The Backlash Effect of State Coercion:
Protest Resilience Under Costly and Targeted Repression

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Abstract

The relationship between state repression and protests is complex, as repression can deter or incite protests and escalate to violence. Additionally, it remains unclear which repressive actions lead to deterrence or incitement of protest activities, and why. Using data from the Chilean 2019 protest cycle, I analyze how different repressive techniques affect the occurrence of protests. Through the estimation of models that consider spatial dynamics and lagged effects, I find that techniques like arrests and beatings correlate with an increase in protest activity, while rubber bullets are linked to deterrence. I interpret these results based on two key mechanisms within the backlash-deterrence continuum identified in the literature: the scope of repression (widespread or targeted) and the costs that repression entails for demonstrators. These findings offer new insights into how specific characteristics of repressive actions influence protest dynamics in democratic contexts.

Keywords
police repression, protests, state coercion, repressive tactics, mobilization dynamics

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1 Introduction

Protests serve as a critical means for people to express their demands and to make themselves heard. In recent years, there has been a significant increase in the number of protests worldwide,[1] with notable rises in both established and emerging democracies. This trend reflects growing global discontent with political, economic, and social issues, manifesting in diverse forms of public demonstrations. Although protests are a fundamental political right in democratic societies, demonstrators are often severely repressed by state authorities. The use of coercion and brutality by law enforcement officials against protesters has intensified, even in the most consolidated democracies.[2] This escalation, in some cases reaching the point of systematic civil and human rights violations during street protests, can have divergent effects: it may either discourage and diminish protest activity or provoke a backlash, potentially increasing mobilization and escalating the protesters' tactics toward violence (Rasler, 1996; Sullivan, Loyle, & Davenport, 2012).

Despite the array of connections between repression and dissent, it is still unclear if specific forms or tactics of repression have particular effects on mobilization, and if this diversity of interactions between state coercion and protest can be explained by the type of coercive strategy that is being used—what some authors have called the *repertoire* of repression (Gutiérrez-Sanín & Wood, 2017). The analysis of concrete repressive actions of law enforcement officials based on typologies was identified as a key topic for social movements research more than a decade ago (Davenport, 2007). Remarkable research in this area has emerged over the last few years, focusing mostly on authoritarian regimes (e.g., Bautista et al., 2023; Curtice and Behlendorf, 2021), but there is still little knowledge about how the backfiring dynamics unfold in democratic settings. The literature has identified multiple factors to explain the backlash effect, such as how widespread it is and the level of violence; however, empirical studies have yet to fully explore the variety of repressive tactics used during contemporary protests in democratic contexts and their varied effects on protest occurrence.

To contribute to this literature, I analyze the *Estallido Social*, a protest cycle in Chile

that began in October 2019 and lasted until the start of the COVID-19 pandemic. The protests spanned several months and occurred across multiple cities, involving a diverse range of repressive tactics used to deter protesters. This case serves as an appropriate setting for studying the effects of state coercion on protest activity due to its varied repressive strategies and the extended duration of unrest, which provide rich data on the interaction between state actions and protest dynamics. In particular, I test four different mechanisms identified in the literature that explain why repression deters mobilization or, conversely, backfires. These mechanisms relate to two dimensions of repression: its scope (whether widespread or targeted) and the costs it imposes on demonstrators. Using daily data on repressive events and protest activities, I characterize specific repressive actions such as rubber bullets, beatings, arrests, and crowd control techniques. My goal is to assess whether the deterrent or backlash effect of repression can be better understood based on the specific repressive technique used. This detailed account of repressive types addresses some of the traditional challenges in this area of research.

The findings suggest different patterns in how particular forms of repression are associated with changes in protest activity. Some tactics of repression, like the use of rubber bullets, are linked to a decrease in protest activity in the following days, while other tactics, such as arrests or the use of crowd control techniques, appear to have a backlash effect, correlating with increased subsequent protest activity. This suggests that not all forms of state repression have uniform effects on protests, offering new insights into the broader discourse on the relationship between state coercion and protest activities. While scholarship has long recognized the importance of assessing the costs (e.g., Gurr, 1970; Lichbach, 1987) and the level of targeting (e.g., Demirel-Pegg and Rasler, 2021; Sullivan, 2016) in understanding how state repression relates to protest and dissent, I apply these theoretical insights to analyze specific, concrete forms of coercion and to interpret these findings alongside previously identified mechanisms. I propose that the most widely used forms of police repression in democracies can be categorized based on their scope and the costs they entail for demonstrators, which may help anticipate specific mobilization outcomes.

This study offers a distinct perspective on the relationship between repression and protest mobilization, refining the conventional view that increased costs and risks invariably deter protest activity (Digrazia, 2014; Opp & Roehl, 1990). The results underscore the importance of the accumulation of repressive actions: it is the repeated application of high-risk tactics with severe or even fatal consequences, such as police beatings or the use of rubber bullets, that gradually reduces the frequency of protests. This pattern suggests that the deterrent effect of repression emerges over time, challenging the notion that the immediate costs and risks of repression are the primary factors dissuading participation in protests. I also present new evidence regarding the effects of targeted versus widespread repression. Contrary to expectations that targeted repression might be more effective in quelling dissent due to its direct impact on individuals or groups (della Porta, 1997; Demirel-Pegg & Rasler, 2021; Josua & Edel, 2015), these findings suggest that the effect of repressive tactics in diminishing dissent is not conditioned on the selectiveness of its targets. Instead, the critical determinant appears to be the ongoing exposure to repression, which can influence protest activity irrespective of whether the tactics are applied broadly or selectively. This approach integrates the costs and targeting of repression, while also considering the cumulative effect of repressive actions over time on the occurrence of protest activities.

2 The Effects of Repression

Extensive research has scrutinized the interplay between state repression and contentious activities.[3] Repression stands out as a critical element in understanding the responses and strategies of social movements (della Porta, 2012). The research puzzle that has captivated scholars is the coercion-protest paradox: the inconsistent outcomes of repression that can either suppress or inadvertently amplify protest activities (Pearlman, 2013). Earl and Soule (2010) made an enlightening critique of the prevalent simplistic view of protest policing, claiming that it fails to account for the array of strategies employed by law enforcement. Scholarship still lacks a detailed exploration of the impact of specific repressive strategies and crowd control techniques on protest dynamics. Khawaja (1993) was among the first to assess the consequences of varied repressive actions beyond just arrests, finding that most forms of repression increased collective action, with the exception of home raids, which decreased it.[4] This section focuses on two key aspects identified in the literature as to why repression backfires or effectively suppresses dissent: the scope of repression and the costs it entails for demonstrators.

2.1 The Scope of Repression

Mechanism 1: Repression incites more protests when it is widespread due to its high visibility to protesters and bystanders

When theorizing about the effects of repression, one focus has been on the visibility of repressive acts. Widespread repression, especially when it is visible to both protesters and bystanders, can incite more protests as it draws attention and raises awareness of the state's actions. Such visibility can transform passive observers into active participants, increasing mobilization. The excessive use of force against demonstrators may intensify grievances against governmental institutions, leading to a collective response that serves as a rallying point for mobilization across diverse societal contexts (Schulte & Steinert, 2023). The high-profile nature of widespread repression not only incites outrage among

those directly affected but also resonates with wider audiences, fostering unity against perceived state excesses (della Porta, 1997; Josua & Edel, 2015).

Widespread, indiscriminate repression, conceptualized as collective targeting (Kalyvas, 2006) or collective punishment (Khawaja, 1993), frequently precipitates a substantial increase in protest mobilization, particularly when perceived as unjust by both direct participants and the wider public (Hess & Martin, 2006; Honari, 2018). Actions that are indiscriminate and highly visible can resonate with the public, encouraging a unified response against state actions. The dissemination of information regarding these repressive acts is pivotal; in the absence of widespread awareness, an increase in collective action is less likely to occur (Sutton, Butcher, & Svensson, 2014). On the contrary, when protests reach their maximum information-revealing potential, the likelihood of cascading into a successful uprising increases (Garfias & Magaloni, 2018).

This process, where repression backfires, is not simply a matter of decreasing costs but involves mobilizing individuals by making state actions visible and resonant (Pearlman, 2013). The Arab Spring serves as a salient example, wherein widespread repression did not deter protests; rather, it sparked indignation and courage, propelling people into the streets (Pearlman, 2013). A similar dynamic was observed during the Catalan independence movement, where the backlash from repression not only failed to suppress the movement but also intensified positive attitudes towards its objectives (Balcells, Dorsey, & Tellez, 2021).

Mechanism 2: Repression discourages protests when it is widespread as individuals fear being affected

Conversely, widespread repression can serve as a deterrent to collective action by creating an environment of fear and uncertainty. This atmosphere not only affects individual decisions about participating in street mobilizations but also disrupts the collective capacity for mobilization. Previous research has found that different types of repressive strategies significantly impact the development of networking and coalition

building among activists (Sika, 2024). When repression is pervasive and indiscriminate, it severely limits activists' ability to form networks and coalitions, which are essential for organizing effective protests and achieving policy changes. The pervasive threat of repression can lead to a decrease in visible dissent, as individuals weigh the high personal risks against the potential benefits of participating in collective action. As a result, the overall momentum of protest movements can be stifled, preventing the formation of unified fronts and diminishing the likelihood of sustained mobilization.

Selective and targeted repression has been widely studied using authoritarian countries as cases of study. Nevertheless, democratic regimes are no strangers to targeted repression, although not through expulsions and disappearances as in authoritarian countries (Gohdes, 2020), but through softer mechanisms like anti-insurgency campaigns and banning of organizations (Franklin, 2020). However, widespread repression, which affects a broader population, has a more profound psychological impact by instilling fear across society. This fear can deter individuals from participating in protests due to the high perceived risk of personal harm. In democratic contexts, this type of repression can be particularly insidious, as it undermines the very principles of freedom and participation that these societies are built upon. This dynamic indicates that indiscriminate repression, intended to suppress dissent, can paradoxically enhance support for movements and escalate conflict (Sullivan, 2016). By affecting not only activists but the general populace, widespread repression creates a chilling effect, stifling dissent and discouraging collective action on a broad scale.

2.2   The Costs of Repression

Mechanism 3: Repression incites more protests when its costs produce an emotional response

Repression can be an escalation factor despite presenting high costs for demonstrators. The severity of repression, often described in terms like "strength" or "intensity," captures the impact on those who experience such acts (Hess & Martin, 2006). The

costs of demonstrating caused by repression can be both physical and intangible, short or long-term. On the one side, the violation of physical integrity can be perceived as a direct choice made by the authorities in command of the state institutions that exercise repression, such as the military or the police. These deliberate policy choices can lead to greater grievances among the population (Bell et al., 2013). On the other side, the visibility of severe repression can galvanize public sympathy and support for the protesters, as the harsh tactics used by the state may be seen as overreaching and unjust.

When repression is seen as unjust or disproportionate, in a situation where demonstrators pay high costs for exercising a basic political right, it can elicit anger among demonstrators and bystanders, increasing their resolve and motivation to protest against these perceived injustices (Honari, 2018). Here, public outrage is a key mechanism for generating backfire, which can incite further protests (Hess & Martin, 2006). For a repressive event to backfire, an audience must perceive it as unjust, thereby eliciting anger and leading to escalation (Hess & Martin, 2006; Honari, 2018). Anger, as an emotional response, can unify diverse groups around a common cause, transforming isolated incidents into larger movements. The perceived sacrifice of those who endure high costs can inspire a moral duty among others to join the protests, thus amplifying mobilization.

Repression increases dissident actions because it allows challengers to frame repressive actions as illegitimate sanctions on dissenting behavior. This framing creates new incentives to mobilize against the system that sanctioned them (Francisco, 2004; Sullivan, Loyle, & Davenport, 2012). The perceived illegitimacy of repression can also attract broader public support, as neutral observers may join the movement out of a sense of justice and opposition to authoritarian measures. This collective indignation can transform individual grievances into a powerful force for political change.

Mechanism 4: Repression discourages protests when the perceived costs of demonstrating outweigh the benefits

The exploration of the repression-concession continuum offers valuable perspectives on when and how state coercion can achieve its intended outcomes (Klein, Cuesta, & Chagalj, 2022; Shadmehr & Boleslavsky, 2022). Faced with the strategic decision between making concessions to or repressing dissidents, governments often choose the path they perceive as most cost-effective (Lachapelle, 2021). Understanding the calculus behind these decisions is essential, not just for analyzing the rationale behind regimes' reliance on repression, but also for identifying the factors that influence individuals' decisions to engage in or abstain from collective action. Subsequently, the decision to participate in protests involves a cost-benefit analysis, where mobilization becomes more likely if the perceived benefits of action outweigh the anticipated costs (Gamson, 1975; Tilly, 1978). In high-cost scenarios, the perceived risks and potential personal harm can deter individuals from participating, tipping the scales in favor of governmental control.

Given that repression can alter the cost-benefit calculus by modifying the perceived risks associated with dissent (Young, 2019), it stands to reason that more violent forms of repression might elevate the perceived danger, thereby diminishing the likelihood of protest activity. The approach of clamping down on largely peaceful dissent can serve as a significant deterrent to future activist engagement. When the costs incurred from facing repression significantly exceed the perceived benefits of participating in movements, it can effectively discourage continued or future mobilization—especially if the demonstrations aimed to be nonviolent, as participants would have the expectation of not being repressed (Chiang, 2021). Dornschneider-Elkink and Edmonds (2024) suggest that nonviolent forms of repression, such as imposing street blockages and curfews to prevent demonstrations, can exert a more substantial dampening effect on dissent than violent state actions, challenging the conventional belief that violent repression is the most effective deterrent. This indicates that the strategic application of repression, which tactically alters the logistical ease of protesting without escalating

violence, can subtly but significantly impact mobilization decisions. In essence, when the state employs tactics that increase the logistical and emotional costs of protesting, potential demonstrators may find the personal and collective risks too high to justify participation.

3   Context: The Chilean *Estallido*

The *Estallido Social* ("Social Outburst") in Chile, which began in October 2019, was not merely a localized event but an important case for understanding the dynamics of police repression and its effects on socio-political landscapes. Characterized by widespread daily manifestations and significant public engagement across multiple localities, this protest cycle sheds light on broader patterns of state response to collective dissent. Its nearly six-month duration provides a unique perspective on the repression-contention nexus over time, beyond isolated incidents. Thus, the *Estallido* serves as a valuable case for exploring how various repressive strategies influence public mobilization trends, providing insights into the complex balance between state coercion and the resilience of protest movements worldwide.

After the return of democracy following the 1988 plebiscite that ended Augusto Pinochet's dictatorship, multiple social movements developed in Chile, the most emblematic being the student movements of 2006 and 2011. Even though the student movement achieved significant political victories, such as the repeal of the General Education Law (*Ley General de Educación* in Spanish, LGE), and maintained steady protest activities throughout almost entire academic years, neither the 2006 nor the 2011 movement matched the level of protest frequency and sustained turnout of the 2019 *Estallido*. What unfolded over almost six months was a sustained routine of protest activity with little to no top-down organization. In Santiago, people gathered almost every afternoon in Plaza Baquedano, one of the most crowded places in the city, with Fridays being the most popular days for protests. Similar dynamics occurred in other cities. According to data provided by the national police (*Carabineros*), over 2,500 protest events occurred across the country during this period (see Appendix E.3).

The protests and riots started in the capital Santiago after the announcement of an increase in public transportation fares of 30 Chilean pesos, but they quickly spread to other cities. After the announcement of the tariff increase, students from several public high schools in the capital organized mass evasions of public transport, specifically in subway stations (Baeza, 2019). During the following week, police officers were constantly

11

monitoring the entrances of the stations, closing accesses to have greater control over the transit of pedestrians. The most critical stations were closed for several hours per day, especially during the evenings, when most people get off work. On the afternoon of Friday, October 18, the situation escalated after thousands of people were not able to commute from their jobs to their homes. Barricades and the destruction of subway access gates occurred. During that night, multiple subway stations were set on fire.

As a response to the fires in the subway stations, President Sebastián Piñera declared a state of emergency and a subsequent curfew that started on October 19. Riots occurred in other parts of the country during that weekend, and the repressive actions of the police exacerbated social unrest. Government support for police actions ultimately translated into more social unrest and discontent. Despite the constant pressure from the Government to "return to normality", and the announcement of an action plan called 'New Social Agenda' (*Nueva Agenda Social*) (Rogel, 2019), which, according to the Government, aimed to solve the main problems and struggles of the population, social unrest did not stop. The feeling that the Government's measures were not aimed at structural reforms, coupled with high levels of repression, ultimately generated a constant state of skepticism and anger among the population. Protests and riots lasted until the COVID-19 outbreak in mid-March 2020.

According to data provided by Carabineros, almost five million people took part in the protests between October and December 2019.[5] Despite this high turnout, demonstrators were severely repressed. The level of repression, exercised mostly by Carabineros but also by other law enforcement institutions such as the military and the marines, was unprecedented in the democratic history of the country. International organizations such as Human Rights Watch and Amnesty International acted as observers and continuously called out the disproportionate use of force against protesters and persistent non-compliance with protocols, which resulted in thousands of people suffering eye injuries caused by rubber bullets (Amnesty International, 2020). The severity of the accusations against Carabineros and their practices caused considerable outrage among the population. Abuses were not limited to the streets but

also occurred in other places. Media reports highlighted several cases of detainees being undressed in police stations (INDH, 2019), along with other instances of gender-based violence, such as rape threats (Rojas, 2019). Given that the frequency and participation levels of protests remained relatively stable over the following months, despite the variety and intensity of repressive actions being committed, it is worth examining the effect of these repressive actions and whether they were linked with an increase in protest activity.

4 Research Design

4.1 Variables and Measurement

I use data on protest occurrences collected by the Social Conflict Observatory (Centre for Social Conflict and Cohesion Studies, 2020), a research initiative that systematically identifies conflicts in Chile through detailed press analysis. This measurement considers contentious actions as the primary unit of study, defined as how an actor, group, or social movement articulates collective grievances in the public sphere at a particular time and location. The Observatory surveys a broad range of media sources, including national newspapers and regional dailies, to ensure comprehensive coverage of various types of conflict, with a particular focus on those affecting local communities. I included all events classified as contentious activities during the period from October 18 to December 31, 2019[6] The data also includes the specific location (municipality) and date of each occurrence.

I complemented the protest occurrence data with information on repressive actions by law enforcement, provided by the Chilean Institute of Human Rights (INDH). The INDH is an autonomous public entity, and although it is publicly funded, it does not depend on any state power. During the 2019 protest cycle, the INDH was a key actor in documenting and reporting wrongdoings by law enforcement officers. The INDH produced an extensive database containing all judicial actions by civilians who claim to have been subjected to any type of abuse, excessive violence, or violation of basic rights by state agents. The fact that this database was compiled based on civil lawsuits reduces the risk of reporting bias since it is not at the discretion of the administrative entity which cases to record and which to omit.[7] The original database includes 22 types of repressive actions, of which I considered only the five with the highest occurrence[8], which comprise over 85% of the total repressive events (see Table A.1). For each of these actions, I recorded the total number of repressive events in each category, by municipality, on a specific date. Details about the full set of categories and their distribution are available in Appendix A.

By integrating these two sources of information, I constructed a time-series database covering 346 municipalities over 74 days, resulting in a final dataset of 25,604 observations. Table 1 summarizes the distribution of repressive actions and contentious events by region (Metropolitan and the rest of the country), month, and type of repressive action.

Table 1: Distribution of repressive actions and contentious events

	Repressive actions	Protest events
Region		
Metropolitan Region	34.27 (790)	22.39 (743)
Other Regions	65.72 (1,515)	77.60 (2,575)
Type of Repressive Action		
Arrests	11.19 (258)	
Beatings	32.53 (750)	
Crowd Control (Tear Gas/Water Cannon)	4.59 (106)	
Rubber bullets shootings	51.67 (1,191)	
Month		
October 2019	56.18 (1,295)	36.67 (1,217)
November 2019	38.04 (877)	54.06 (1,794)
December 2019	5.77 (133)	9.25 (307)
Total (N)	2,305	3,318

Note: Entries in percentages with N in parenthesis.

4.2   Estimation

Following Sudduth and Gallop (2023), I use a generalized linear mixed model (GLMM) to address overdispersed protest and police repressive event data, as well as the presence of zeros—municipalities that did not have protests or repressive events on a given day, leading to rows containing only zeros.[9] This approach enables me to account for specific dispersion parameters in the dependent variable, such as the day of the week or climate conditions.[10]

Additionally, following the literature that highlights the importance of lagged variables in the study of social movements and protests (e.g., Beck and Katz, 1996; Earl and Soule, 2010; Opp and Roehl, 1990) and their role in eliminating serial

15

correlation of errors (Beck & Katz, 2011), I included lagged explanatory variables for the occurrence of protest events. I also added lagged specifications for each of the four types of repressive actions, as I am interested in how previous experiences with police repression affect subsequent protest occurrences.

The outcome $Y_{i,t}$ is the observed count of protest events for municipality i on day t, which follows a distribution of $Y_{i,t} \sim ZINB(\psi_{i,t}, \lambda_{i,t}, \phi)$. $Y_{i,t}$ is a structural zero with probability $\psi_{i,t}$ (the zero-inflation component), or otherwise, a count with expected value $\lambda_{i,t}$ and overdispersion ϕ to estimate the count component $log(\lambda_{i,t})$. Therefore, the estimated models have the following structure:

$$Protest\ Events_{i,t} \sim ZINB(\psi_{i,t}, \lambda_{i,t}, \phi) \tag{1}$$

where:

$$\psi_{i,t} = Logit(\beta_0 + \beta_m Z_{i,t-k} + \mu_i) \tag{2}$$

and:

$$log(\lambda_{i,t}) = \gamma_0 + \gamma_n X_{n,i,t-k} \tag{3}$$

In Equation 2, β_0 is the intercept in the zero-inflation model, representing the baseline log odds of a protest event being a structural zero. β_m represents the coefficients corresponding to each zero-inflation predictor represented by $Z_{i,t-k}$ for each municipality i lagged by $t - k$.[11] In Equation 3, γ_0 is the intercept term in the count component model, representing the baseline log count when all predictors are at their reference levels, and γ_n are the coefficients corresponding to each count component predictor with $X_{n,i,t-k}$ being the count component predictors for each municipality i lagged by $t - k$. Finally, ϕ represents the overdispersion parameter in the ZINB distribution, which is critical for modeling the extra variability in the count data.

5   Results

Figure 1 illustrates the distribution of repressive actions across the country, spanning from October 18 to December 31, 2019. A significant concentration of these actions is evident in the Metropolitan Region, especially within the Province of Santiago. This pattern corresponds closely with the high density of protests observed in this region. The question arises: is there a correlation between the distribution of repressive actions and subsequent protest activities?

Figure 1: Number of Repressive Actions by Municipality
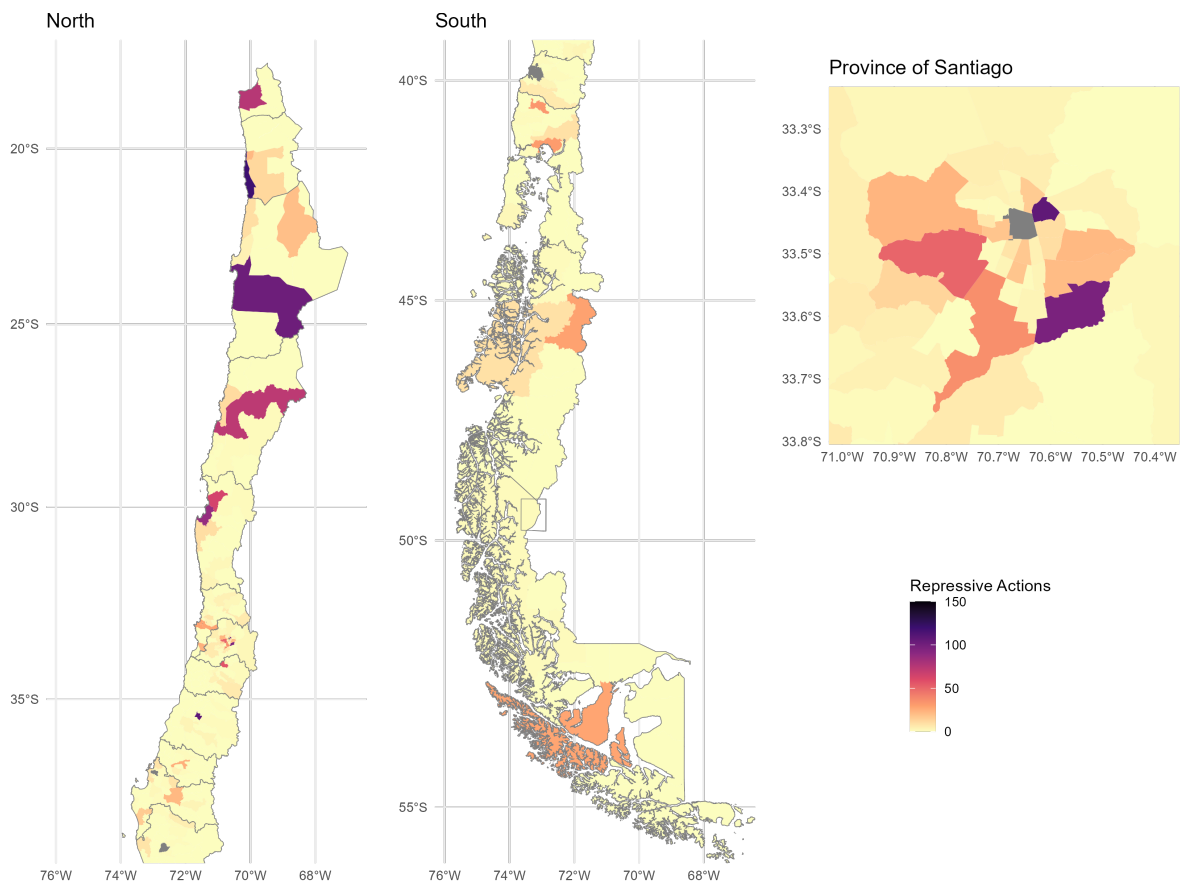
Note: The top right panel zooms into the Province of Santiago.

Since I am interested in exploring how previous acts of repression affect subsequent protest events, I estimated the ZINB models with three main specifications. The first model includes lagged independent variables for the day before the protests, both for the type of repression and for the protests that occurred the day before. The second model

includes the accumulation of repression and protests for the three days prior. Finally, a third model includes the accumulation of the seven days prior.[12] The full models are available in Table B.1. To ease interpretation, I present plots of the predicted effects at different levels of repressive actions based on these models.

Figure 2 demonstrates the varying impacts of rubber bullet shootings on the frequency of subsequent protest events. In the left panel, a one-day lag analysis indicates a weak negative correlation between shootings and protests, yet this relationship shows no substantial amplification with an increase in the number of shootings. In stark contrast, the center and right panels, representing three-day and seven-day accumulations, point to a deterrent effect on protest events. This effect is not only constant but intensifies as the amount of rubber bullet incidents grows, showing that while an immediate response to this type of repression might be weak, a sustained strategy of attacking demonstrators with rubber bullets over time may in fact dampen the propensity for further protest, hinting at a potential threshold where the cumulative effect of state violence alters the willingness or ability of individuals to engage in protest.

Figure 2: Predicted Impact of Rubber Bullet Shootings on Protest Occurrence
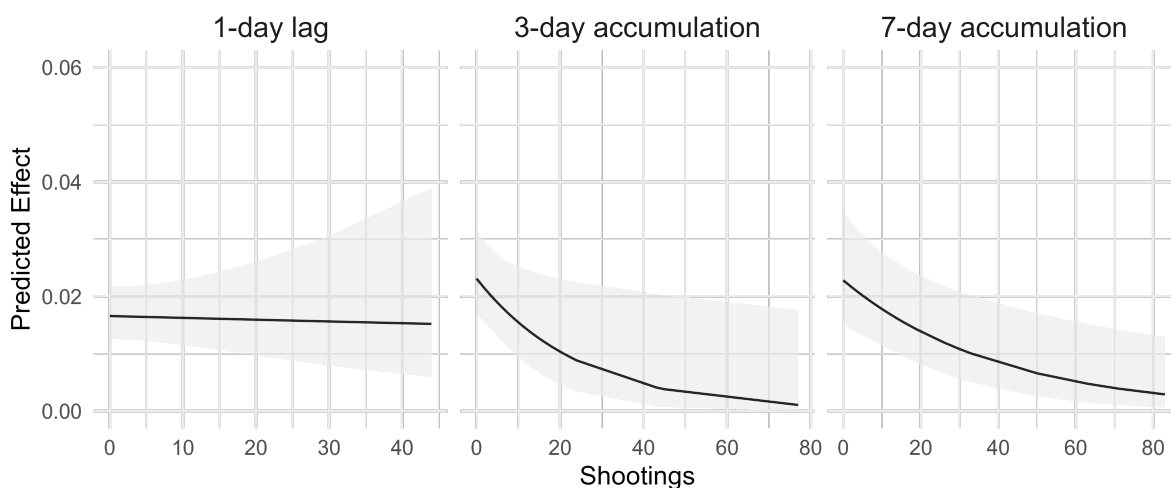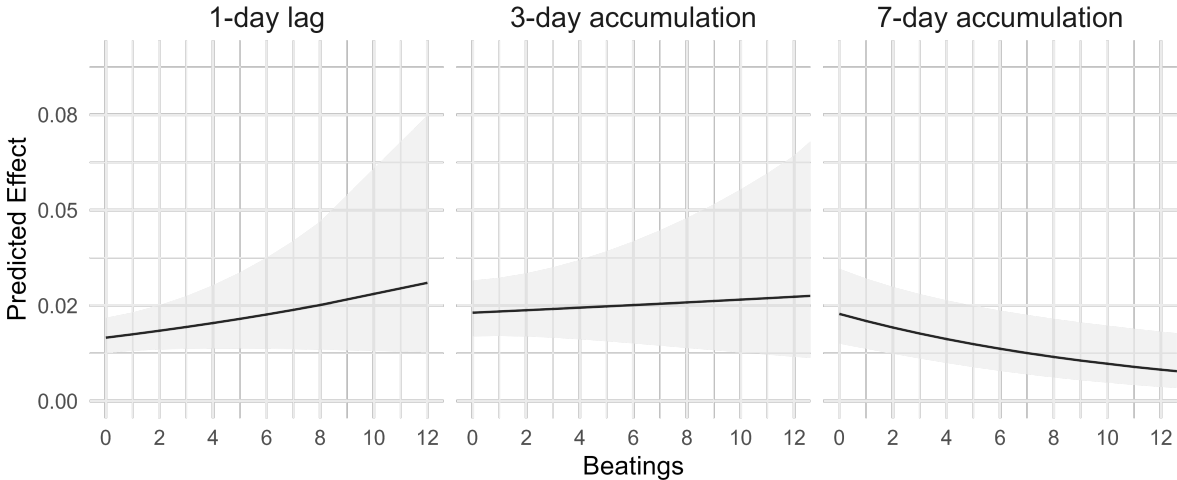

Note: Predicted effect based on models available in Table B.1. C.I.s at 95%.

Figure 3 examines the predicted influence of the beating of demonstrators on the occurrence of protests. The immediate response, as depicted in the one-day lag graph

18

(left panel), shows an effect on protest frequency with an increased number of beatings, suggesting that immediate physical repression may, in fact, lead to a rise in protest activity the following day. This could be indicative of a backlash effect, where acts of violence against demonstrators spur further mobilization. As the analysis extends to cover the three-day and seven-day accumulations of such incidents, the trends diverge. In the seven-day accumulation graph, the trend shifts downward, suggesting that prolonged exposure to beatings over the course of a week might suppress the occurrence of protests.

Figure 3: Predicted Impact of Beating of Demonstrators on Protest Frequency

Note: Predicted effect based on models available in Table B.1. C.I.s at 95%.

Figure 4 provides evidence of how crowd control measures, such as tear gas and water cannons, affect protest activity. In the immediate aftermath of these tactics (one-day lag), there is no significant effect on protest frequency. However, when examining the data over longer periods, a discernible trend appears. This trend is more pronounced over a seven-day period, where the data indicate an increased likelihood of protests coinciding with intensified use of crowd control. These findings suggest a potential delayed reaction to sustained repressive actions that may be associated with a higher propensity for protests.

Figure 4: Predicted Impact of Crowd Control Techniques on Protest Frequency
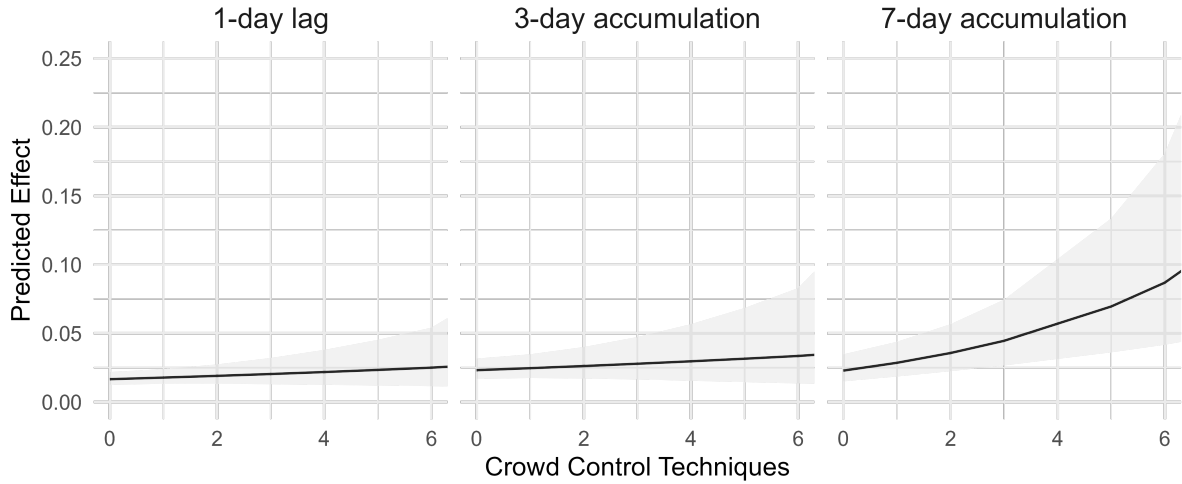
Note: Predicted effect based on models available in Table B.1. C.I. at 95%.

Lastly, Figure 5 illustrates the relationship between arrests and protest frequency, showing different patterns across various timeframes. Initially, a slight upward trend in the one-day lag graph indicates an association between arrests and increased protest activity the following day. This trend is more pronounced in the three-day accumulation, suggesting a possible build-up in protest activity as arrests increase. However, the seven-day accumulation graph shows a less steep slope, indicating that the association between arrests and protest frequency may diminish over time. This pattern could reflect changes in protester responses and the potential depletion of participants more susceptible to being arrested, resulting in a nonlinear relationship where the influence of arrests is strongest in the short term but declines as time progresses.

Figure 5: Predicted Impact of Arrests on Protest Frequency
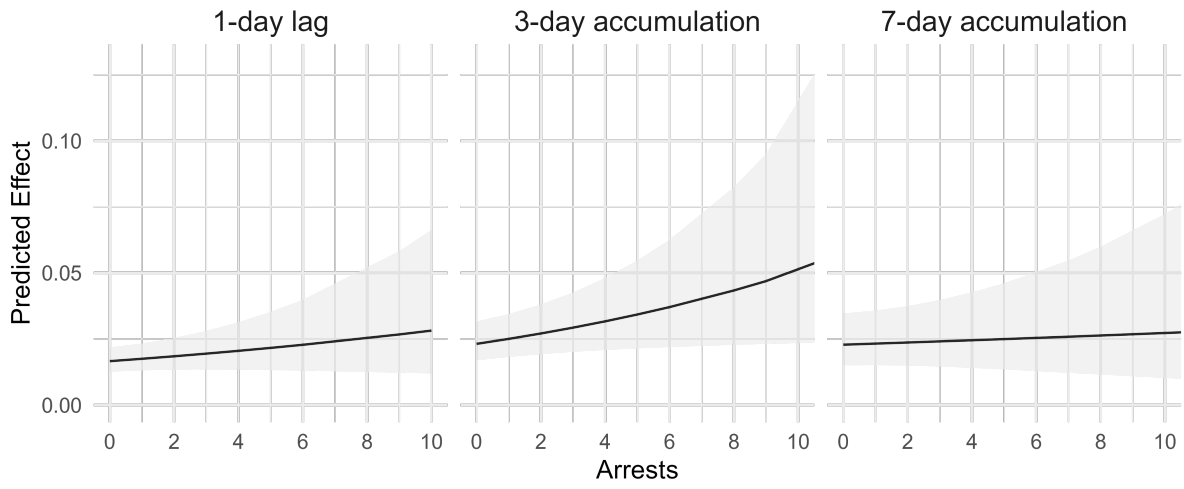
Note: Predicted effect based on models available in Table B.1. C.I. at 95%.

6   Mechanisms

The results indicate that while arrests and beatings are associated with an immediate increase in protest occurrence, other repressive actions, like crowd control techniques, are linked to increased protests only when examined over longer periods. Conversely, rubber bullets appear to have a deterrent effect on protests, though this effect is not immediate but becomes apparent with repeated use over three and seven days. To contextualize these acts of repression within the mechanisms of backlash and deterrence, I follow the conceptualization of 'patterns of violence' by Gutiérrez-Sanín and Wood (2017). The authors suggest that, for each repertory of violence, we can identify its frequency, the technique used, and the targeted population. Building on that model, the main results of this study can be understood as different combinations of targeting (targeted or widespread forms of repression) and the cost of the techniques (highly costly or low-cost in terms of physical harm).

Table 2 offers a taxonomy of the forms of repression examined in this study, classifying them according to their potential for physical harm and their level of targeting. High-cost police tactics, such as shootings and beatings, are recognized for their significant potential for bodily harm.[13] In contrast, crowd control methods like the deployment of tear gas and water cannons, while distressing and disorienting, typically result in less severe physical injury and are therefore classified as low-cost.[14] Arrests, generally less physically injurious at the moment of apprehension, correlate with an increase in protest activity. The degree of targeting also varies, with beatings and arrests being more precise in targeting individuals, while the use of firearms and crowd control tools is deployed with a broader scope, affecting larger numbers without discrimination.

Table 2: Taxonomy of Police Repression Tactics by Costs and Targeting

		Targeting	
		Widespread	**Targeted**
Costs	**High**	Shootings	Beatings
	Low	Crowd Control	Arrests

Note: Based on conceptualizations made by Gutiérrez-Sanín and Wood (2017).

As previously addressed, the first two mechanisms are related to the scope of repression: we can expect a backlash effect from repression when it is widespread, as it becomes visible to bystanders, or a deterrent effect if individuals are afraid of being affected, leading them to refrain from participating in demonstrations. The use of rubber bullets and crowd control techniques against demonstrators are widespread forms of coercion. Contrary to expectations, rubber bullets exhibit a marked deterrent effect in the three- and seven-day accumulations. This suggests that the severity and visibility of their consequences may overshadow any rallying effect, leading to reduced protest activity. The use of rubber bullets is the only repressive act that demonstrates a consistent temporal effect, showing no immediate association with protest events (1-day lag) and a deterrent effect when analyzed over three and seven days. Conversely, crowd control techniques demonstrate a backlash effect, but only after one week. This delayed response might reflect the gradual build-up of public outrage and solidarity in reaction to sustained visible repression.

The final mechanisms relate to the costs: we can expect a backlash effect if the costs produce an emotional response that leads to more participation, or a deterrent effect when the costs are perceived to be greater than the benefits of participating. Rubber bullets and beatings are repressive actions considered highly costly for demonstrators. As previously mentioned, rubber bullets do not exhibit a backlash effect but rather a deterrent effect, which might be explained by the costs they entail, regardless of their level of targeting. In contrast, beatings can trigger a backlash due to their targeted nature and the strong emotional responses they evoke, highlighting the relationship between

perceived injustice and mobilization.

These results improve our understanding of the effects of repression, but they also highlight the importance of considering the temporal dimension. Specifically, the backfiring effect of crowd control techniques and the dissuasive effect of police beatings are both observable only in their seven-day accumulations. Without accounting for these long-term effects, observations of the immediate impacts of repression would be misleading, as they would fail to accurately capture the dynamic relationship between repression tactics and mobilization.

To further understand the individual-level mechanisms driving these dynamics, I analyzed individual survey data from the CEP National Public Opinion Survey (Centro de Estudios Públicos, 2020), taking advantage of the fact that the final measurement of 2019 was conducted during the protest period. This survey offers insights into how personal experiences with repression influence attitudes toward protest and perceptions of human rights violations (see Appendix D). The analysis indicates that arrests on the day before interviews increased respondents' justification for protests but decreased their perception of human rights abuses, suggesting a differentiation between order maintenance and human rights violations. This response aligns with the mechanism where targeted repression can incite backlash due to perceived injustices. Conversely, crowd control measures heightened both protest justification and perceptions of human rights abuses, consistent with the hypothesized backlash effect observed at the local level. These findings underscore how personal and collective experiences of repression shape public attitudes and potentially influence protest dynamics, highlighting the importance of visibility and emotional responses.

These outcomes suggest that the effects of repression on mobilization are shaped by a combination of factors, including the targeting of the action, the physical harm inflicted, and the timeframe over which these effects are measured. Immediate increases in mobilization following targeted and harmful repression, such as beatings, may reflect an emotional or solidarity-driven response. Over time, this can transition to deterrence as the perceived risks become more pronounced, especially when repression is intense

and sustained. Crowd control, though less directly harmful, eventually fosters a broader climate of dissent due to its visibility and cumulative impact. This illustrates the dynamic nature of demonstrators' responses to state repression, which are continually influenced by the evolving socio-political context. These findings align with the analysis by Somma et al. (2020), who argue that brutal police repression during the Chilean Spring of 2019–2020 deepened the crisis and affected the interplay between peaceful and violent protests.

7 Conclusion

Why do specific repressive actions increase the occurrence of protests when such crowd control mechanisms are supposed to do exactly the opposite? Tilly (1978) argued that state coercion increases the costs of collective action and, therefore, repression should have negative effects on mobilization. More recent studies have also shown that people engage less in street protests when their perceptions of violence and risk increase (Dave et al., 2020; Steinert-Threlkeld, Chan, & Joo, 2022). Recognizing that this association is very context-dependent, I examined how this relationship unfolds in the case of the Chilean protests that began in October 2019, introducing a novel approach that distinguishes between different forms of police repression used in democratic regimes.

The primary objective of this study was to explore four classical mechanisms from social movement literature to determine how repressive actions against demonstrators influence the likelihood of subsequent protest activities. These mechanisms include the scope of repression (widespread or targeted) and the costs of repression (high-cost or low-cost in terms of physical harm). By analyzing the 2019 Chilean Social Outburst, I found that, contrary to the assumption that repression consistently deters protests, certain forms of repression can trigger a backlash effect, increasing the likelihood of further mobilization. The backlash effect is particularly evident with low-cost, widespread repression, which often incites protest due to its visibility and emotional impact. Police beatings, in particular, were found to significantly heighten the occurrence of subsequent contentious events in the short term. This aligns with prior research, which suggests that high-cost forms of repression, capable of generating public outrage, can lead to increased mobilization (della Porta, 2013; Jasper, 2014; Khawaja, 1993), and may shift individuals' tolerance for previously unacceptable costs (Pearlman, 2013). Nevertheless, this occurs only in the short term; in the long term, both forms of costly repression (shooting and beatings) deter protests, regardless of their level of targeting. Conversely, crowd control techniques and arrests often incite backlash due to their cumulative impact over time and their perceived violation of human rights. I analyzed the mechanisms behind these findings using individual public

opinion data and found that individuals living in municipalities where crowd control techniques took place tend to show more favorable opinions on protest justification, as well as a higher perception that the police have violated human rights.

Assessing the consequences of such repression poses significant challenges for social movement scholars. Most sources only consider broad categories based on dichotomous classifications, such as police presence or lethal versus non-lethal tactics, limiting our understanding of specific repression tactics (Earl, Soule, & McCarthy, 2003). The scarcity and difficulty in accessing reliable data on police repression, compounded by the endogeneity problem, where the propensity for dissent is influenced by repression itself, makes it a complex field to navigate (Ritter & Conrad, 2016). In this study, I address these challenges by focusing on spatial dynamics and immediate responses to police repression in Chile, providing more detailed characterizations of police tactics. This allows for a better understanding of the distinct impacts of different forms of repression on protest dynamics. Despite the robustness of this data source, challenges such as the potential underreporting of protest events persist. While the Observatory's press-based methodology ensures comprehensive coverage of protest events, replicating this study in other contexts might be challenging, particularly in countries with limited media diversity or where state control over media and social networks is prevalent.

This study's insights into the dynamics of repression and mobilization within Chile's democratic context may not extend to authoritarian regimes or countries experiencing democratic backsliding, given the unique oversight and residual legitimacy of Chile's national police and the relatively moderate risks faced by protesters compared to places where severe repression is more common. Additionally, while this study identifies a backlash effect in protest occurrence, it does not capture variations in protest size, which could exhibit different patterns in response to state violence (Steinert-Threlkeld, Chan, & Joo, 2022), leaving unanswered questions about the characteristics of protests that follow repressive acts. The focus on specific forms of repression helps illuminate whether these conflicting results in the literature are due to grouping different repressive actions together, highlighting the importance of context-specific data collection. Despite these

constraints, the findings offer a foundational analysis of the effects of police strategies on protests, providing a basis for further investigation into the nuanced relationship between state actions and public response, and contributing to existing research on the effects of the *Estallido* in areas such as electoral preferences (Castro & Retamal, 2024).

Future research should incorporate a geographical lens to investigate potential regional variations in protest responses to repression. In Chile, conflict dynamics have historically been regionally distinct: the south is known for the Mapuche conflict, while environmental issues predominantly spark contention in the central and northern regions, pitting communities against both government and private entities. Examining how these geographical distinctions influence responses to police violence could provide valuable insights. Additionally, the emotional reactions elicited by state coercion, particularly how repression can generate outrage and, in turn, fuel mobilization, merit further exploration. Future studies should aim to identify which specific forms of repression are most likely to provoke outrage and the underlying reasons for these reactions, as conceptualizing backlash solely in terms of protest frequency simplifies its complex nature. This approach overlooks shifts in protest tactics, demographics, sustainability of efforts, and other expressions of resistance (Ellefsen, 2021; Hager & Krakowski, 2022).

Notes

[1]Mass Mobilization Protest Data (Clark & Regan, 2016) shows an upsurge in protest occurrence after 2013, as illustrated in Figure E.1.

[2]ACLED data also reveals a substantial rise in violence against civilians by state forces in recent years (see Figure E.2).

[3]Refer to Davenport (2005) and Earl (2011) for comprehensive reviews.

[4]Khawaja (1993) examined both individualized forms of repression, like tear gas, shootings, and arrests, and collective punishment, such as curfews and military checkpoints. Khawaja notes, however, that these results may be context-specific, applicable primarily in settings already primed for resistance where organizational structures can withstand persistent state repression.

[5]This data was provided in response to a request through the Transparency Law (see Appendix E.3, Table E.2). Attendance is calculated based on a methodology used by Carabineros, which considers two different counting mechanisms: for low-turnout protests, the calculation is according to the assessment of the police personnel present at each event; for protests with high turnout, the calculation is based on the use of drone images and a geographical function application that divides the territory into polygons based on the density of attendees and the area in square meters.

[6]For this measurement, the Social Conflict Observatory only included protests until 2019. This poses a temporal limitation since, in actuality, protests continued until March, when they began to decline due to the pandemic. Nevertheless, the largest number of protests occurred between October and December, primarily because students are less active during the summer months (January-February) compared to the school period.

[7]Under-reporting is still possible, considering that not all victims of police abuse decide to report and file a complaint. This under-reporting could lead to false negatives, where incidents are not recorded, thus underestimating the true extent of repressive actions. However, there is certainty that the events included in this database did indeed occur at the time and place that was reported.

[8]I ended up using four categories since tear gas and water cannon were grouped in the category 'crowd control techniques'.

[9]The analysis was conducted using the `glmmTMB` package (Brooks et al., 2022), which is designed to handle overdispersion and excess zeros in the data.

[10]Protests are more frequent during weekdays than during weekends. Climate conditions, such as extreme temperatures (which are likely to occur during the summer), can also deter protests and/or police activity. Given that the data mostly includes spring days and the start of summer, this has to be taken into account.

[11]The zero-inflation component requires identifying and including predictors ($Z_{i,t-k}$) that explain the

presence of structural zeros, i.e. those that might arise due to specific conditions that effectively prevent the event from occurring, regardless of the underlying rate of occurrence. Therefore, in the context of protest events, I include the following predictors for the zero-inflation component: extreme weather conditions (temperatures over 30°C) and precipitations.

[12]The reason for including the three-day accumulation is that it captures dynamics that happen on a weekend, from Friday to Sunday, and also potential delays in the reporting of repression by the media. The seven-day accumulation was constructed to capture weekly dynamics.

[13]Being shot by a rubber bullet and being a victim of a beating are arguably the most costly repressive actions measured in this study. Hundreds of protesters in Chile lost one or both eyes due to rubber bullets. Chile became the country with the highest worldwide rate of ocular trauma caused by kinetic impact projectiles during protests (Rodríguez et al., 2021). Additionally, police beatings can also result in significant harm to the physical integrity of protesters.

[14]Additional sources of data that have also delved into the justifications of police violence have shown that crowd control methods, specifically the use of tear gas, are seen as a repressive technique that is sometimes/often/always justified by 58.5% of respondents, while the use of rubber bullets, in contrast, is never/rarely justified by 66.6% of respondents (see Table C.1).

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Online Supplementary Information

The Backlash Effect of State Coercion:

Protest Resilience Under Costly and Targeted Repression

September, 2024

A   Data and Variables

A.1   Repressive Acts During the Chilean Social Crisis

The repression faced by protesters during the so-called "social outburst" that took place from October 2019 to March 2020 caused great concern both in the national and international community. Reports elaborated by Amnesty International and Human Rights Watch provided valuable information regarding the police abuse and human rights violation that occurred during the initial months of protest. A longer-standing record was elaborated by the National Institute of Human Rights (*Instituto Nacional de Derechos Humanos*, INDH). The INDH is a Chilean organization founded in 2005, although officially constituted in 2010, in charge of the promotion and protection of human rights within the national territory. One of its functions is to "communicate to the government and different state organisms its opinion about situations regarding human rights inside the country", about which INDH is entitled to both request and elaborate reports.

In the context of the *social outburst*, the INDH elaborated a first report containing information from October 17 to November 30, 2019, where they systematize, describe, and analyze the serious human rights violations within this period (INDH, 2019). Intending to contribute to the clarification of the truth and obtain justice and reparation for victims of human rights violations, the INDH made available to researchers, academics, and citizens in general, a database with the information contained in the legal actions filed by the INDH to denounce the events that occurred between October 2019 and March 2020, in the context of the social crisis (INDH, 2020).

A.1.1   Conceptualizing Human Rights Violations

The glossary that accompanies the database "Human Rights Violations in the Context of the Social Crisis" defines the concept of "human rights violation" as any action or omission that deprives the enjoyment of rights guaranteed, nationally or internationally, to a person or group of persons. This definition engages the responsibility of the State,

since "a State directly engages its international responsibility when its agents violate the human rights of persons under its jurisdiction".

A.1.2 Acts Denounced by Victims

The database in question was elaborated by a specific department within the INDH (Studies and Memory Unit), which coded and processed the content of all the briefs filed by the INDH in courts to denounce human rights violations in the context of the social mobilizations that occurred between October 2019 and March 2020. The final product combines information from three nested sources: the victims, the judicial actions (complaints and denounces), and the actual facts denounced.

Among the acts denounced in the database, which were later recoded to create the final four types of repressive acts, are the following, along with the descriptions. Each description is a construction based on the facts reported by the victims.

1. Asphyxia: the act of being subjected to the obstruction of the respiratory tract by one or more state agents, through the use of arms, plastic bags, or other elements.

2. Attack with animals: the act of being attacked by animals acting on the orders of agents of the state, such as dogs, horses, or others.

3. Beating: the act of being assaulted by one or more state agents, either with blows of the fist, kicks, or blunt objects.

4. Breaking of telephone: the act of having one's cell phone destroyed by state agents, preventing the detainee from communicating or recording events.

5. Burned: the act of being the object of an attack with incendiary elements by agents of the state (e.g. to bring a detained person close to a burning barricade, causing burns on purpose).

6. Detention: the act of being retained and/or transferred by State agents from one place to another. This act is coded not to declare the legality of the illegality of the act, but to leave a record of the act.

7. Denial or obstruction of medical assistance: act in which one or more agents of the state impede, interrupt, or prevent the provision of medical assistance of the transfer of the victim to a health center.

8. Destruction of personal items: the act of destruction of objects or movable property of a personal nature, by state agents.

9. Follow-up: the act of being observed, investigated, and persecuted to their homes by state agents generally dressed in civilian clothes, with unknown objectives.

10. Gassing: the act of being sprayed directly or indirectly by pepper spray and/or other chemical agents such as tear gas.

11. Hit by car: the fact of being run over by vehicles operated by law enforcement officers, either on a roadway intended for vehicular traffic or in a pedestrian traffic area.

12. Home invasion: illegal or unauthorized entry to the victim's home.

13. Irregular interrogation: the act of being questioned by state agents, in a place not determined for these purposes, and without the presence of a defense attorney (e.g. in a police car, or jail cell).

14. Shooting: the act of receiving projectiles thrown directly at the body of the demonstrators.

15. Stigmatization: the act of being the object of disparagement or belittlement by an agent of the state.

16. Stone throw: the act of receiving projectiles from stones thrown directly at the body, by agents of the state.

17. Stripping: the act of being forced by state agents to take off one's clothes, totally or partially.

18. Threat, death threat, rape threat: the act of being the object of announcements of possible physical or psychological acts of violence, possible assassination or forced disappearance, or announcements of possible sexual crimes by agents of the state.

19. Touching: the act of being subjected to forced palpation by state agents in the genital area, or other areas of sexual connotation.

20. Unauthorized entering: the irruption of agents of the state into public and/or private institutions without following protocols of previous authorization, such as schools, universities, unions, or workplaces.

21. Water impact: the act of directly receiving water thrown by the water cannons operated by state agents.

22. Wetting with chemicals: the act of spraying the victims with water mixed with chemical elements that cause burns or other injuries.

Additional acts were included in the report as a type, but they were not in the database, such as rape or introduction of objects, robbery, electrical shock, and placement of tear gas bombs on clothes.

A.2   Recodification of Repressive Acts

From the 22 original repressive types, water impact and wetting with chemicals were merged into the same category (water impact), along with home invasion and unauthorized entering. This leaves a total of 19 categories. I ended up using only the five first categories, but with the use of tear gas (gassed) and water cannon (water impact) merged in the same category of crowd control techniques.

Table A.1: Distribution of the total of repressive actions

Repression Type	Frequency	%
Shooting	1258	45.448
Beating	956	34.538
Detention	274	9.899
Gassed	91	3.288
Water impact	47	1.698
Threats	40	1.445
Hit by a car	37	1.337
Unauthorized entry/invasion	30	1.084
Asphyxia	7	0.253
Stripping	7	0.253
Obstruction medical assistance	4	0.145
Stone throwing	4	0.145
Touching	4	0.145
Stigmatization	3	0.108
Destruction personal items	2	0.072
Follow up	2	0.072
Attack with Animals	1	0.036
Burned	1	0.036

B Models

B.1 Lagged variables

Arguably, the occurrence of protest events at time t will be influenced by previous protests and repressive acts at time t–1. In this case, we would have to deal with a dynamic stochastic process. Taking Figure B.1, I am interested in capturing the effect of repressive actions at time t–1 and their effect on protest occurrence at time t (red line). To accurately capture this, I need to include lagged specifications of both variables in the final models.

Figure B.1: DAG
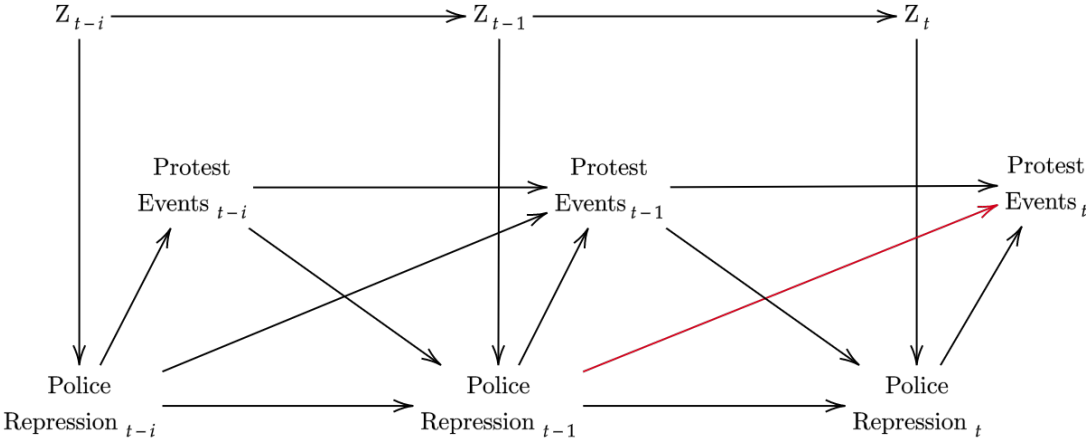
B.2 Full Models

Table B.1: Zero-inflated Negative Binomial Models. Dependent Variable: Protest Events$_t$

	Model 1	Model 2	Model 3	Model 4
Shootings$_{t-1}$	0.198***	−0.002		
	(0.065)	(0.010)		
Beatings$_{t-1}$	0.812***	0.052		
	(0.102)	(0.035)		
Arrests$_{t-1}$	0.195	0.053		
	(0.185)	(0.041)		
Crowd Control$_{t-1}$	0.149	0.068		
	(0.243)	(0.062)		
Protests$_{t-1}$	1.154***	0.102***		
	(0.052)	(0.010)		
Police per 100k$_{t-1}$		0.018***		
		(0.005)		
Rain$_{t-1}$		−0.019		
		(0.073)		
Hot Day$_{t-1}$		−0.586***		
		(0.081)		
Weekday		0.584***		
		(0.066)		
Distance Province Capital (Kms.)		−0.014***	−0.017***	−0.012***
		(0.002)	(0.003)	(0.003)
Shootings$_{t-3\ acc}$			−0.040**	
			(0.018)	
Beatings$_{t-3\ acc}$			0.014	
			(0.034)	
Arrests$_{t-3\ acc}$			0.078**	
			(0.036)	
Crowd Control$_{t-3\ acc}$			0.062	
			(0.072)	
Protests$_{t-3\ acc}$			0.114***	
			(0.010)	
Police per 100k$_{t-3\ acc}$			0.006*	
			(0.003)	
Rain$_{t-3\ acc}$			−0.034	
			(0.060)	
Hot Day$_{t-3\ acc}$			−0.202***	
			(0.057)	
Shootings$_{t-7\ acc}$				−0.025***
				(0.009)
Beatings$_{t-7\ acc}$				−0.085***
				(0.027)
Arrests$_{t-7\ acc}$				0.018
				(0.044)
Crowd Control$_{t-7\ acc}$				0.223***
				(0.052)
Protests$_{t-7\ acc}$				0.131***
				(0.012)
Police per 100k$_{t-7\ acc}$				0.003
				(0.002)
Rain$_{t-7\ acc}$				0.051
				(0.048)
Hot Day$_{t-7\ acc}$				0.005
				(0.043)
SD (Intercept Municipality)		1.590	1.363	1.119
Num.Obs.	25 604	22 422	7575	3030
R^2 Marg.	0.333	0.087	0.118	0.084
R^2 Cond.		0.366	0.336	0.219
AIC	14 392.0	10 668.8	3434.0	1328.6
BIC	14 449.0	10 781.0	3524.1	1406.8
ICC		0.3	0.2	0.1
RMSE	647.03	0.68	0.59	0.42

Note: Model 1 is the simplified model without control variables. Subsequent models include police deployment per 100,000 inhabitants, rain, temperature above 30 degrees Celsius, a binary variable that indicates a weekday or weekend, and distance of the municipality to the province capital. * p < 0.1, ** p < 0.05, *** p < 0.01

C OLES Survey

The survey elaborated by the *Observatorio de Violencia y Legitimidad Social* is a study conducted as a part of a bigger project called Centre for Social Conflict and Cohesion Studies (COES), which develops collaborative research on issues related to social conflict and cohesion (coexistence) in Chile, through a multidisciplinary team from the social sciences and humanities.

In particular, the objectives of the OLES survey are (1) to evaluate the perceptions of legitimacy about the police *Carabineros* in the Chilean population over time, (2) to evaluate the effect of perceptions of justice on the treatment and procedures used by *Carabineros* when interacting with the citizenry, and the perception of legitimacy of the same, and (3) to evaluate the effect of the perception of legitimacy on the justification of violence, the tolerance of state violence, and the approval of repressive or punitive social control measures.

Methodologically, this study involved conducting an online panel (longitudinal) survey, considering three measurements with three months between each wave (January 2021, June 2021, and November 2021). The universe was considered to be people over 18 years of age living in Chile.

This project has the approval of the Ethics Committee of the Universidad Diego Portales. The data are available upon request.

Table C.1: Justification of *Carabineros* Violence

Variable	Never	Rarely	Sometimes	Often	Always
Use of tear gas	22.70 (1221)	18.52 (996)	32.18 (1731)	15.32 (824)	11.28 (607)
Use of rubber bullets	49.76 (2679)	17.37 (935)	15.23 (820)	9.68 (521)	7.97 (429)
Beat demonstrators if destroying public property	42.05 (2263)	17.95 (966)	19.64 (1057)	11.22 (604)	9.14 (492)
Beat demonstrators if resisting arrest	47.39 (2548)	19.96 (1073)	16.79 (903)	8.26 (444)	7.61 (409)
Beat demonstrators inside police vehicle	73.57 (3959)	8.77 (472)	8.33 (448)	5.58 (300)	3.75 (202)
Insult demonstrators	80.59 (4330)	6.29 (338)	6.23 (335)	4.50 (242)	2.38 (128)
Evicting students from occupied school	41.11 (2209)	17.16 (922)	21.61 (1161)	11.26 (605)	8.86 (476)

Note: Numbers in percentages, observations within parentheses. These questions are part of Module B of the survey, titled "Attitude towards *Carabineros* violence". The Module lists a series of actions linked to the main question "There are different actions that the carabineros can carry out as part of their task of maintaining order at demonstrations. To what extent do you think the following actions are justified?".

D CEP Survey

The CEP National Public Opinion Survey is an academic analysis of the political, economic, and social attitudes and perceptions of the population that has been conducted periodically since 1987. The survey seeks to understand the concerns, preferences, and needs of the population and to reflect the continuities and changes experienced by Chilean society. The survey targeted individuals aged 18 and older across the entire country, both in urban and rural settings, excluding Easter Island. This exclusion was based on demographic data from the 2017 Census, ensuring comprehensive representation while omitting Easter Island due to its unique demographic characteristics.

In executing this survey, a total of 1,496 respondents were interviewed in their homes. These interviews spanned 117 municipalities, reflecting a wide geographical distribution and encompassing various demographic segments. The sampling strategy was rigorous and methodical, utilizing a stratified, random, and probabilistic approach across three distinct stages: block, household, and respondent. This meticulous methodology ensured that no replacements were necessary, achieving a notable response rate of 71% with the original subjects, underscoring the survey's effectiveness in engaging participants.

Regarding the survey's precision, the sampling error was estimated at ±3%, considering the maximum variance and a confidence level of 95%. This indicates a high level of reliability and accuracy in the survey results, providing a solid foundation for further analysis and interpretation.

The data collection process was conducted through individual face-to-face interviews, leveraging a structured questionnaire to guide the conversation. This approach facilitated a consistent and reliable gathering of information, allowing for a detailed exploration of the survey topics. The fieldwork for this survey took place between November 28, 2019, and January 6, 2020, a period strategically chosen to maximize participation and ensure the relevance of the data collected.[15]

D.1 Individual Mechanism: Protest Justification and Perceptions of Human Rights Violations

To explore individual-level mechanisms behind the backlash and deterrent effects of police repression, I use data from the National Public Opinion Study conducted by CEP (2020). This survey includes two key questions that capture respondents' attitudes towards protest as a legitimate form of dissent and their perceptions of state conduct regarding human rights violations. I leverage the timing of the survey's last measurement in 2019, which coincided with the protests and included ad-hoc questions about the sociopolitical crisis's impact on public opinion. Unlike Carrasco and Pavlic (2023), who examine the effect of protest participation on perceptions of human rights violations, I focus on respondents' proximity to repressive incidents. By combining this individual-level data with local-level data on repressive events in the municipalities where respondents live, I aim to understand the mechanisms behind the deterrent and backlash effects of different repressive activities.

To explore individual-level mechanisms about the backlash and the deterrent effect of police repression, I use two different questions in the survey that capture, to some extent, respondents' attitudes towards protest as a legitimate form of dissent and their perceptions of state conduct regarding human rights violations.

1. I would like to ask you about actions people take to protest against something they feel is unfair. How often would you justify or not justify the following actions? Participating in a march as a form of protest (Always, almost always, sometimes, almost never, never).

2. How often do you think Carabineros violated human rights during the crisis that began in October 2019? (Very frequently, Frequently, Sometimes, Almost never, Never).

Table D.1 presents the effect of police repression tactics deployed at the municipal level on two dependent variables. The first variable, depicted in Models 1 and 2,

11

pertains to protest justification, which gauges respondents' attitudes toward the legitimacy of participating in street demonstrations as a form of protest. This is measured on a spectrum from 'never justified' to 'always justified'. The second variable, outlined in Models 3 and 4, concerns perceptions of human rights violations by the police (Carabineros) since the onset of the crisis in October 2019, with responses ranging from 'never' to 'very frequently'. The use of individual-level public opinion data enables an exploration of protest behavior and attitudes, offering a granular perspective on how repression is experienced and interpreted by individuals within affected communities. These measures serve as indicators of the emotional and rational mechanisms that potentially drive the backlash or deterrent effects at the municipal level, offering a detailed look at how repression is personally experienced and interpreted.

The main results of the paper highlight that targeted repression techniques, such as beatings and arrests, have an immediate backlash effect, whereas crowd control techniques only exhibit a backlash effect after seven days. Conversely, highly costly and widespread techniques, such as rubber bullets, show a deterrent effect. When contrasting the individual-level data, we see that arrests on the day before the survey increased respondents' justification for protests but reduced their perception of human rights abuses by the police. This may suggest that respondents differentiate between the necessity of maintaining order and the violation of rights. On the other hand, the shooting of rubber bullets also negatively affects the perception of human rights abuses, which could be explained by the same mechanism; however, that effect disappears when the three-day accumulation is considered. Interestingly, crowd control techniques appear to increase both protest justification and the perception of human rights abuses. The public's increasing concern about human rights, especially in response to crowd control measures, aligns with the hypothesized backlash effect, where sustained exposure to such repression reinforces the public's resolve and awareness, possibly leading to continuous mobilization.

Table D.1: Models for Protest Justification and Human Rights Violations

	Protest Justification		Perception of Human Rights Violations	
	Model 1	Model 2	Model 3	Model 4
Shootings$_{t-1}$	−0.002		−0.072***	
	(0.040)		(0.025)	
Beatings$_{t-1}$	−0.007		−0.031	
	(0.257)		(0.042)	
Arrests$_{t-1}$	0.255**		−0.133***	
	(0.115)		(0.044)	
Crowd Control$_{t-1}$	0.263***		0.098**	
	(0.053)		(0.039)	
Police per 100k$_{t-1}$	−0.042		0.014	
	(0.039)		(0.017)	
Shootings$_{t-3\,acc}$		0.101***		−0.030
		(0.038)		(0.020)
Beatings$_{t-3\,acc}$		−0.147		−0.020
		(0.157)		(0.043)
Arrests$_{t-3\,acc}$		0.291		−0.083
		(0.222)		(0.068)
Crowd Control$_{t-3\,acc}$		0.374		0.136**
		(0.380)		(0.067)
Police per 100k$_{t-3\,acc}$		−0.014		0.003
		(0.014)		(0.007)
Num.Obs.	1445	1474	1385	1414
R^2	0.227	0.225	0.462	0.459
R^2 Adj.	0.157	0.155	0.410	0.408
SE	Municipality	Municipality	Municipality	Municipality
FE Municipality	✓	✓	✓	✓

Note: Full models available in Appendix D. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

E Additional Information

E.1 Mass Mobilization Data

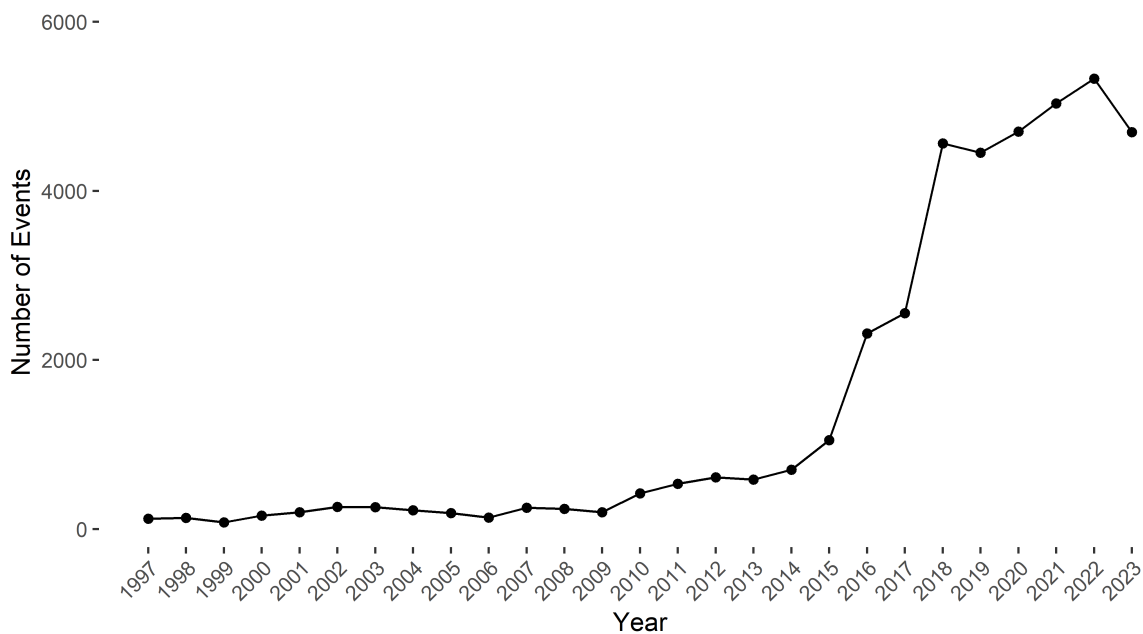Figure E.1: Trends in Mass Mobilization per Year
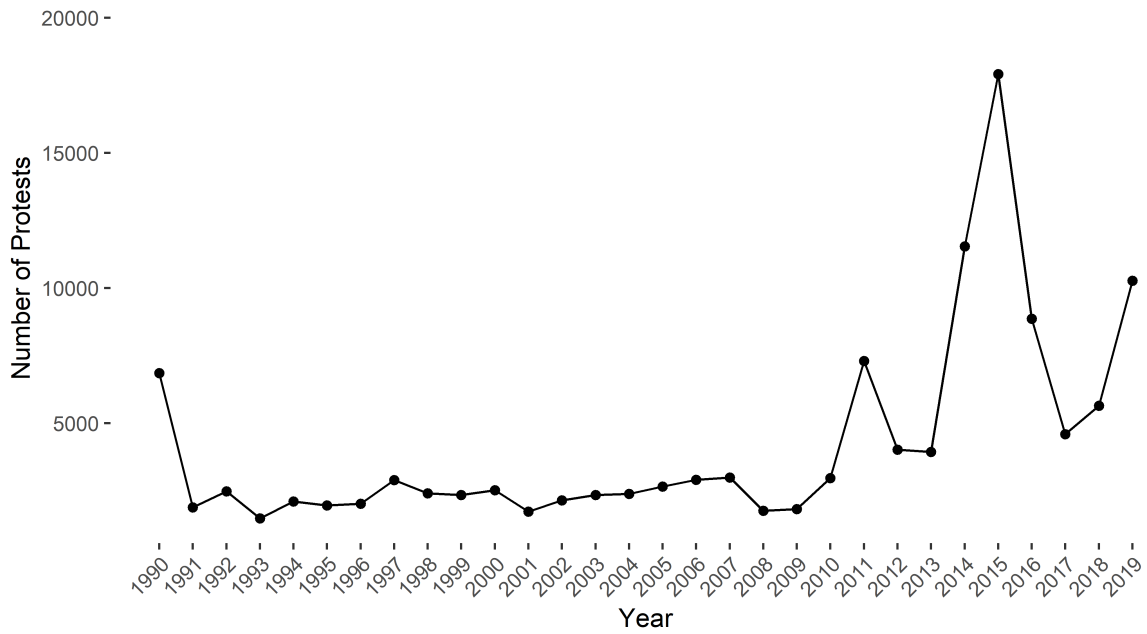
Source: Mass Mobilization Data (Clark & Regan, 2016).

E.2 Violence Against Civilians

Figure E.2: Trends in Violence Against Civilians Perpetrated by State Forces

Source: ACLED.

E.3 Mobilizations in Chile

This data was provided by the national Chilean police, Carabineros, as a response of a request made via Transparency Law.

Table E.1: Registration of Demonstrations

	2019			Total Nationwide
	October	November	December	
Total Per Month	392	1228	910	2530

Table E.2: Registration Attendees

Regiones	2019			Total
	October	November	December	
Arica y Parinacota	23847	19209	3412	46468
Tarapacá	26218	57882	5906	90006
Antofagasta	76487	63358	12265	152110
Atacama	23820	34885	4262	62967
Coquimbo	72269	78682	6121	157072
Valparaíso	124340	107465	14941	246746
Metropolitana	2106645	547838	116161	2770644
Lib. Bdo. O´Higgins	59047	52665	5979	117691
Maule	119021	89251	10981	219253
Ñuble	101162	28362	1135	130659
Bio Bío	183230	120513	23223	326966
Araucanía	70202	71686	5226	147114
Los Ríos	107165	59683	6410	173258
Los Lagos	89505	100221	9975	199701
Aysén	12285	23712	1105	37102
Magallanes	33698	27005	2830	63533
Total	3228941	1482417	229932	4941290

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