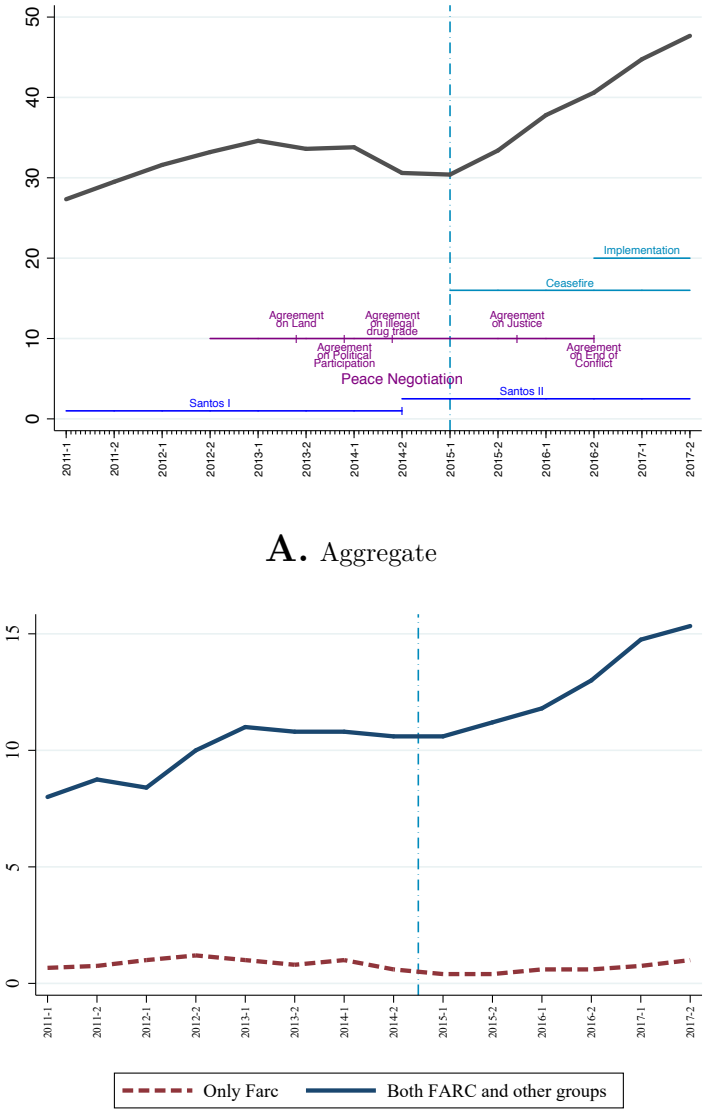
FIGURE 1. **Evolution of social leaders killings**

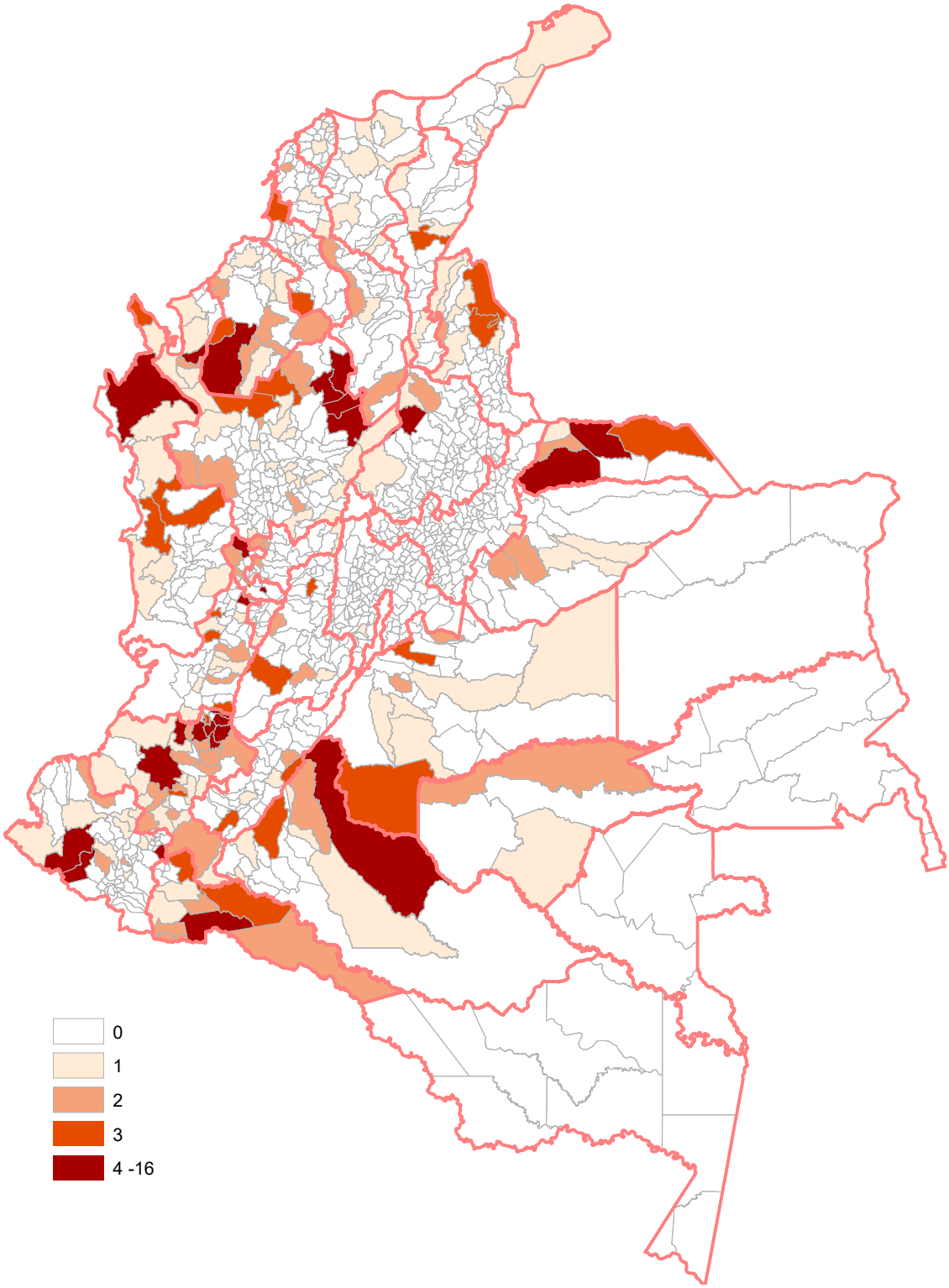



**A.** Aggregate

**B.** Split by type of municipality

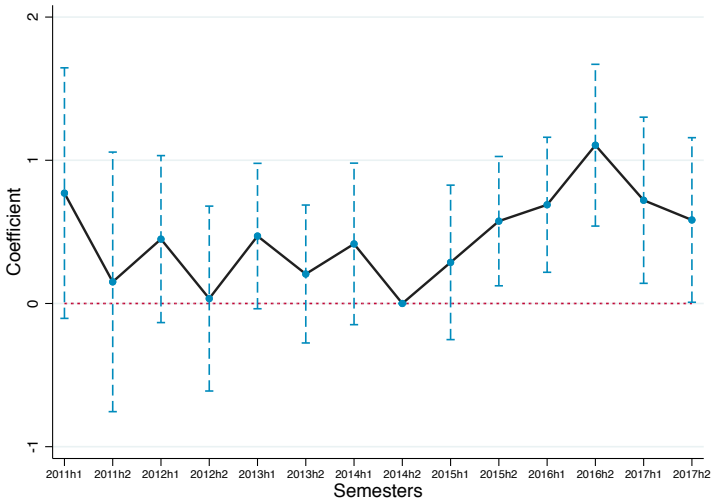
**Notes**: This figure presents the evolution of killings of social leaders from 2010 to 2017. Panel A presents the distribution of total cases per semester and adds the description of the peace process. In panel B we split the sample by type of municipality, distinguishing between municipalities with FARC presence and above the median of exposure to other armed groups and municipalities with FARC presence but not exposed. In both panels we show one-year moving averages to smooth the data.

FIGURE 2. **Spatial distribution of social leaders killings**

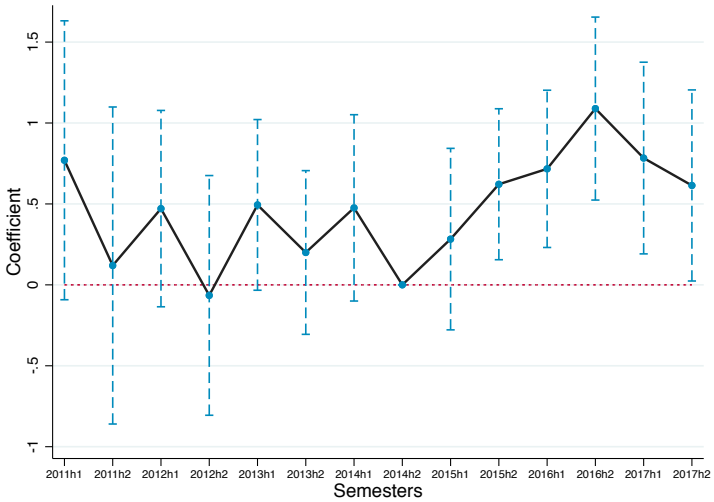



**Notes**: This map presents the spatial distribution of killings of social leaders for the sample 2011 to 2017.

FIGURE 3. **Dynamic estimation and parallel trends**




**A.** Without controls




**B.** With controls

**Notes**: This figure presents the coefficients from our dynamic specification presented in equation (4.2). We present the point estimates of the regression and the confidence of interval at the 95%.

TABLE 1. Leaders killed by activity

| Activity | N (1) | % (2) |
|---|---|---|
| Local council | 165 | 33.3 |
| Indigenous | 109 | 22.0 |
| Peasant | 59 | 11.9 |
| Conflict victims | 47 | 9.5 |
| Union member | 32 | 6.5 |
| Afro | 23 | 4.7 |
| Human rights | 19 | 3.8 |
| LGBT | 18 | 3.6 |
| Student-teacher | 20 | 4.0 |
| Women | 3 | 0.6 |

**Notes:** This table shows the distribution of homicides by type of social leader during our period of analysis, 2011:1 to 2017:2.

Table 2. Descriptive Statistics: Time-invariant variables

| | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| *Social leaders killings* | | | | |
| Dummy of any killing | 0.021 | 0.144 | 0.0 | 1.0 |
| Number of killings | 0.026 | 0.189 | 0.0 | 5.0 |
| Rate of killings | 0.113 | 1.051 | 0.0 | 38.4 |
| *Illegal groups presence* | | | | |
| FARC | 0.093 | 0.290 | 0.0 | 1.0 |
| Exposure to other armed groups | 0.128 | 0.325 | 0.0 | 1.3 |
| Exposure to neo-paramilitary groups | 0.103 | 0.292 | 0.0 | 1.3 |
| Exposure to ELN | 0.035 | 0.178 | 0.0 | 1.2 |
| *Geographic* | | | | |
| Altitude (Km) | 1.149 | 0.903 | 0.0 | 3.1 |
| Distance to main city kms | 80.772 | 55.551 | 0.0 | 376.1 |
| Rural share | 0.579 | 0.229 | 0.0 | 1.0 |
| Municipal area in km$^2$ | 865.268 | 2996.145 | 15.0 | 65674.0 |
| *Basic socioeconomic* | | | | |
| Log (population) | 9.489 | 0.948 | 6.9 | 12.2 |
| Poverty index | 69.924 | 15.631 | 14.3 | 100.0 |
| Literacy rate | 83.661 | 8.447 | 30.0 | 97.8 |
| Language test scores | 47.977 | 2.200 | 38.4 | 57.1 |
| Math test scores | 47.863 | 2.694 | 39.4 | 61.7 |
| *Fiscal* | | | | |
| Log (Tax income) | 6.726 | 1.408 | 0.0 | 12.1 |
| Good fiscal policy index | 66.239 | 9.359 | 0.0 | 94.2 |

**Notes:** Control variables measure before 2010. Altitude above sea level of the urban center of each municipality. Distance is linear distance to the state's capital. Rural share is the percentage of population outside urban center. Municipal area official in km$^2$. Total municipal population (in logs). Proportion of people in poverty according to multidimensional index. Percentage literate population. Math and language scores is the municipal average scores per area for high-school graduates in the official standardized test. Tax income is municipal total amount collected taxes. Good fiscal policy index of efficiency, legal requirements and management of the fiscal resources.

Table 3. Descriptive Statistics by illegal groups presence

| | Presence FARC (1) | Presence Other Groups (2) | Only FARC vs. Both FARC and Other Groups (3) |
|---|---|---|---|
| *Social leaders killings* | | | |
| Dummy of any killing | 0.058 | 0.052 | 0.038 |
| | [0.000] | [0.000] | [0.024] |
| Number of killings | 0.073 | 0.061 | 0.049 |
| | [0.000] | [0.000] | [0.026] |
| Rate of killings | 0.290 | 0.243 | 0.209 |
| | [0.000] | [0.000] | [0.099] |
| *Geographic* | | | |
| Altitude (Km) | -0.276 | -0.542 | -0.134 |
| | [0.001] | [0.000] | [0.436] |
| Distance to main city kms | 13.673 | 31.071 | 25.678 |
| | [0.023] | [0.000] | [0.057] |
| Rural share | 0.062 | -0.099 | -0.004 |
| | [0.006] | [0.000] | [0.944] |
| Municipal area in $km^2$ | 1900.961 | 833.764 | 1140.908 |
| | [0.000] | [0.001] | [0.149] |
| *Basic socioeconomic* | | | |
| Log (population) | 0.552 | 0.760 | 0.322 |
| | [0.000] | [0.000] | [0.099] |
| Poverty index | 9.026 | 5.026 | 7.552 |
| | [0.000] | [0.001] | [0.016] |
| Literacy rate | -5.038 | -3.873 | -7.021 |
| | [0.000] | [0.000] | [0.000] |
| Language test scores | -0.765 | -0.888 | -0.973 |
| | [0.001] | [0.000] | [0.014] |
| Math test scores | -1.241 | -0.774 | -0.971 |
| | [0.000] | [0.003] | [0.061] |
| *Fiscal* | | | |
| Log (Tax income) | 0.363 | 0.557 | 0.250 |
| | [0.002] | [0.001] | [0.346] |
| Good fiscal policy index | 0.184 | 0.263 | -0.831 |
| | [0.813] | [0.826] | [0.560] |

**Notes:** Control variables measured before 2010 and social leader killings before 2014:2. Column 2 reports the differences between municipalities with FARC presence and municipalities with no presence of any group. Column 2 reports differences between municipalities with presence of other armed groups and municipalities with no presence of any group. Column 3 reports differences between municipalities with presence of FARC only and municipalities with presence of both FARC and other armed groups. p-value in square brakets.

TABLE 4. Killing of social leaders, FARC presence, and exposure to other armed groups

| | Killing rate | | Number of killings | | Any killing | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Cease × FARC × ExposureOthers | 0.348** | 0.377** | 0.090** | 0.095*** | 0.052* | 0.055* |
| | (0.149) | (0.154) | (0.037) | (0.036) | (0.030) | (0.030) |
| Cease × FARC | −0.113 | −0.144 | −0.012 | −0.020 | 0.001 | −0.006 |
| | (0.098) | (0.102) | (0.014) | (0.015) | (0.012) | (0.013) |
| Cease × ExposureOthers | −0.178*** | −0.225*** | −0.032*** | −0.042*** | −0.018** | −0.027*** |
| | (0.060) | (0.067) | (0.011) | (0.012) | (0.009) | (0.009) |
| Observations | 14966 | 14966 | 14966 | 14966 | 14966 | 14966 |
| Municipalities | 1069 | 1069 | 1069 | 1069 | 1069 | 1069 |
| Municipality FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Period FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Controls | | ✓ | | ✓ | | ✓ |
| Avg Dep Var | 0.101 | 0.101 | 0.028 | 0.028 | 0.021 | 0.021 |
| SD Dep Var | 1.083 | 1.083 | 0.219 | 0.219 | 0.144 | 0.144 |

**Notes:** This table presents the results from the main specification in equation (4.1). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. Columns (1) and (2) use the number of homicides of social leaders over total population, columns (3) and (4) use as dependent variable the total number of homicides of social leaders, while columns (5) and (6) use a dummy that takes the value one if there was at least one social leader assassinated. *Cease* is a dummy that takes the value one for the period after 2015:1. *FARC* is a dummy for those municipalities with FARC presence. *ExposureOthers* is a continuous variable that measures ELN or paramilitary groups presence in the municipality or their (distance-penalized) vicinity. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

TABLE 5. Killing of social leaders by exposure to different armed groups

| | Neo-Paramilitary | | ELN | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Cease × FARC × ExposureOthers | 0.330** | 0.353** | 0.483** | 0.515** |
| | (0.165) | (0.168) | (0.230) | (0.240) |
| Cease × FARC | −0.099 | −0.144 | −0.061 | −0.088 |
| | (0.092) | (0.096) | (0.080) | (0.083) |
| Cease × ExposureOthers | −0.180*** | −0.225*** | −0.293 | −0.300 |
| | (0.068) | (0.077) | (0.189) | (0.192) |
| Observations | 14966 | 14966 | 14966 | 14966 |
| Municipalities | 1069 | 1069 | 1069 | 1069 |
| Municipality FE | ✓ | ✓ | ✓ | ✓ |
| Period FE | ✓ | ✓ | ✓ | ✓ |
| Controls | | ✓ | | ✓ |
| Avg Dep Var | 0.101 | 0.101 | 0.101 | 0.101 |
| SD Dep Var | 1.083 | 1.083 | 1.083 | 1.083 |

**Notes:** This table presents the results from the main specification in equation (4.1). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. The dependent variable is the number of homicides of social leaders over total population. *Cease* is a dummy that takes the value one for the period after 2015:1. *FARC* is a dummy for those municipalities with FARC presence. In columns (1) and (2) *ExposureOthers* is a continuous variable that measures paramilitary groups presence in the municipality or their (distance-penalized) vicinity, while in columns (3) and (4) is a continuous variable that measures ELN presence. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

TABLE 6. Killing of social leaders during the cease fire and the implementation of the peace agreement

| | Killing rate | |
|---|---|---|
| | (1) | (2) |
| Implementation × FARC × ExposureOthers | −0.0121 | 0.0212 |
| | (0.2159) | (0.2171) |
| Cease × FARC × ExposureOthers | 0.352** | 0.369** |
| | (0.161) | (0.165) |
| Implementation × FARC | 0.1269 | 0.0782 |
| | (0.1548) | (0.1620) |
| Cease × FARC | −0.155 | −0.170 |
| | (0.099) | (0.105) |
| Implementation × ExposureOthers | 0.0101 | −0.0198 |
| | (0.0577) | (0.0649) |
| Cease × ExposureOthers | −0.182*** | −0.218*** |
| | (0.063) | (0.070) |
| Implementation + Cease × FARC × ExposureOthers | 0.340 | 0.391* |
| | (0.216) | (0.221) |
| Observations | 14966 | 14966 |
| Municipalities | 1069 | 1069 |
| Municipality FE | ✓ | ✓ |
| Period FE | ✓ | ✓ |
| Controls | | ✓ |
| Avg Dep Var | 0.101 | 0.101 |
| SD Dep Var | 1.083 | 1.083 |

**Notes:** This table presents the results from the main specification in equation (4.3). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. The dependent variable is the number of homicides of social leaders over total population. *Cease* is a dummy that takes the value one for the period after 2015:1, *Implementation* is a dummy that takes the value one for the period after 2017:1. *FARC* is a dummy for those municipalities with FARC presence. *ExposureOthers* is a continuous variable that measures ELN or paramilitary groups presence in the municipality or their (distance-penalized) vicinity. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

TABLE 7. Heterogeneous effects by municipality characteristics

| | Land Restitution | Judicial Inefficiency | Military Presence | Coca Suitability |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Cease × FARC × ExposureOthers × Z | 0.669* | 3.893* | -0.123 | 0.030 |
| | (0.345) | (2.096) | (0.108) | (0.060) |
| Cease × FARC × Z | 0.009 | 0.084 | 0.033 | -0.031 |
| | (0.230) | (1.102) | (0.068) | (0.084) |
| Cease × ExposureOthers × Z | -0.200 | -1.510** | 0.009 | -0.010 |
| | (0.128) | (0.684) | (0.037) | (0.083) |
| Cease × FARC × ExposureOthers | 0.001 | 0.035 | 0.436*** | 0.474*** |
| | (0.266) | (0.241) | (0.168) | (0.162) |
| Cease × FARC | -0.154 | -0.136 | -0.138 | -0.161 |
| | (0.163) | (0.120) | (0.100) | (0.103) |
| Cease × ExposureOthers | -0.133 | -0.120 | -0.240*** | -0.217*** |
| | (0.109) | (0.073) | (0.067) | (0.071) |
| Cease × Z | 0.070** | 0.184 | -0.007 | 0.013 |
| | (0.034) | (0.180) | (0.019) | (0.029) |
| Observations | 14966 | 14966 | 14966 | 14154 |
| Municipalities | 1069 | 1069 | 1069 | 1011 |
| Municipality FE | ✓ | ✓ | ✓ | ✓ |
| Period FE | ✓ | ✓ | ✓ | ✓ |
| Controls | ✓ | ✓ | ✓ | ✓ |
| Avg Dep Var | 0.101 | 0.101 | 0.101 | 0.101 |
| SD Dep Var | 1.083 | 1.083 | 1.083 | 1.083 |

**Notes:** This table presents the results from the main specification in equation (4.4). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. The dependent variable is the number of homicides of social leaders over total population. *Cease* is a dummy that takes the value one for the period after 2015:1, *Implementation* is a dummy that takes the value one for the period after 2017:1. *FARC* is a dummy for those municipalities with FARC presence. *ExposureOthers* is a continuous variable that measures ELN or paramilitary groups presence in the municipality or their (distance-penalized) vicinity. *Land restitution* is a dummy for those municipalities with the number of request for land restitution over the size of the municipality being above the median. *Judicial inefficiency* is the share of justice employees under disciplinary investigations. *Military presence* is the logarithm of the distance to the closest military unit. *Coca suitability* is a dummy that takes the value one if the index for coca suitability from Mejía and Restrepo (2015) is above the median of the empirical distribution weighted by the exposure to coca plantations in neighboring municipalities. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

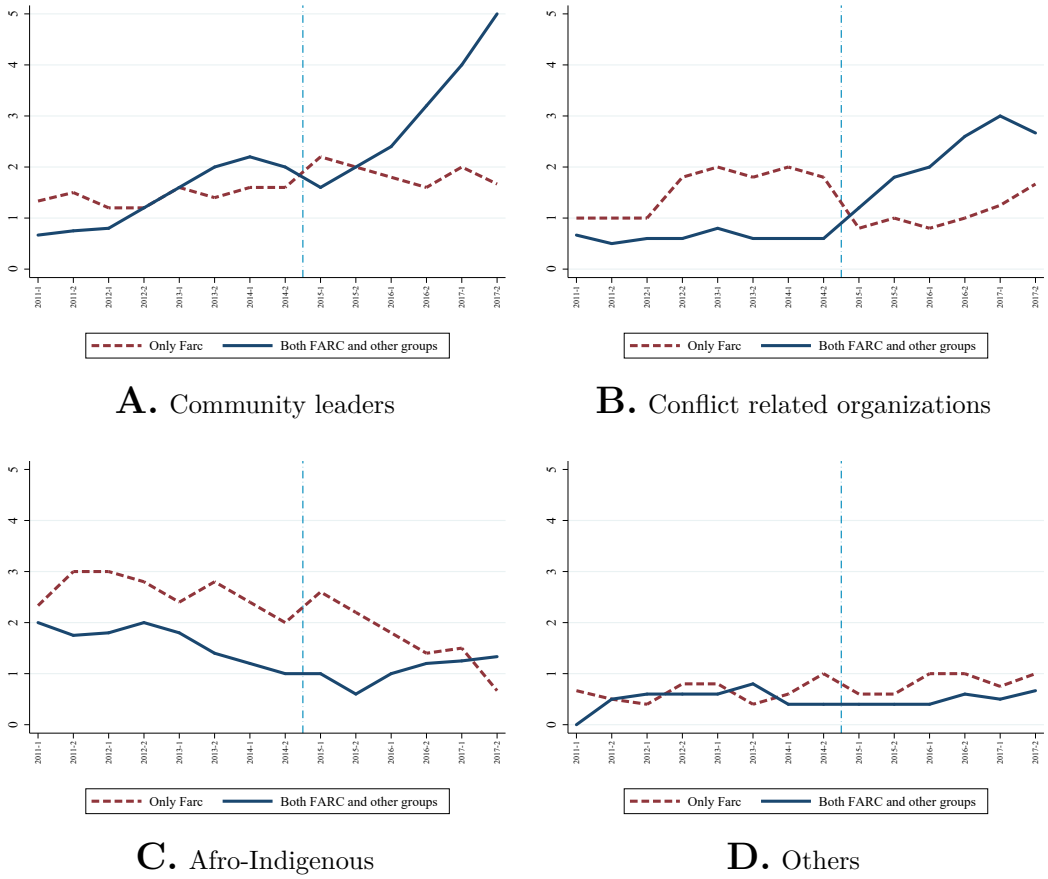
TABLE 8. Overall homicides rate, FARC presence, and exposure to other armed groups

| | Homicide rate | |
|---|---|---|
| | (1) | (2) |
| Cease × FARC × ExposureOthers | 1.511 | 1.499 |
| | (3.222) | (3.131) |
| Cease × FARC | −0.686 | −0.011 |
| | (2.097) | (2.126) |
| Cease × ExposureOthers | −2.339** | −2.457** |
| | (1.066) | (1.111) |
| Observations | 14966 | 14966 |
| Municipalities | 1069 | 1069 |
| Municipality FE | ✓ | ✓ |
| Period FE | ✓ | ✓ |
| Controls | | ✓ |
| Avg Dep Var | 12.595 | 12.595 |
| SD Dep Var | 28.347 | 28.347 |

**Notes:** This table presents the results from the main specification in equation (4.1). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. The dependent variable is the total number of homicides excluding social leaders over total population. *Cease* is a dummy that takes the value one for the period after 2015:1. *FARC* is a dummy for those municipalities with FARC presence. *ExposureOthers* is a continuous variable that measures ELN or paramilitary groups presence in the municipality or their (distance-penalized) vicinity. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

ONLINE APPENDIX

FIGURE A.1. **Evolution of killings by leader type**




**Notes**: This figure presents the evolution of killings of social leaders from 2010 to 2017 by type of leader. We split the sample by type of municipality into those with FARC and other groups exposure, and only FARC. We define those municipalities with exposure as those that have any positive exposure. Panel A presents the evolution for community leaders (30%), panel B for leaders of peace related organizations (20%), panel C for afro and indigenous leaders (27%), while panel D present the rest (23%). In all the panels we show one-year moving averages to smooth the data.

Table A.1. Killing of social leaders, FARC presence and exposure to other armed groups: Using Negative Binomial and Conditional Poisson models

| | Negative Binomial | | Conditional Poisson | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Cease × FARC × ExposureOthers | 1.612*** | 1.586*** | 1.681*** | 1.663*** |
| | (0.435) | (0.465) | (0.421) | (0.451) |
| Cease × FARC | -0.633** | -0.873*** | -0.803*** | -0.976*** |
| | (0.296) | (0.327) | (0.285) | (0.320) |
| Cease × ExposureOthers | -1.165*** | -1.343*** | -1.232*** | -1.459*** |
| | (0.289) | (0.326) | (0.282) | (0.319) |
| Observations | 2786 | 2786 | 2786 | 2786 |
| Municipalities | 199 | 199 | 199 | 199 |
| Municipality FE | ✓ | ✓ | ✓ | ✓ |
| Period FE | ✓ | ✓ | ✓ | ✓ |
| Controls | | ✓ | | ✓ |
| Avg Dep Var | 0.008 | 0.008 | 0.008 | 0.008 |
| SD Dep Var | 0.105 | 0.105 | 0.105 | 0.105 |

**Notes:** This table presents the results from the main specification in equation (4.1). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. All the columns use as dependent variable the total number of homicides of social leaders. Columns (1) and (2) estimate a negative binomial model while columns (3) and (4) estimate a conditional poisson model. *Cease* is a dummy that takes the value one for the period after 2015:1. *FARC* is a dummy for those municipalities with FARC presence. *ExposureOthers* is a continuous variable that measures ELN or paramilitary groups presence in the municipality or their (distance-penalized) vicinity. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Standard errors in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

TABLE A.2. Measuring exposure to other armed groups using the presence in neighboring municipalities

| | Homicides rate | | Homicides | | Any homicides | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Cease × FARC × NeighOthers | 0.252** | 0.289** | 0.054** | 0.060** | 0.033 | 0.036* |
| | (0.114) | (0.120) | (0.027) | (0.026) | (0.022) | (0.021) |
| Cease × FARC | −0.130 | −0.172 | −0.013 | −0.021 | −0.001 | −0.007 |
| | (0.105) | (0.110) | (0.015) | (0.016) | (0.013) | (0.014) |
| Cease × NeighOthers | −0.131*** | −0.171*** | −0.019** | −0.028*** | −0.010* | −0.018*** |
| | (0.046) | (0.053) | (0.008) | (0.008) | (0.006) | (0.007) |
| Observations | 14966 | 14966 | 14966 | 14966 | 14966 | 14966 |
| Municipalities | 1069 | 1069 | 1069 | 1069 | 1069 | 1069 |
| Municipality FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Period FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Controls | | ✓ | | ✓ | | ✓ |
| Avg Dep Var | 0.101 | 0.101 | 0.028 | 0.028 | 0.021 | 0.021 |
| SD Dep Var | 1.083 | 1.083 | 0.219 | 0.219 | 0.144 | 0.144 |

**Notes:** This table presents the results from the main specification in equation (4.1). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. Columns (1) and (2) use the number of homicides of social leaders over total population, columns (3) and (4) use as dependent variable the total number of homicides of social leaders, while columns (5) and (6) use a dummy that takes the value one if there was at least one social leader assassinated. *Cease* is a dummy that takes the value one for the period after 2015:1. *FARC* is a dummy for those municipalities with FARC presence. *NeighOthers* is the share of ELN or paramilitary groups presence among the municipality and their neighbors. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

Table A.3. Measuring exposure to other armed groups using all municipalities penalized by distance

| | Homicides rate | | Homicides | | Any homicides | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Cease × FARC × ExposureOthers | 0.300** | 0.330** | 0.073** | 0.078** | 0.044* | 0.047* |
| | (0.138) | (0.143) | (0.031) | (0.031) | (0.025) | (0.025) |
| Cease × FARC | −0.188 | −0.227* | −0.028 | −0.037** | −0.009 | −0.017 |
| | (0.121) | (0.126) | (0.017) | (0.018) | (0.015) | (0.015) |
| Cease ×ExposureOthers | −0.147*** | −0.209*** | −0.025** | −0.038*** | −0.014* | −0.025*** |
| | (0.051) | (0.061) | (0.010) | (0.011) | (0.007) | (0.008) |
| Observations | 14966 | 14966 | 14966 | 14966 | 14966 | 14966 |
| Municipalities | 1069 | 1069 | 1069 | 1069 | 1069 | 1069 |
| Municipality FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Period FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Controls | | ✓ | | ✓ | | ✓ |
| Avg Dep Var | 0.101 | 0.101 | 0.028 | 0.028 | 0.021 | 0.021 |
| SD Dep Var | 1.083 | 1.083 | 0.219 | 0.219 | 0.144 | 0.144 |

**Notes:** This table presents the results from the main specification in equation (4.1). We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. Columns (1) and (2) use the number of homicides of social leaders over total population, columns (3) and (4) use as dependent variable the total number of homicides of social leaders, while columns (5) and (6) use a dummy that takes the value one if there was at least one social leader assassinated. *Cease* is a dummy that takes the value one for the period after 2015:1. *FARC* is a dummy for those municipalities with FARC presence. *ExposureOthers* is a continuous variable that measures ELN or paramilitary groups presence in the municipality and (distance-penalized) Colombian whole municipalities. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

TABLE A.4. Killing of social leaders by type of leader

| | Community councils | | Conflict related organizations | | Afro-Indigenous | | Others | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Cease × FARC × ExposureOthers | 0.170** | 0.177** | 0.067 | 0.070 | 0.086 | 0.099 | 0.024 | 0.030 |
| | (0.081) | (0.086) | (0.093) | (0.091) | (0.079) | (0.085) | (0.029) | (0.029) |
| Cease × FARC | -0.010 | -0.021 | 0.006 | 0.005 | -0.113* | -0.122* | 0.004 | -0.007 |
| | (0.057) | (0.057) | (0.054) | (0.058) | (0.065) | (0.066) | (0.017) | (0.018) |
| Cease × ExposureOthers | -0.063 | -0.087 | -0.011 | -0.018 | -0.049 | -0.050 | -0.055*** | -0.070*** |
| | (0.046) | (0.055) | (0.018) | (0.018) | (0.032) | (0.033) | (0.018) | (0.021) |
| Observations | 14966 | 14966 | 14966 | 14966 | 14966 | 14966 | 14966 | 14966 |
| Municipalities | 1069 | 1069 | 1069 | 1069 | 1069 | 1069 | 1069 | 1069 |
| Municipality FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Period FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Controls | | ✓ | | ✓ | | ✓ | | ✓ |
| Avg Dep Var | 0.003 | 0.003 | 0.006 | 0.006 | 0.011 | 0.011 | 0.003 | 0.003 |
| SD Dep Var | 0.117 | 0.117 | 0.179 | 0.179 | 0.341 | 0.341 | 0.123 | 0.123 |

**Notes:** This table presents the results from the main specification in equation (4.1) by splitting the killings into types of leaders. We exploit municipal-level variation by semester, over the period 2011:1 to 2017:2. All columns use as dependent variable the number of killings over population. *Cease* is a dummy that takes the value one for the period after 2015:1. *FARC* is a dummy for those municipalities with FARC presence. *ExposureOthers* is a continuous variable that measures ELN or paramilitary groups presence in the municipality or their (distance-penalized) vicinity. Predetermined municipal controls includes logarithm of the population in 2010, municipality area, average elevation, distance to the closest major city, share of population under poverty, literacy rate, math and language test scores, index of rurality, log of tax income and index of good fiscal policy. Errors in parentheses control for spatial and first-order time correlation (see Conley, 1999, Conley, 2016). We allow spatial correlation to extend to up to 279 km from each municipality's centroid to ensure that each municipality has at least one neighbor. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.