Paz Total? How can a ceasefire backfire*

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Abstract

Ceasefires are often seen as a tool to reduce violence and hostilities while peace negotiations take place or to facilitate the delivery of humanitarian assistance. However, poorly planned and executed truces can backfire. This paper examines the 2023 ceasefires decreed by Colombia's government to to reduce violence and foster peace talks with several organized criminal groups simultaneously. Using difference-in-differences, we find that while more salient, identifiable and visible forms of violence such as homicides and massacres were at best unaffected by the ceasefire, other forms of violence against civilians such as extortion, forced recruitment of minors, terrorist attacks, and criminal governance largely in the areas that experienced a retreat of government forces. Our findings highlight the unintended consequences of inadequately designed policies and emphasize the need for strategic planning and oversight in ceasefire agreements.

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1 Introduction

Ceasefires are widely recognized as pivotal mechanisms in conflict resolution, serving as temporary or permanent pauses in hostilities to facilitate humanitarian action, foster dialogue, reduce human suffering, and establish the groundwork for lasting peace agreements. In recent decades, theoretical research on ceasefires has advanced significantly, providing conceptual frameworks to evaluate their success, typologies of violations, and insights into their strategic uses in intrastate conflicts. However, the empirical literature remains sparse, particularly in assessing the causal effects of ceasefires on the dynamics of violence. This paper addresses this gap by offering an empirical evaluation of the ceasefires decreed by the Colombian government from January to June 2023. These ceasefires, implemented with five distinct organized criminal groups, aimed to reduce violence, mitigate humanitarian crises, and build trust for subsequent peace negotiations. Ultimately, the objective of the government in office was to achieve *paz total*. But, despite the good intentions, total peace is a rather ambitious goal in a country plagued with organized criminal groups in most of its rural territory (see section 2).

The theoretical literature on ceasefires offers valuable insights into their dynamics and potential outcomes. For example, Sticher (2022) highlights that ceasefire violations are often linked to the strategic decision-making processes of conflict parties, which may use violations to strengthen their military advantage, retaliate against perceived noncompliance, or undermine opposing leaders. These findings imply that ceasefires are rarely neutral events; rather, they are deeply embedded in the broader political and military strategies of conflict actors. Govinda Clayton and Wiehler (2021) argue that assessing the success of ceasefires requires distinguishing between their immediate objective—the cessation of hostilities—and their underlying purpose, such as advancing negotiations or protecting civilians. Their framework emphasizes that the effectiveness of a ceasefire depends on aligning its design with the political context and goals of the parties involved. These insights are particularly relevant to the Colombian case, where the absence of established verification mechanisms and the premature (and naïve) declaration of ceasefires rights after a new government took office and with groups at very initial stages of peace negotiation, hindered their implementation and effectiveness.

Clayton et al. (2023) broader research agenda on ceasefires also underscores the need for empirical analysis to complement the largely theoretical and case-study-driven literature. Comparative quantitative studies are essential to identify trends,

test theoretical claims, and evaluate the sustainability of ceasefire arrangements. The Colombian recent experience provide a unique opportunity to contribute to this emerging subfield by examining their causal effects on various forms of violence.

Our paper builds on these theoretical foundations by providing the first empirical evaluation of the causal effects of ceasefires on violence. Unlike previous studies that focus on fatalities or conflict-related deaths, our analysis encompasses a broader range of violence indicators, including both highly visible acts, such as homicides and massacres, and less salient forms of violence, such as extortion, kidnappings and different forms of criminal governance and social control over civilian populations. This distinction is crucial for understanding the strategic behavior of organized criminal groups, which may seek to avoid overt violations of ceasefires while intensifying less visible forms of control and coercion. Also unlike previous studies that rely on comparative case studies, or paper offers the first causal empirical evaluation.

Using detailed monthly and municipal-level data for Colombia, our findings reveal a troubling paradox: while more salient, identifiable and visible forms of violence such as homicides and massacres were at best unaffected by the ceasefires, other forms of violence against civilians such as extortion, forced recruitment of minors, terrorist attacks, and criminal governance, increased after the ceasefires were decreed, disproportionally in the areas controlled by the involved groups relative to the rest of the country. This pattern suggests that, in the absence of clear protocols and credible verification mechanisms, criminal groups exploited the ceasefires to consolidate territorial control and intensify coercion over civilian populations. Thus quite the exact opposite of total peace. Indeed, our results underscore the critical importance of designing and implementing ceasefires with a comprehensive understanding of the political and strategic incentives of criminal groups.

Our results have significant implications for policymakers, particularly in contexts where organized criminal groups play a dominant role in the dynamics of violence. They emphasize the importance of tailoring ceasefire agreements to the specific characteristics and incentives of armed actors, as well as the need for rigorous monitoring to ensure compliance and prevent the use of ceasefires by organized criminal groups to gain further territorial control and exert social control over civilian populations. By bridging the gap between theoretical and empirical research, this study contributes to a more nuanced understanding of ceasefires and their potential to advance or undermine peacebuilding efforts.

The remainder of the paper is organized as follows. Section 2 provides a de-

tailed overview of the Colombian ceasefires, including their design, implementation, and stated objectives. Section 4 describes the data and empirical strategy used to evaluate their effects on violence. Section 5 presents the main findings, highlighting the heterogeneous impacts of the ceasefires on different forms of violence. Section 5 discusses the policy implications of these findings, with particular attention to the design and verification of future ceasefire agreements. Finally, Section 6 concludes with a summary of the key insights and directions for future research.

2 *Paz Total* under the Petro administration and the ceasefires decreed in 2023

Since President Gustavo Petro took office in August 2022, Colombia's security landscape has been shaped by his administration's Paz Total (Total Peace) initiative. This policy, propelled by an ambition to bilaterally negotiate with multiple criminal groups at the same time, represented a major departure from the predominantly militarized responses of past governments, which often reserved peace dialogues for guerrilla organizations with explicit political aims. By contrast, Petro's approach included reaching out to groups with varied motives, from the long-established National Liberation Army (ELN) to criminal organizations like the Gaitanista Self-Defense Forces of Colombia (AGC) and the newly configured FARC dissidents, among others (Bonilla and Daza, 2024; Saffon and Garcia, 2023).

Despite high expectations, the implementation of bilateral ceasefires between January and June 2023 led to mixed outcomes. Government decrees targeted five main groups—the Estado Mayor Central (EMC), Segunda Marquetalia, ELN, Clan del Golfo (AGC), and Autodefensas Conquistadoras de la Sierra Nevada (ACSN)—with the aim of halting violence, reducing humanitarian harm, and fostering an environment conducive to dialogue (Llorente et al., 2023). Early analysis of these ceasefires reveals both the promise of decreased confrontation in certain regions and the emergence of unintended consequences, especially where clear protocols and robust verification mechanisms were lacking.

Critical assessments of the ceasefire decrees underscore the importance of sequencing and planning in peace negotiations. Llorente et al. (2023) observe that many of these decrees were enacted without having fully established peace dialogue rules and protocols. Only the ELN was already in formal negotiations, whereas engagements with other criminal groups remained in exploratory phases. This abrupt approach

opened the possibility for contradictory interpretations of ceasefire terms and contributed to limited compliance on the ground. In many regions, state security forces struggled to navigate where their operations should pause versus continue, and local populations received insufficient information about their rights and protections under the new policies. The decreed ceasefires effectively tied the hands of security forces, preventing them from intervening in clear violations committed by criminal groups and leaving communities vulnerable. Moreover, in territories where multiple criminal groups competed for control over illicit economies—such as drug production and illegal gold mining—these rivalries persisted unabated, even as the security forces hesitated to engage, fearing they would breach the ceasefire provisions. As a result, civilian populations frequently found themselves caught in the crossfire of violent confrontations and unprotected by a state apparatus unsure of its mandate to act.

Moreover, challenges arose when some groups, like the Clan del Golfo, unilaterally suspended cooperation or allegedly exploited the lull in offensive operations to expand territorial control Bonilla and Daza (2024). These setbacks exposed a fundamental tension: while the Petro administration aimed to reduce violence and garner humanitarian relief, organized criminal groups continued to pursue strategic gains, either by quietly entrenching themselves or by capitalizing on the absence of military pressure (Saffon and Garcia, 2023).

An underlying complexity in Colombia's fragmented conflict is the mosaic of local realities. Llorente et al. (2023) detail how certain zones experienced partial or overlapping ceasefires, creating a patchwork of security regimes. In some territories, such as Putumayo, violence subsided due to the consolidation of single dominant actors, whereas in areas like Cauca or the Bajo Cauca region of Antioquia, ongoing territorial disputes among multiple armed groups led to sustained or even heightened confrontations (Saffon and Garcia, 2023). Additionally, the limited presence of state institutions in rural and remote regions constrained the government's capacity to enforce ceasefire provisions and protect civilians.

Another factor compounding these variances is the political environment, particularly the absence of clear legal frameworks guiding dialogues with criminally motivated organizations. Multiple analysts note that negotiations with groups primarily pursuing illicit profit—such as the AGC—can face both public skepticism and legal hurdles, especially in light of constitutional prohibitions on amnesties for crimes like drug trafficking (Bonilla and Daza, 2024; Saffon and Garcia, 2023). This landscape contrasts with negotiations involving insurgencies like the ELN, where mechanisms

grounded in international humanitarian law and historical precedents exist.

Public discourse on the Petro administration's policies has become increasingly polarized. On one hand, proponents argue that these ceasefires, despite their flaws, have reduced certain forms of violence such as direct clashes with state forces, potentially saving lives (Llorente et al., 2023). On the other hand, critics question whether the Paz Total framework inadvertently enabled criminal governance and social control to expand, as armed groups refrained from highly visible hostilities yet intensified extortion, kidnapping, and control over local communities (Bonilla and Daza, 2024; Saffon and Garcia, 2023).

Bonilla and Daza (2024) also underscores the broader confusion surrounding Paz Total, characterizing it not as a conventional public policy but as a tapestry of presidential announcements, exploratory talks, and partial negotiations with various criminal and insurgent factions. According to her assessment, despite the array of dialogues launched, the absence of a coherent roadmap complicates both implementation and public support. Surveys cited by Bonilla and Daza (2024) indicate a generalized uncertainty among Colombians regarding the policy's real impact on security.

In parallel, Saffon and Garcia (2023) suggest that while the Petro administration's vision is commendable in principle, critical missteps—like declaring ceasefires without adequate oversight or accountability—have contributed to the reshaping of Colombia's criminal landscape. These scholars point to a rise in territorial disputes among non-state actors, noting that, in areas where the government negotiated, certain criminal groups felt emboldened to refocus on combating rival organizations rather than confronting the state.

Altogether, these analyses highlight both the ambition and pitfalls of the Petro administration's Paz Total policy. Although some direct confrontations have diminished, many observers agree that violence has transformed rather than declined, with more discreet abuses becoming prevalent. Threats against community leaders, forced recruitment of minors, and covert extortion networks remain pervasive in vast parts of rural Colombia (Llorente et al., 2023; Bonilla and Daza, 2024). Meanwhile, the legislative vacuum for negotiating with (purely) criminal organizations has hampered the administration's capacity to offer credible incentives for demobilization, and disagreements between defense authorities and peace negotiators have further stalled progress (Saffon and Garcia, 2023).

In light of these challenges, analysts emphasize the need for stronger verification mechanisms, clear ceasefire protocols, and more inclusive governance measures

that incorporate the voices of local communities. They call attention to the urgency of providing tangible benefits—such as improved public services and security guarantees—to areas where the state's presence has historically been minimal. Without such measures, the perceived legitimacy of the Paz Total initiative could erode, potentially undermining the long-term prospects for reducing violence in Colombia (Bonilla and Daza, 2024; Llorente et al., 2023).

In sum, the Colombian case illustrates the complexity of negotiating ceasefires in a context with multiple armed actors pursuing diverse political, economic, and criminal agendas. Petro administration's initial application of ceasefires demonstrates the necessity of thorough planning, robust legal frameworks, and consistent state engagement to curtail the risk that such agreements may backfire, exacerbating localized violence rather than fostering sustainable peace.

3 The Effect of Ceasefires on Criminal Violence

4 Empirical Strategy

4.1 Data

Our empirical analysis focuses on criminal violence committed by FARC dissidents (Segunda Marquetalia and Estado Mayor Central) and the Autodefensas Gaitanistas de Colombia (AGC), as these groups represent the most significant non-state armed actors involved in the first Paz Total ceasefire. Although the Autodefensas Conquistadoras de la Sierra Nevada (ACSN) was also included in the ceasefire, its presence was minimal, with activity reported in only two municipalities. Moreover, ACSN is not a prominent actor in the broader Colombian conflict, making its inclusion in our analysis less relevant. By focusing on FARC dissidents and AGC, we ensure that our estimates capture the dynamics of the most influential groups that participated in the ceasefire.

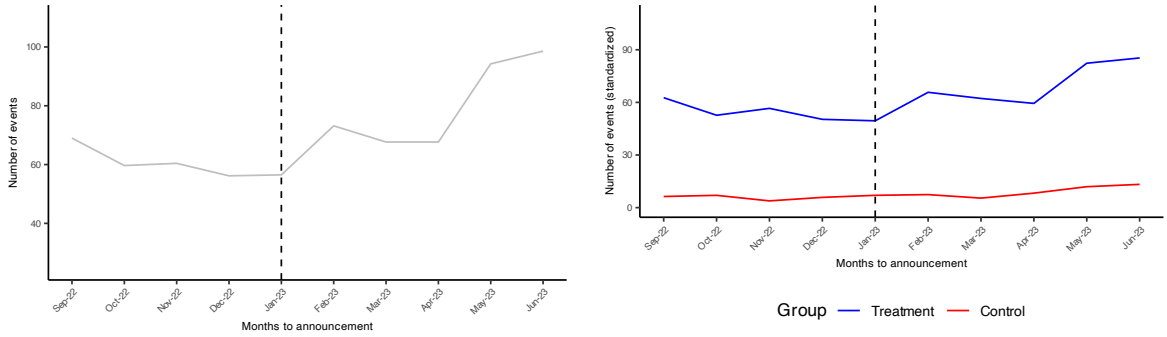
Our primary data source is a comprehensive set of conflict events compiled by the *Jurisdicción Especial para la Paz* (JEP), which includes homicides, terrorist incidents, massacres, kidnappings, forced displacement, forced recruitment, extortion, threats, lockdowns, illegal checkpoints, armed clashes, military operations, and the outcomes of such operations. These data are recorded at a daily frequency and contain detailed information on the location (municipality), date, type of event, a brief description, and the alleged perpetrator. Using these event-level data, we construct a monthly

panel covering the period from September 2022 to June 2023, in which the number of violent incidents is standardized to facilitate comparability across municipalities and over time. In addition, we use these event records to derive an indicator of armed group presence—specifically, we include data on the Ejército de Liberación Nacional (ELN), FARC dissidents, and the AGC. The presence variable takes a value of one if any conflict event involving one of these groups was observed in the municipality during 2019–2021, and zero otherwise.

We supplement the primary data source with additional conflict information from the *Misión de Observación Electoral* (MOE), the *Fiscalía General de la Nación* (Attorney General's Office), and the Ministerio de Defensa Nacional (Ministry of Defense). The MOE data are particularly helpful in analyzing robustness for outcomes associated with criminal governance—namely, illegal checkpoints, lockdowns, extortion, and threats. Meanwhile, the datasets from the Attorney General's Office and the Ministry of Defense enable us to test the consistency of our findings regarding homicides, terrorist attacks, kidnappings, extortion, and massacres.

Finally, we incorporate data on various municipal characteristics from multiple sources. First, we use information on the presence of coca crops from the *Integrated Monitoring System for Illicit Crops* (SIMCI) of the *United Nations Office on Drugs and Crime* (UNODC). We also include socioeconomic indicators from a municipal panel compiled by the *Centro de Estudios sobre Desarrollo Económico* (CEDE) at Universidad de los Andes, which contains information on population size, a rurality index, municipal area size, region dummy indicators, altitude, distance to the departmental capital, distance to Bogotá, poverty rate, and municipal revenues and expenditures.

Figure 1. Raw data: Violence from September 2022 to June 2023



(a) Events

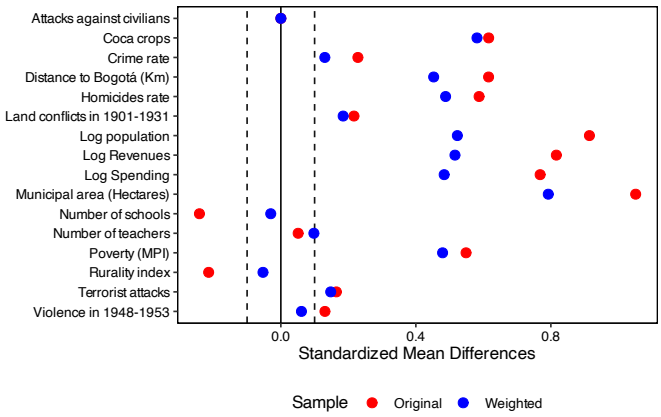
(b) Events by group

This figure presents the evolution of violent events over time. Panel A displays the overall trend for our sample, including events of terrorism, homicides, forced displacement, massacres, kidnappings, forced recruitment of minors, illegal checkpoints, lockdowns, extortion, threats, and armed clashes. Panel B disaggregates the data, comparing municipalities affected by the Paz Total policy with those that were not. Figure 1 highlights the beginning of the first Paz Total ceasefire announcement in January 2023.

Panel A of Figure 1 depicts the evolution of the total number of violent events across Colombia from September 2022 to June 2023. Panel B disaggregates this trajectory by comparing municipalities exposed to the Paz Total (i.e., those that experienced the presence of non-state armed groups involved in ongoing negotiations with the Colombian government—referred to as the "treatment") with municipalities that did not experience the presence of these groups and therefore were not subject to the policy (the "control"). Both panels highlight January 2023, the point at which the Paz Total officially began to operate, and demonstrate a marked increase in violent events from that month onward. This surge in violence appears largely concentrated in municipalities where non-state armed groups maintain a significant presence.

Figure 2 presents a covariate balance assessment, comparing municipalities affected by the Paz Total policy with those not affected using standardized mean differences for a range of pre-sample (2018) characteristics reported in the figure. Overall, municipalities subject to the policy tend to exhibit greater coca crop presence, higher crime rates, are located farther from Bogotá, report higher homicide rates, and have a history of more land conflicts. In addition, they are larger in both population and municipal area, experience higher local government revenues and spending, report more terrorist attacks, and display higher poverty levels as measured by a multidimensional index. Hence, the figure indicates that municipalities under the Paz Total policy and those not affected differ in several observable attributes.

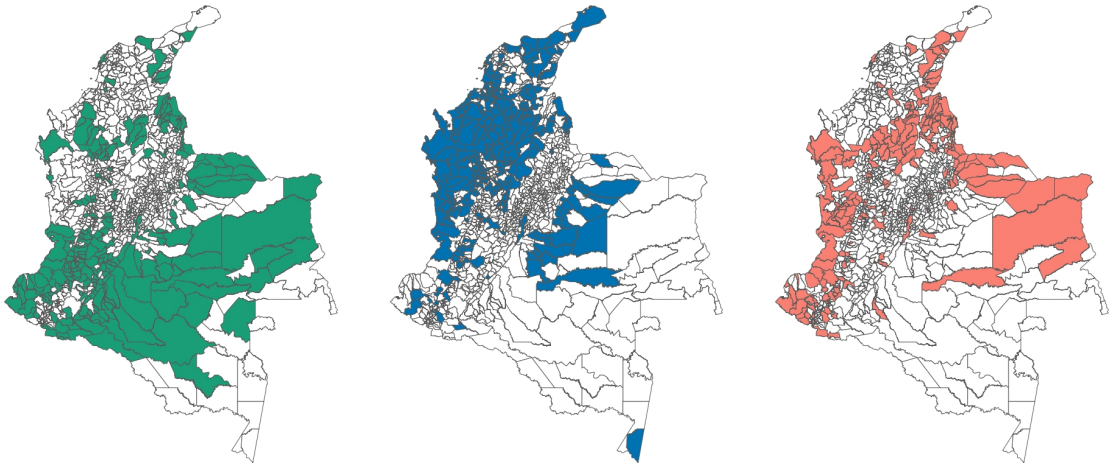
Figure 2. Covariate balance



This figure presents a covariate balance assessment for a set of municipal characteristics in 2018, comparing standardized mean differences between treatment and control municipalities.

Figure 3 maps the spatial distribution of armed group presence across Colombia, disaggregated by faction. Panel A highlights municipalities in which FARC dissidents operate, Panel B depicts those influenced by the AGC, and Panel C indicates ELN strongholds. The figure underscores the strategic location of these non-state actors, confirming their concentrated presence in the Colombian southwest (Cauca and Nariño), the southern regions (Putumayo and Meta), the Pacific coast (Chocó), the north of Antioquia and the Darien region, as well as the border areas adjacent to Venezuela. This geographical pattern reiterates the significance of these areas for the groups' territorial control and operations.

Figure 3. Non-state armed groups presence in Colombian municipalities

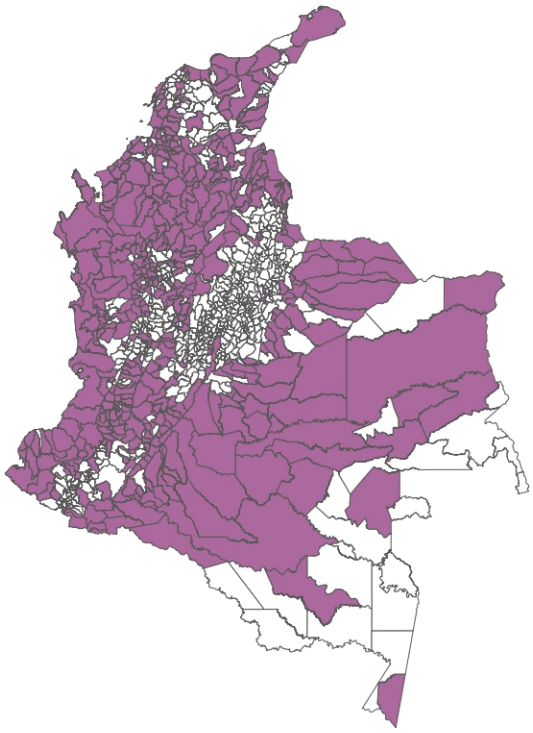


(a) Ex-FARC (b) AGC (c) ELN

This figure displays the spatial distribution of armed groups in Colombia, highlighting the areas where different non-state armed actors maintained a presence between 2019-2021.

Figure 4 illustrates the municipalities in which Segunda Marquetalia, Estado Mayor Central, and the Autodefensas Gaitanistas de Colombia maintain a presence. These jurisdictions are precisely those included in the first ceasefire announcement under the Paz Total policy. Overall, the map reveals that the policy covers 39% of Colombian municipalities, 65% of the country's territory, and affects approximately 29% of its population. Given these substantial figures, the scope of the Paz Total initiative may significantly influence local violence dynamics across Colombia.

Figure 4. Colombian municipalities affected by the first Paz Total ceasefire



This figure illustrates the spatial distribution of the first Paz Total ceasefire announcement, covering municipalities where Segunda Marquetalia, Estado Mayor Central, and Autodefensas Gaitanistas de Colombia maintained a presence between 2019-2021.

4.2 Estimation

It is important to emphasize that the observed spike in violence following the January 2023 ceasefire announcement (depicted in Figure 1) could reflect a correlation rather than a direct causal effect of the policy. One potential concern is omitted variable bias: there may be unobserved factors influencing both the timing or likelihood of the ceasefire announcement and the level of violence, thereby generating an artificial statistical association. Indeed, as illustrated in Figure 2, municipalities included in the first ceasefire announcement differ from their counterparts in a number of observable characteristics, and potentially also in various unobserved dimensions. These differences suggest that something inherent to the treatment municipalities—rather than the Paz Total first ceasefire announcement itself—could explain the surge in

violence.

Our empirical strategy employs a *difference-in-differences* model to estimate the effect of the Paz Total first ceasefire on measures of criminal violence in Colombia between September 2022 and June 2023. By leveraging variation in both the timing of the announcement and the geographic coverage of municipalities affected by the Paz Total policy, we seek to isolate the causal impact of the ceasefire announcement on municipal-level violence outcomes. This approach helps address potential omitted variable bias by comparing changes in violence before and after the announcement between treated and untreated municipalities, thereby providing a more robust basis for drawing causal inferences.

To establish a clean counterfactual, we restrict our sample to those municipalities that report no presence of any non-state armed group included in the first ceasefire, ensuring a valid comparison baseline. Formally, letting i index municipalities and t index months, we estimate a two-way fixed-effects regression:

$$y_{it} = \alpha_i + \gamma_t + \beta_1 \times D_i \times Post_t + \varepsilon_{it} \tag{1}$$

where y_{it} is a measure of criminal violence in municipality i during month t. D_i is a dummy indicator that equals one if the municipality is covered by the Paz Total first ceasefire, while Post_t is an indicator that equals one for the post-treatment period (after December 2022). α_i represents a municipality fixed effect that accounts for any time-invariant unobserved characteristics of municipality i, while γ_t denotes a month fixed effect that absorbs any aggregate shocks common to all municipalities in month t. Our coefficient of interest is β_1, which measures the differential shift in criminal violence following the first Paz Total ceasefire in municipalities where non-state armed groups in peace negotiations with the Colombian government are active, relative to the shift in municipalities without such groups after accounting any differential effects driven by time-invariant municipal characteristics as well as any time shocks common across municipalities.

4.3 Identification

The main identification assumption for the validity of our *difference-in-differences* design is the parallel trends assumption, which holds that in the absence of the first Paz Total ceasefire, the treated and control municipalities would have exhibited similar trajectories in criminal violence. This assumption is fundamental to the validity

of the empirical model, as it underpins the causal interpretation of the estimated effects. For instance, if a supply shock in coca production occurred before the ceasefire announcement and disproportionately affected areas later designated as treatment municipalities, it could alter their baseline trajectory of violence relative to control areas. In other words, violence in these future treatment municipalities might begin rising—or falling—at a different rate than in control municipalities, for reasons unrelated to the forthcoming ceasefire. As a result, by the time the ceasefire took effect, the two sets of municipalities might already be on diverging trajectories of violence, thereby violating the parallel trends assumption necessary for a valid *difference-in-differences* analysis.

5 Results

5.1 Main Results

The main results focus exclusively on violence committed by non-state armed groups included in the first Paz Total ceasefire: Segunda Marquetalia, Estado Mayor Central, and the Autodefensas Gaitanistas de Colombia. This ensures that the estimated effects specifically capture changes in violence driven by these groups rather than broader security dynamics involving other armed actors.

Table 1 presents the estimated impact of the first Paz Total ceasefire on criminal violence. Columns (1) and (2) report the effects on an aggregate measure of violence, which is constructed as the average of five key violence indicators: homicides, massacres, kidnappings, terrorism, and extortion. Column (1) shows unweighted estimates, while Column (2) presents results using weighted averages.[1] These estimates provide an overall assessment of whether the ceasefire significantly influenced the total level of violence. Both columns indicate a statistically significant increase in criminal violence in Colombia at the 1% level. Specifically, Column (1) shows that the ceasefire announcement in January 2023 is associated with an increase in the unweighted average of criminal violence by 0.082 standard deviations. Beyond statistical significance, this effect is also economically meaningful: compared to the pre-announcement

[1]The weighted aggregate measure of violence in Column (2) assigns different weights to each type of violent event based on the severity of the crime as defined by the Colombian penal code. The weights are as follows: homicides (17.04%), massacres (44.84%), terrorist attacks (13.45%), kidnappings (14.35%), and extortion (10.31%). These weights are derived by summing the prison sentences prescribed by the Colombian penal code for each crime and then calculating the share of each crime's total sentence years relative to the overall sum. This approach reflects the differential legal gravity assigned to each type of violence in Colombia's judicial system.

average level of criminal violence in treatment municipalities, this increase represents approximately a 15% rise. Column (2) presents similar results, with the weighted average of violence increasing by a comparable magnitude, corresponding to an estimated 12% increase relative to its pre-announcement mean. These findings suggest that the ceasefire announcement had a substantial impact on overall criminal violence levels in affected municipalities.

Table 1. First Paz Total ceasefire announcement and criminal violence in Colombia

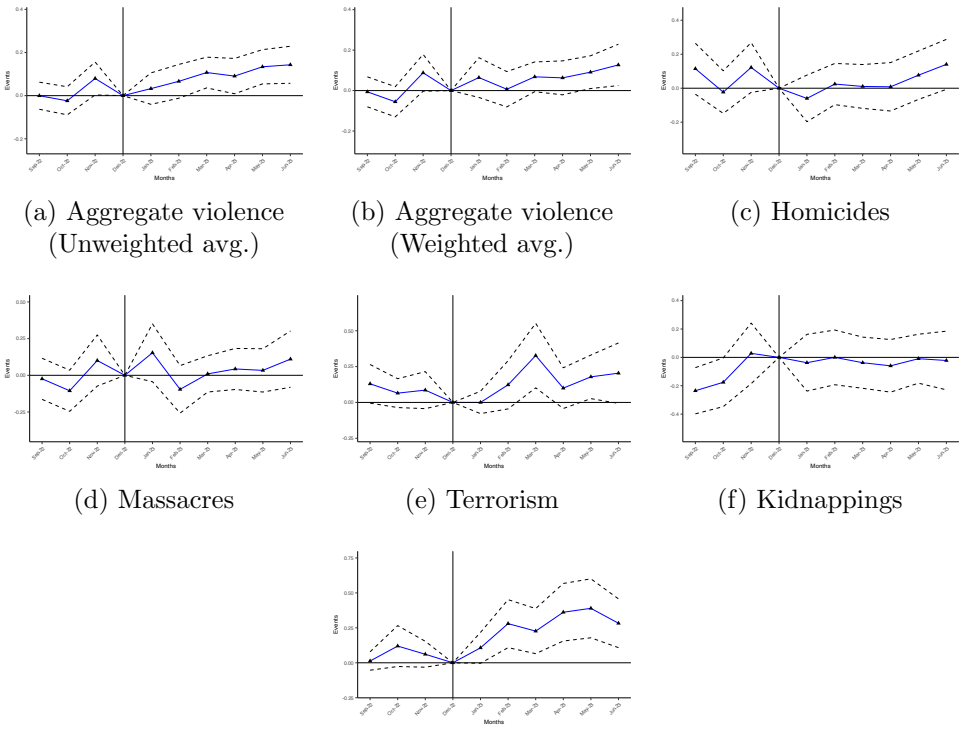
Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.082***	0.063***	-0.020	0.049	0.085**	0.068*	0.226***
	(0.019)	(0.022)	(0.041)	(0.041)	(0.039)	(0.038)	(0.043)
Percentage effect	15.46%	11.92%	-3.71%	59.62%	62.37%	44.63%	320.24%
Adjusted R^2	0.310	0.186	0.444	0.027	0.083	0.133	0.054
Observations	10,690	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include two aggregate measures of violence (unweighted and weighted), constructed as the average of five key violence indicators: homicides, massacres, kidnappings, terrorism, and extortion. The weighted aggregate measure assigns different weights based on the severity of each violent event: homicides (17.04%), massacres (44.84%), terrorist attacks (13.45%), kidnappings (14.35%), and extortion (10.31%). Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Columns (3) through (7) then disaggregate the analysis by examining each of the five components individually. The estimates suggest that the increase in criminal violence is mostly driven by terrorism and extortion. Specifically, the ceasefire announcement is associated with an increase of 0.085 standard deviations in terrorism and 0.227 standard deviations in extortion. These effects are statistically significant and economically meaningful. When compared to their respective pre-announcement averages in treatment municipalities, these estimates translate into a 62% increase in terrorism and a striking 320% increase in extortion. Notably, while we observe a sig-

nificant increase in terrorism and extortion, we do not find any statistically significant effects on other measures of criminal violence, such as homicides and massacres. This pattern suggests that non-state armed groups may have leveraged the ceasefire to expand their influence through intimidation tactics and economic extraction, rather than engaging in more overtly violent activities such as homicides or massacres.

Figure 5. First Paz Total ceasifere announcement and criminal violence in Colombia (Event-study)



(a) Aggregate violence (Unweighted avg.)

(b) Aggregate violence (Weighted avg.)

(c) Homicides

(d) Massacres

(e) Terrorism

(f) Kidnappings

(g) Extortion

This figure presents coefficients of Table 1 from an event-study regression based on Equation 1, along with 95% confidence intervals, using municipal-year data for seven different outcomes (as indicated in each subfigure title). Standard errors are clustered at the municipal level.

Figure 5 presents the event-study estimates corresponding to the results in Table 1. The figure visually illustrates the dynamics of the impact of the first Paz Total ceasefire announcement on criminal violence over time. For the aggregate measures of criminal violence, as well as for terrorism and extortion specifically, we observe a statistically significant increase immediately following the announcement. Notably, the point estimates for all outcome variables prior to the ceasefire announcement are close to zero and lack statistical significance, suggesting parallel pre-trends between treated and control municipalities. However, immediately after the ceasefire announcement,

the point estimates shift upward and become statistically significant at the 5% level. This temporal pattern underscores the immediate effect of the ceasefire announcement, particularly in driving increases in terrorism and extortion activities.

Table 2. First Paz Total ceasefire announcement and criminal violence in Colombia: Type of violence

Dependent variable: Number of events (standardized)	Armed confrontations	Civilian victimization	Criminal governance	Military operations	Operational seizures	Operational results
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	-0.046	0.051***	0.119***	0.042	-0.014	-0.053
	(0.039)	(0.018)	(0.027)	(0.034)	(0.025)	(0.034)
Percentage effect	-16.76%	9.21%	39.59%	45.62%	-3.05%	-9.98%
Adjusted R^2	0.146	0.284	0.156	0.169	0.144	0.236
Observations	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include seven types of criminal violence. Armed confrontations include clashes between state forces and clashes between non-state armed groups. Civilian victimization includes events of terrorism, homicides, forced displacement, massacres, kidnappings, and the forced recruitment of minors. Criminal governance refers to illegal checkpoints, lockdowns, extortion, and threats. Military operations include destruction of explosives, drug labs, mines, and eradication operations. Operational seizures include seizures of drugs, explosives, chemicals, and armament. Operational results include arrests, combatant killings, and judicialization. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

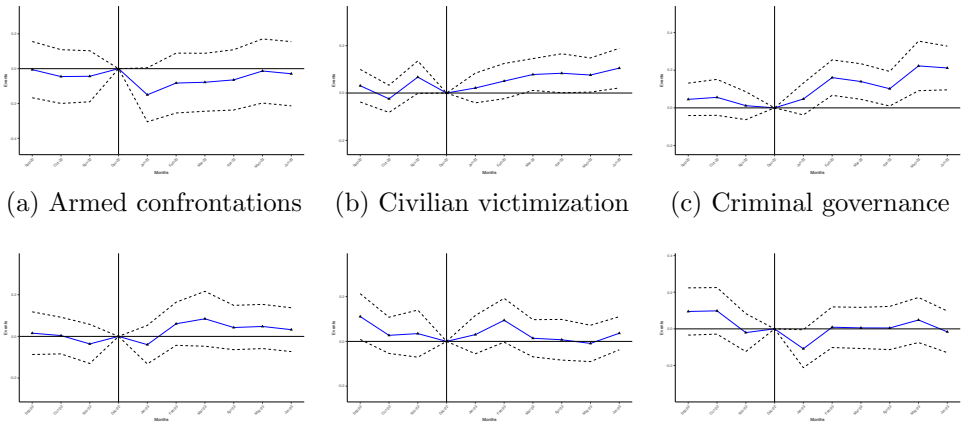
Table 2 examines the impact of the ceasefire announcement on different types of violence, including armed confrontations, civilian victimization, criminal governance, military operations, operational seizures, and operational results.[2] The results indicate that the ceasefire primarily led to an increase in civilian victimization and

[2]The classification of violence types in our analysis is based on specific event categories. Armed confrontations include clashes between state forces and clashes between non-state armed groups. Civilian victimization comprises incidents of terrorism, homicides, forced displacement, massacres, kidnappings, and the forced recruitment of minors. Criminal governance refers to activities aimed at exerting territorial and social control, including illegal checkpoints, lockdowns, extortion, and threats. Military operations encompass efforts to disrupt armed group infrastructure, such as the destruction of explosives, drug labs, mines, and eradication operations. Operational seizures capture state interventions leading to the confiscation of illicit materials, including drugs, explosives, chem-

criminal governance. Specifically, the announcement is associated with a 0.051 standard deviation increase in civilian victimization, which, when compared to its pre-announcement average in treatment municipalities, translates into an almost 9% rise. Similarly, criminal governance experiences a substantial increase of 0.12 standard deviations, representing a 40% rise relative to its pre-announcement level in affected municipalities. These findings suggest that rather than reducing violence across the board, the ceasefire may have inadvertently strengthened the capacity of non-state armed groups to exert control over local populations through coercive means.

Figure 6 presents the event-study estimates corresponding to the results in Table 2, illustrating the temporal evolution of the effects of the ceasefire announcement on civilian victimization and criminal governance. The figure shows that, prior to the announcement, the point estimates for both outcomes are close to zero and not statistically significant, indicating no pre-existing differences between treated and control municipalities. However, immediately after the ceasefire announcement, the point estimates increase and become statistically significant, confirming a positive and robust effect on both civilian victimization and criminal governance. This pattern reinforces the idea that the ceasefire announcement coincided with a shift in violence dynamics, particularly in ways that strengthened armed groups' control over local populations.

Figure 6. Ceasefires and criminal violence in Colombia (Event-study)



(a) Armed confrontations (b) Civilian victimization (c) Criminal governance

(d) Military operations (e) Operational seizures (f) Operational results

This figure presents coefficients of Table 2 from an event-study regression based on Equation 1, along with 95% confidence intervals, using municipal-year data for six different outcomes (as indicated in each subfigure title). Standard errors are clustered at the municipal level.

icals, and armament. Finally, operational results measure direct actions against criminal actors, including arrests, combatant killings, and judicializations.

We further examine the impact of the ceasefire on civilian victimization and criminal governance by disaggregating the effects on specific categories of violence. Table 3 explores the impact on each component of civilian victimization, providing a more detailed understanding of how different forms of violence evolved following the ceasefire. In addition to the previously reported increase in terrorism, Column (3) of Table 3 reveals a significant rise in the forced recruitment of minors, with an estimated effect of 0.173 standard deviations. This effect is statistically significant at the 1% level and represents a 237% increase relative to the pre-announcement average of forced recruitment in treatment municipalities. These findings suggest that the ceasefire may have inadvertently enabled non-state armed groups to expand their influence through intensified recruitment efforts, further entrenching their presence in affected regions.

Table 3. First Paz Total ceasefire announcement and criminal violence in Colombia: Civilian victimization

Dependent variable: Number of events (standardized)	Terrorism	Homicides	Forced displacement	Massacres	Kidnappings	Forced recruitment
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	0.085**	-0.020	-0.051	0.049	0.068*	0.173***
	(0.039)	(0.041)	(0.047)	(0.041)	(0.038)	(0.048)
Percentage effect	62.37%	-3.71%	-25.89%	59.62%	44.63%	236.71%
Adjusted R^2	0.083	0.444	0.072	0.027	0.133	0.053
Observations	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include six categories of civilian victimization. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In terms of the effects on criminal governance, beyond the significant increase in extortion, we also find a notable rise in threats against the civilian population. Specifically, Table 3 shows that the ceasefire announcement led to a 0.216 standard deviation increase in reported threats, an effect that is statistically significant at the 1% level. When compared to the pre-announcement average threat levels in treated

municipalities, this represents a substantial 73% increase. These results suggest that non-state armed groups leveraged the ceasefire not only to strengthen their extortion mechanisms but also to exert greater social control through intimidation tactics. This expansion of criminal governance highlights the unintended consequences of the ceasefire, as it appears to have provided armed groups with an opportunity to consolidate territorial influence and reinforce coercive strategies.

Table 4. First Paz Total ceasefire announcement and criminal violence in Colombia: Criminal governance

Dependent variable: Number of events (standardized)	Illegal checkpoints	Lockdowns	Extortion	Threats
	(1)	(2)	(3)	(4)
Post × Treated	0.058	-0.023	0.226***	0.216***
	(0.045)	(0.045)	(0.043)	(0.041)
Percentage effect	37.45%	-16.86%	320.24%	73.31%
Adjusted R^2	0.070	0.121	0.072	0.027
Observations	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include four categories of criminal governance. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

We explore the strategic use of violence by non-state armed groups participating in the Paz Total process. As previously discussed, the ceasefire announcement provided these groups with an opportunity to enhance their bargaining power in negotiations with the Colombian government. This shift appears to have incentivized an increase in criminal governance activities and tactics designed to intimidate the civilian population. In other words, rather than reducing overall violence, the ceasefire may have prompted armed groups to substitute between different forms of violence to maximize territorial control while minimizing external scrutiny. In this context, non-state armed groups had an incentive to rely less on highly visible forms of violence that could attract attention from the media, government agencies, or NGOs and instead deploy more covert tactics to consolidate their influence with less public exposure.

To analyze this strategic shift, we categorize violent events into two groups: more salient and less salient forms of violence. More salient events include terrorism, homicides, illegal checkpoints, lockdowns, forced displacement, massacres, and armed clashes—types of violence where perpetrators can be more easily identified, and which are more likely to generate public attention and governmental response. In contrast, less salient events include extortion, kidnappings, forced recruitment of minors, and threats—tactics that allow armed groups to exert control more discreetly and with a lower risk of immediate backlash. This distinction helps to assess whether armed groups adjusted their violent strategies in response to the ceasefire, shifting away from overt confrontations and toward more indirect means of maintaining dominance.

Table 5. First Paz Total ceasefire announcement and criminal violence in Colombia: Strategic violence

Dependent variable: Number of events (standardized)	More salient violence	Less salient violence
	(1)	(2)
Post × Treated	0.001	0.171***
	(0.022)	(0.026)
Percentage effect	0.12%	58.75%
Adjusted R^2	0.240	0.191
Observations	10,690	10,690
Municipalities	1,069	1,069
Municipality FE	Yes	Yes
Time FE	Yes	Yes

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include two broad categories of criminal violence. More salient events include terrorism, homicides, illegal checkpoints, lockdowns, forced displacement, massacres, and armed clashes. Less salient events include extortion, kidnappings, forced recruitment of minors, and threats. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5 provides evidence of the strategic use of violence by non-state armed groups participating in the Paz Total process. The results show a significant increase in less salient forms of criminal violence, with an estimated effect of 0.171 standard deviations. This effect is statistically significant at the 1% level and represents a 59% increase relative to the pre-announcement average in treated municipalities. In

contrast, we find no statistically significant effects on more salient forms of violence, suggesting that while overall criminal activity increased, armed groups shifted their tactics toward less conspicuous forms of violence—such as extortion, threats, kidnappings, and forced recruitment—rather than engaging in high-profile violent events that could attract media attention or provoke government intervention. These findings reinforce the idea that the ceasefire provided an opportunity for these groups to consolidate control through more covert and less publicly visible means. Figure B3 in the Appendix Figures show the event-study estimates of Table 5.

5.2 Robustness Checks

All our results are based on a *difference-in-differences* model, which allows us to estimate the causal impact of the ceasefire announcement on criminal violence. Since the ceasefire was announced simultaneously across all treated municipalities, a staggered *difference-in-differences* design is not applicable in this context. However, to further ensure the robustness of our findings, we implement a doubly robust *difference-in-differences* estimator following the method proposed by Sant'Anna and Zhao (2020). This approach helps control for a set of pre-treatment characteristics that could be correlated with both the likelihood of treatment and the outcome of interest. We select these characteristics based on the data-driven approach suggested by Belloni et al. (2013), which uses a post-double-selection LASSO procedure to identify relevant covariates. Our results remain largely consistent across this alternative specification. Specifically, the effects on criminal violence (Table A1), types of violence (Table A2), civilian victimization (Table A3), criminal governance (Table A4), and strategic use of violence (Table A9) remain robust, reinforcing the credibility of our main findings.

Our analysis finds no evidence that the ceasefire announcement had any significant impact on military operations (Table A6), operational seizures (Table A7), or operational results (Table A8). This holds true across both our primary two-way fixed effects *difference-in-differences* model and the doubly robust approach. We further evaluate whether the impact of the ceasefire announcement differs between FARC dissidents (Segunda Marquetalia and Estado Mayor Central) and the Autodefensas Gaitanistas de Colombia (AGC). Our results remain largely consistent across these groups, particularly in terms of criminal governance. Regardless of whether the treatment is driven by the presence of FARC dissidents (Table A10) or AGC (Table A11), we continue to observe a significant increase in criminal governance, suggesting that both types of non-state armed actors leveraged the ceasefire to expand their

territorial control through extortion, threats, and other coercive tactics. Finally, to further validate our findings on criminal governance, we test our results using an alternative dataset from the MOE, which provides independent measures of illegal checkpoints, lockdowns, extortion, and threats. Our estimates remain robust across this alternative source.

The ELN was initially included in the list of non-state armed groups set to participate in the first Paz Total ceasefire. However, the Colombian government called off the ELN's participation after only four days, effectively excluding the group from the ceasefire agreement. This abrupt exit may have influenced the ELN's strategic use of violence, potentially leading to either an escalation or reduction in future violent activities. In our main analysis, municipalities with an ELN presence are classified as part of the control group since the ceasefire did not effectively apply to them. To assess the robustness of our results, we re-estimate our models using two alternative samples: one where ELN municipalities are included in the treatment group (Table A13), and another where ELN municipalities are excluded from the sample entirely (Table A14). In both cases, our key findings remain robust, suggesting that the observed effects of the ceasefire on criminal violence, criminal governance, and civilian victimization are not driven by the classification or exclusion of ELN-controlled areas.

Our main analysis defines the control group as municipalities where no non-state armed groups included in the ceasefire were present. While this provides a clear comparison, it represents an extreme scenario that could bias our results if these municipalities are structurally different from those with an armed group presence. To address this concern, we re-estimate our models using an alternative sample that excludes municipalities with no presence of non-state armed groups, ensuring that the comparison is made only between areas with some level of armed group activity. The results remain robust under this specification (Table A15), confirming that the observed effects of the ceasefire on criminal violence, criminal governance, and civilian victimization are not driven by the inclusion of municipalities with no armed actor presence in the control group.

5.3 Heterogeneous Effects

Table 6. First Paz Total ceasefire announcement and criminal violence in Colombia: Heterogeneous effects

Dependent variable: Number of events	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Post × Treated	0.051**	0.073***	-0.067	0.055*	0.058**	0.069***	0.062***	0.043*	-0.079
	(0.022)	(0.024)	(0.065)	(0.029)	(0.023)	(0.023)	(0.023)	(0.023)	(0.067)
Post × Treated × Coca crops	0.005**								0.006***
	(0.002)								(0.002)
Post × Treated × Illegal mining		-0.139							-0.139
		(0.096)							(0.099)
Post × Treated × Seizures			0.140**						0.150**
			(0.069)						(0.064)
Post × Treated × Military operations				0.001					-0.044
				(0.041)					(0.040)
Post × Treated × Arrests and demobilizations					0.076				0.091
					(0.063)				(0.073)
Post × Treated × Distance to military brigades						-0.064*			-0.070*
						(0.035)			(0.037)
Post × Treated × Conflict intensity							0.012		0.017
							(0.076)		(0.081)
Post × Treated × Government coalition								0.098	0.092
								(0.062)	(0.064)
Percentage effect	4.09%	113.19%	114.13%	0.73%	62.24%	-52.17%	9.66%	80.22%	
Adjusted R^2	0.186	0.186	0.186	0.186	0.186	0.186	0.186	0.186	0.188
Observations	10,690	10,690	10,690	10,690	10,690	10,690	10,690	10,680	10,680
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,068	1,068
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include two broad categories of criminal violence. More salient events include terrorism, homicides, illegal checkpoints, lockdowns, forced displacement, massacres, and armed clashes. Less salient events include extortion, kidnappings, forced recruitment of minors, and threats. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

6 Conclusion

This paper examines the impact of the first Paz Total ceasefire announcement on criminal violence and the strategic behavior of non-state armed groups in Colombia. Using a difference-in-differences framework, we find that rather than reducing violence, the ceasefire announcement led to a significant increase in criminal governance and civilian victimization, particularly through extortion, threats, and the forced recruitment of minors. Our results suggest that non-state armed groups participating in the ceasefire adapted their violent strategies, shifting away from more visible forms

of violence—such as homicides and armed confrontations—toward less salient tactics that reinforce territorial control with lower risks of attracting government or public scrutiny.

These findings highlight a critical unintended consequence of the ceasefire: instead of de-escalating conflict, it may have provided armed groups with an opportunity to consolidate their power through coercive and economic extraction mechanisms. The strategic substitution of violence suggests that while ceasefires may reduce direct confrontations, they can also create conditions that enable criminal organizations to expand their governance structures and deepen their influence over local populations.

We conduct a series of robustness checks to validate our findings, including alternative estimation strategies, different control group definitions, and the use of external data sources. Across all specifications, our results remain consistent, reinforcing the credibility of our conclusions.

These results have important policy implications for peace negotiations in Colombia and other conflict-affected regions. While ceasefires are often seen as a necessary step toward de-escalation, they may also alter the incentives of armed groups in ways that exacerbate certain forms of violence. Future peace processes should consider mechanisms to prevent armed actors from exploiting ceasefires as opportunities for territorial expansion and economic predation, particularly in areas where state presence is weak. A deeper understanding of how criminal organizations respond to peace negotiations is essential for designing policies that effectively reduce violence while preventing the entrenchment of criminal governance structures.

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A Appendix Tables

Appendix Table A1. First Paz Total ceasefire announcement and criminal violence in Colombia (Doubly robust DID)

Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.074**	0.045	0.056	0.002	0.140***	-0.051	0.221***
	(0.030)	(0.032)	(0.075)	(0.061)	(0.054)	(0.075)	(0.067)
Percentage effect	13.95%	8.47%	10.43%	2.98%	102.56%	-33.78%	313.45%
Observations	10,690	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069	1,069

This table shows the doubly robust estimator of Table 1 as proposed by Sant'Anna and Zhao (2020). Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include two aggregate measures of violence (unweighted and weighted), constructed as the average of five key violence indicators: homicides, massacres, kidnappings, terrorism, and extortion. The weighted aggregate measure assigns different weights based on the severity of each violent event: homicides (17.04%), massacres (44.84%), terrorist attacks (13.45%), kidnappings (14.35%), and extortion (10.31%). Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A2. First Paz Total ceasefire announcement and criminal violence in Colombia: Type of violence (Doubly robust DID)

Dependent variable: Number of events (standardized)	Armed confrontations	Civilian victimization	Criminal governance	Military operations	Operational seizures	Operational results
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	-0.091	0.055**	0.127***	0.013	-0.005	-0.052
	(0.092)	(0.028)	(0.040)	(0.053)	(0.040)	(0.050)
Percentage effect	-33.10%	9.21%	39.59%	45.62%	-3.05%	-9.98%
Observations	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069

This table shows the doubly robust estimator of Table 2 as proposed by Sant'Anna and Zhao (2020). Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include seven types of criminal violence. Armed confrontations include clashes between state forces and clashes between non-state armed groups. Civilian victimization includes events of terrorism, homicides, forced displacement, massacres, kidnappings, and the forced recruitment of minors. Criminal governance refers to illegal checkpoints, lockdowns, extortion, and threats. Military operations include destruction of explosives, drug labs, mines, and eradication operations. Operational seizures include seizures of drugs, explosives, chemicals, and armament. Operational results include arrests, combatant killings, and judicialization. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A3. First Paz Total ceasefire announcement and criminal violence in Colombia: Civilian victimization (Doubly robust DID)

Dependent variable: Number of events (standardized)	Terrorism	Homicides	Forced displacement	Massacres	Kidnappings	Forced recruitment
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	0.139**	0.050	0.004	0.005	-0.050	0.181***
	(0.052)	(0.070)	(0.062)	(0.060)	(0.075)	(0.061)
Percentage effect	101.86%	9.3%	2.12%	5.67%	-32.84%	247.18%
Observations	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069

This table shows the doubly robust estimator of Table 3 as proposed by Sant'Anna and Zhao (2020). Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include six categories of civilian victimization. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A4. First Paz Total ceasefire announcement and criminal violence in Colombia: Criminal governance (Doubly robust DID)

Dependent variable: Number of events (standardized)	Illegal checkpoints	Lockdowns	Extortion	Threats
	(1)	(2)	(3)	(4)
Post × Treated	0.035	0.008	0.229***	0.252***
	(0.077)	(0.057)	(0.063)	(0.062)
Percentage effect	22.82%	5.74%	324.24%	85.58%
Observations	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069

This table shows the doubly robust estimator of Table 3 as proposed by Sant'Anna and Zhao (2020). Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include four categories of criminal governance. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. The post-double-selection LASSO controls are: regional dummy indicators, population size, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A5. First Paz Total ceasefire announcement and criminal violence in Colombia: Armed confrontations

Panel A: Difference-in-differences estimates (TWFE)		
Dependent variable: Number of events (standardized)	State clashes	Non-state clashes
	(1)	(2)
Post × Treated	-0.065	-0.027
	(0.052)	(0.047)
Percentage effect	-29.75%	-14.42%
Adjusted R^2	0.045	0.121
Observations	10,690	10,690
Municipalities	1,069	1,069
Municipality FE	Yes	Yes
Time FE	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)		
Dependent variable: Number of events (standardized)	State clashes	Non-state clashes
	(1)	(2)
Post × Treated	-0.310**	0.133
	(0.155)	(0.108)
Percentage effect	-141.85%	71.68%
Observations	10,690	10,690
Municipalities	1,069	1,069

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include two categories of armed confrontations. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, municipal spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A6. First Paz Total ceasefire announcement and criminal violence in Colombia: Military operations

Panel A: Difference-in-differences estimates (TWFE)				
Dependent variable: Number of events (standardized)	Explosives destruction	Labs destruction	Mines destruction	Eradication operations
	(1)	(2)	(3)	(4)
Post × Treated	0.075	0.055	0.050	-0.012
	(0.045)	(0.054)	(0.041)	(0.056)
Percentage effect	56.50%	37.01%	45.16%	-16.82%
Adjusted R^2	0.124	0.137	0.101	0.020
Observations	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)				
Dependent variable: Number of events (standardized)	Explosives destruction	Labs destruction	Mines destruction	Eradication operations
	(1)	(2)	(3)	(4)
Post × Treated	0.062	0.027	0.079	-0.082
	(0.066)	(0.109)	(0.054)	(0.201)
Percentage effect	47.04%	17.72%	71.58%	-117.75%
Observations	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include four categories of military operations. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, municipal spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A7. First Paz Total ceasefire announcement and criminal violence in Colombia: Operational seizures

Panel A: Difference-in-differences estimates (TWFE)					
Dependent variable: Number of events (standardized)	Explosives destruction	Labs destruction	Mines destruction	Eradication operations	Eradication operations
	(1)	(2)	(3)	(4)	(5)
Post × Treated	-0.027	-0.003	0.057	-0.006	-0.092*
	(0.052)	(0.043)	(0.054)	(0.046)	(0.048)
Percentage effect	-10.06%	-1.66%	34.45%	-9.03%	-21.92%
Adjusted R^2	0.103	0.033	0.126	0.000	0.105
Observations	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)					
Dependent variable: Number of events (standardized)	Explosives destruction	Labs destruction	Mines destruction	Eradication operations	Eradication operations
	(1)	(2)	(3)	(4)	(5)
Post × Treated	0.003	0.040	0.041	0.041	-0.179**
	(0.078)	(0.080)	(0.077)	(0.022)	(0.090)
Percentage effect	11.18%	19.36%	24.59%	62.94%	-42.62%
Observations	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include five categories of operational seizures. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A8. First Paz Total ceasefire announcement and criminal violence in Colombia: Operational results

Panel A: Difference-in-differences estimates (TWFE)			
Dependent variable: Number of events (standardized)	Arrests	Combatants killed	Judicializations
	(1)	(2)	(3)
Post × Treated	-0.052	-0.028	-0.078
	(0.048)	(0.050)	(0.052)
Percentage effect	-9.97%	-20.50%	-24.92%
Adjusted R^2	0.247	0.030	0.206
Observations	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)			
Dependent variable: Number of events (standardized)	Arrests	Combatants killed	Judicializations
	(1)	(2)	(3)
Post × Treated	-0.042	-0.141	0.007
	(0.074)	(0.107)	(0.058)
Percentage effect	-8.10%	-102.54%	2.34%
Observations	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069

Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include three categories of operational results. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A9. First Paz Total ceasefire announcement and criminal violence in Colombia: Strategic violence (Doubly robust DID)

Dependent variable: Number of events (standardized)	More salient violence	Less salient violence
	(1)	(2)
Post × Treated	0.034	0.156***
	(0.087)	(0.037)
Percentage effect	1.56%	53.58%
Observations	10,690	10,690
Municipalities	1,069	1,069

This table shows the doubly robust estimator of Table 5 as proposed by Sant'Anna and Zhao (2020). Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include two broad categories of criminal violence. More salient events include terrorism, homicides, illegal checkpoints, lockdowns, forced displacement, massacres, and armed clashes. Less salient events include extortion, kidnappings, forced recruitment of minors, and threats. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A10. First Paz Total ceasefire announcement and criminal violence in Colombia: Segunda Marquetalia and Estado Mayor Central

Panel A: Difference-in-differences estimates (TWFE)						
Dependent variable: Number of events (standardized)	Armed confrontations	Civilian victimization	Criminal governance	Military operations	Operational seizures	Operational results
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	-0.108	0.028	0.104**	0.069	-0.076	-0.120**
	(0.085)	(0.028)	(0.046)	(0.054)	(0.051)	(0.090)
Percentage effect	-25.01%	3.68%	25.31%	44.41%	-10.10%	-16.41%
Adjusted R^2	0.189	0.279	0.148	0.109	0.107	0.261
Observations	8,020	8,020	8,020	8,020	8,020	8,020
Municipalities	802	802	802	802	802	802
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)						
Dependent variable: Number of events (standardized)	Armed confrontations	Civilian victimization	Criminal governance	Military operations	Operational seizures	Operational results
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	-0.263	-0.001	0.138*	-0.033	-0.033	-0.142
	(0.221)	(0.052)	(0.072)	(0.153)	(0.064)	(0.079)
Percentage effect	-60.34%	-0.14%	33.42%	-20.19%	-4.42%	-19.30%
Observations	8,020	8,020	8,020	8,020	8,020	8,020
Municipalities	802	802	802	802	802	802

This table reports the results of a sample that drops municipalities controlled by AGC. Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include seven types of criminal violence. Armed confrontations include clashes between state forces and clashes between non-state armed groups. Civilian victimization includes events of terrorism, homicides, forced displacement, massacres, kidnappings, and the forced recruitment of minors. Criminal governance refers to illegal checkpoints, lockdowns, extortion, and threats. Military operations include destruction of explosives, drug labs, mines, and eradication operations. Operational seizures include seizures of drugs, explosives, chemicals, and armament. Operational results include arrests, combatant killings, and judicialization. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A11. First Paz Total ceasefire announcement and criminal violence in Colombia: Autodefensas Gaitanistas de Colombia

Panel A: Difference-in-differences estimates (TWFE)						
Dependent variable: Number of events (standardized)	Armed confrontations	Civilian victimization	Criminal governance	Military operations	Operational seizures	Operational results
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	-0.062	0.028	0.091***	0.044	0.024	-0.073
	(0.038)	(0.022)	(0.035)	(0.023)	(0.027)	(0.047)
Percentage effect	-18.51%	4.84%	29.11%	97.33%	5.76%	-11.96%
Adjusted R^2	0.088	0.209	0.144	0.095	0.117	0.219
Observations	8,380	8,380	8,380	8,380	8,380	8,380
Municipalities	838	838	838	838	838	838
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)						
Dependent variable: Number of events (standardized)	Armed confrontations	Civilian victimization	Criminal governance	Military operations	Operational seizures	Operational results
	(1)	(2)	(3)	(4)	(5)	(6)
Post × Treated	0.021	0.048	0.078	0.071**	0.041	-0.051
	(0.074)	(0.030)	(0.054)	(0.153)	(0.041)	(0.069)
Percentage effect	6.21%	8.42%	24.81%	158.52%	9.96%	-8.29%
Observations	8,380	8,380	8,380	8,380	8,380	8,380
Municipalities	838	838	838	838	838	838

This table reports the results of a sample that drops municipalities controlled by FARC dissidents. Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include seven types of criminal violence. Armed confrontations include clashes between state forces and clashes between non-state armed groups. Civilian victimization includes events of terrorism, homicides, forced displacement, massacres, kidnappings, and the forced recruitment of minors. Criminal governance refers to illegal checkpoints, lockdowns, extortion, and threats. Military operations include destruction of explosives, drug labs, mines, and eradication operations. Operational seizures include seizures of drugs, explosives, chemicals, and armament. Operational results include arrests, combatant killings, and judicialization. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A12. First Paz Total ceasefire announcement and criminal governance in Colombia: MOE

Panel A: Difference-in-differences estimates (TWFE)					
Dependent variable: Number of events (standardized)	Criminal governance	Illegal checkpoints	Lockdowns	Extortion	Threats
	(1)	(2)	(3)	(4)	(5)
Post × Treated	0.072***	0.012	0.129***	0.213***	-0.067
	(0.023)	(0.046)	(0.042)	(0.039)	(0.052)
Percentage effect	66.75%	17.99%	1600.54%	808.71%	-42.35%
Adjusted R^2	0.052	0.000	0.022	0.021	0.023
Observations	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)					
Dependent variable: Number of events (standardized)	Criminal governance	Illegal checkpoints	Lockdowns	Extortion	Threats
	(1)	(2)	(3)	(4)	(5)
Post × Treated	0.072**	0.000	0.140***	0.242***	-0.096
	(0.031)	()0.096)	(0.043)	(0.052)	(0.096)
Percentage effect	66.66%	0.00%	1741.86%	917.81%	-60.77%
Observations	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069

This table reports the results using data from MOE. Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. The outcome variables include four categories of criminal governance. Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A13. First Paz Total ceasefire announcement and criminal violence in Colombia: ELN municipalities in treatment group

Panel A: Difference-in-differences estimates (TWFE)							
Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.077***	0.063***	-0.019	0.055	0.112***	0.062*	0.176***
	(0.017)	(0.020)	(0.037)	(0.037)	(0.035)	(0.034)	(0.039)
Percentage effect	16.15%	13.21%	-3.91%	68.21%	93.52%	44.43%	238.91%
Adjusted R^2	0.310	0.186	0.444	0.028	0.084	0.133	0.053
Observations	10,690	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069	1,069
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)							
Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.087*	0.061	0.103	0.012	0.164***	0.005	0.152***
	(0.048)	(0.040)	(0.228)	(0.066)	(0.048)	(0.085)	(0.064)
Percentage effect	18.27%	12.80%	21.22%	15.02%	136.60%	3.67%	206.14%
Observations	10,690	10,690	10,690	10,690	10,690	10,690	10,690
Municipalities	1,069	1,069	1,069	1,069	1,069	1,069	1,069

This table reports the results of a sample that includes ELN municipalities in the treatment group. Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. he outcome variables include two aggregate measures of violence (unweighted and weighted), constructed as the average of five key violence indicators: homicides, massacres, kidnappings, terrorism, and extortion. The weighted aggregate measure assigns different weights based on the severity of each violent event: homicides (17.04%), massacres (44.84%), terrorist attacks (13.45%), kidnappings (14.35%), and extortion (10.31%). Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Appendix Table A14. First Paz Total ceasefire announcement and criminal violence in Colombia: Dropping ELN municipalities from sample

Panel A: Difference-in-differences estimates (TWFE)							
Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.074***	0.054***	0.023	0.035	-0.005	0.070	0.246***
	(0.025)	(0.027)	(0.051)	(0.049)	(0.054)	(0.059)	(0.052)
Percentage effect	15.16%	11.04%	4.56%	34.93%	-3.40%	68.63%	522.26%
Adjusted R^2	0.239	0.149	0.369	0.029	0.055	0.072	0.057
Observations	8,840	8,840	8,840	8,840	8,840	8,840	8,840
Municipalities	884	884	884	884	884	884	884
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)							
Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.031	0.006	0.046	-0.033	-0.025	-0.029	0.198**
	(0.042)	(0.049)	(0.075)	(0.086)	(0.088)	(0.109)	(0.097)
Percentage effect	6.43%	1.17%	9.27%	-33.25%	-17.44%	-28.57%	419.42%
Observations	8,840	8,840	8,840	8,840	8,840	8,840	8,840
Municipalities	884	884	884	884	884	884	884

This table reports the results of a sample that drop ELN municipalities. Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. he outcome variables include two aggregate measures of violence (unweighted and weighted), constructed as the average of five key violence indicators: homicides, massacres, kidnappings, terrorism, and extortion. The weighted aggregate measure assigns different weights based on the severity of each violent event: homicides (17.04%), massacres (44.84%), terrorist attacks (13.45%), kidnappings (14.35%), and extortion (10.31%). Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

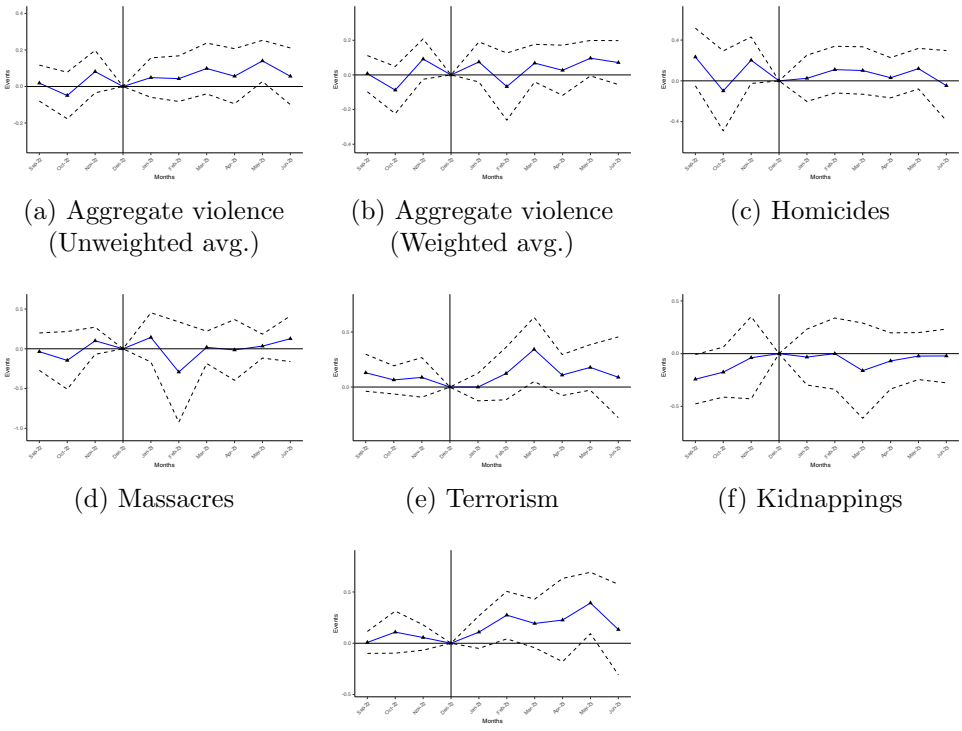
Appendix Table A15. First Paz Total ceasefire announcement and criminal violence in Colombia: Dropping peaceful municipalities from sample

Panel A: Difference-in-differences estimates (TWFE)							
Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.053***	0.039*	-0.021	0.030	0.030	0.059 *	0.166***
	(0.018)	(0.022)	(0.037)	(0.041)	(0.035)	(0.033)	(0.040)
Percentage effect	12.18%	9.03%	-4.82%	43.09%	27.37%	47.79%	290.24%
Adjusted R^2	0.297	0.177	0.429	0.027	0.080	0.132	0.050
Observations	6,890	6,890	6,890	6,890	6,890	6,890	6,890
Municipalities	689	689	689	689	689	689	689
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Adding controls (Doubly robust DiD)							
Dependent variable: Number of events (standardized)	Aggregate violence		Homicides	Massacres	Terrorism	Kidnappings	Extortion
	Unweighted average	Weighted average					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × Treated	0.062**	0.033	0.065	-0.015	0.091**	-0.020	0.187**
	(0.026)	(0.029)	(0.048)	(0.057)	(0.044)	(0.062)	(0.058)
Percentage effect	14.24%	7.60%	14.69%	-21.62%	82.91%	-16.11%	326.48%
Observations	6,890	6,890	6,890	6,890	6,890	6,890	6,890
Municipalities	689	689	689	689	689	689	689

This table reports the results of a sample that drop peaceful municipalities from the control group. Standard errors (in parentheses) are clustered at the municipal level. The sample consists of a municipal-yearly panel covering 1,069 municipalities over 10 months. Treated is a binary indicator equal to 1 for municipalities where a non-state armed group involved in the first Paz Total ceasefire (Segunda Marquetalia, Estado Mayor Central, or Autodefensas Gaitanistas de Colombia) is present. Post is a binary indicator for the post-treatment period. he outcome variables include two aggregate measures of violence (unweighted and weighted), constructed as the average of five key violence indicators: homicides, massacres, kidnappings, terrorism, and extortion. The weighted aggregate measure assigns different weights based on the severity of each violent event: homicides (17.04%), massacres (44.84%), terrorist attacks (13.45%), kidnappings (14.35%), and extortion (10.31%). Each column reports treatment effect estimates for a different standardized outcome, as specified in the table header. Panel A reports the two-way fixed effects estimates of Equation 1. Panel B reports the doubly robust estimator proposed by Sant'Anna and Zhao (2020). The post-double-selection LASSO controls are: regional dummy indicators, population size, distance to Bogotá, municipal revenues and spending, poverty rate, and area share of coca crops. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

B Appendix Figures

Appendix Figure B1. Ceasefires and criminal violence in Colombia (Doubly robust DID event-study)



(a) Aggregate violence (Unweighted avg.)

(b) Aggregate violence (Weighted avg.)

(c) Homicides

(d) Massacres

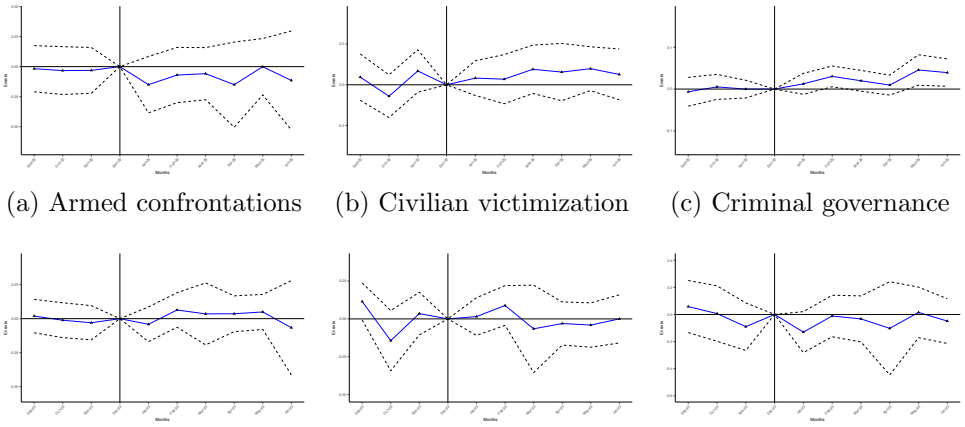
(e) Terrorism

(f) Kidnappings

(g) Extortion

This figure presents coefficients of Table A1 from an event-study regression based on Equation 1, along with 95% confidence intervals, using municipal-year data for seven different outcomes (as indicated in each subfigure title). Standard errors are clustered at the municipal level.

Appendix Figure B2. Ceasefires and criminal violence in Colombia: Type of violence (Doubly robust DID event-study)

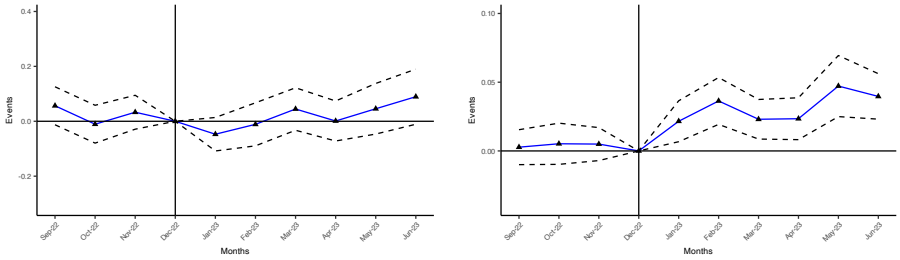


(a) Armed confrontations (b) Civilian victimization (c) Criminal governance

(d) Military operations (e) Operational seizures (f) Operational results

This figure presents coefficients of Table A2 from an event-study regression based on Equation 1, along with 95% confidence intervals, using municipal-year data for six different outcomes (as indicated in each subfigure title). Standard errors are clustered at the municipal level.

Appendix Figure B3. Ceasefires and criminal violence in Colombia: Strategic violence (Event-study)



(a) More salient violence (b) Less salient violence

This figure presents coefficients of Table 5 from an event-study regression based on Equation 1, along with 95% confidence intervals, using municipal-year data for two different outcomes (as indicated in each subfigure title). Standard errors are clustered at the municipal level.