

Coercive Capacity, Social Dissent, Repression or Redistribution?^{*}

Evidence from Authoritarian Mexico

Horacio Larreguy[†] David Martínez[‡] Juan Felipe Riaño[§]
Mariano Sánchez-Talanquer[¶]

[Click here for the most recent version.]

Abstract: Why do authoritarian regimes exhibit subnational variation in their use of repression versus redistribution to manage local dissent? We develop a model in which an autocrat's localized response to dissent depends on incomplete information about the geography of people's discontent and the government's coercive capacity, a feature that authoritarian governments often inherit from the past. The model predicts that when dissent rises, rulers are more likely to rely on repression rather than redistribution in areas with strong inherited coercive capacity. We then test these predictions using novel data from twentieth-century Mexico under PRI rule. Our empirical strategy exploits a sharp increase in overall dissent in the mid-1960s and three sources of subnational variation: (1) a large-scale land reform that redistributed over half of all agricultural land between 1910 and 1992; (2) the localized presence of regime-aligned rural militias with revolutionary origins; and (3) newly digitized archival records documenting individual instances of repression over time. Difference-in-Differences and Instrumental Variable estimates indicate that after the sudden increase in dissent, municipalities with a stronger militia presence experienced more repression events and less land redistribution than areas with weaker or no militia presence. Our findings demonstrate how historical variation in inherited coercive capacity and informational frictions can shape the subnational logic of authoritarian control.

Keywords: Authoritarianism, Social dissent, Coercive capacity, Redistribution, Repression

JEL: D72, D73, P00

This Version: February 1, 2026

*We thank Siwan Anderson, Felipe Valencia Caicedo, Florian Hollenbach, Vinicius Peçanha, Francesco Trebbi, and participants at IAST/TSE, RIDGE FORUM/LACEA-EHN Workshop on Historical Development, Second Annual HPE Conference at USC, and SPSA for their helpful comments. We are very grateful to Melissa Dell, who shared the Cadaster and History of Agrarian Nuclei (PHINA) she scraped from the Mexican Agrarian National Registry (RAN). All authors gratefully acknowledge financial support from CAF-Development Bank of Latin America and the Global Research Training Initiative at the United Programs for Political Economy Research network (UPPER). Larreguy gratefully acknowledges funding from the French Agence Nationale de la Recherche under the Investissement d'Avenir program ANR-17-EURE-0010.

[†]Departments of Economics and Political Science, ITAM, and JPAL, horacio.larreguy@itam.mx

[‡]Department of Economics, Harvard University, jmartinezherandez@fas.harvard.edu

[§]Department of Economics, Georgetown University, jr2009@georgetown.edu

[¶]Center for International Studies, El Colegio de México, mariano.sanchez@colmex.mx

1 Introduction

Authoritarian regimes confronted with bursts of localized dissent face a fundamental trade-off between the deployment of targeted repression and the provision of limited concessions to stop unrest from spreading. In principle, the absence of institutional checks should make repression a straightforward tool for preserving authority (Davenport 2007). Yet, in practice, many authoritarian governments opt for a markedly different approach. They often deploy targeted redistributive transfers to mitigate dissent and secure political stability (Acemoglu and Robinson 2001; Acemoglu, Verdier and Robinson 2004; Gandhi 2008; Magaloni 2006; Padró i Miquel 2007).¹ Notably, recent empirical work shows that redistribution—particularly land reform—occurs in autocracies at rates that rival or exceed those in democracies, challenging conventional associations between redistribution and democratic rule (Albertus 2017). This strategic substitution between coercion and redistribution raises an important question. What is the logic behind authoritarian responses to local unrest, whether through repression or redistribution?

This paper sheds light on this issue by highlighting the critical role of inherited coercive capacity. We argue that an autocrat’s ability to monitor society, detect dissent, and suppress opposition fundamentally shapes the local choice between coercion and redistribution as survival strategies. Crucially, local coercive capacity is not easily or quickly augmented in response to sudden social dissent, especially in weak states that lack the monopoly of violence over their vast territories (Acemoglu and Robinson 2019; Soifer 2015; Centeno 2002). Waves of localized dissent can emerge rapidly, escalate unpredictably, and pose serious threats to regime stability (Kuran 1989). Under the threat of such a possibility, regimes with limited coercive capacity may be compelled to respond to these events of dissent through redistributive concessions—such as agrarian reform—even at the risk of undermining support from entrenched elites (Albertus 2017). Our framework thus emphasizes how historical legacies and structural constraints on repression shape the strategic local calculus of authoritarian rulers trying to prevent sudden localized dissent from escalating.

To formalize this argument and clarify its implications, we develop a dynamic model in which an authoritarian leader chooses between repression and redistribution in response to rises in local dissent. The model provides testable predictions and a formal foundation for the idea that variation in inherited local coercive capacity shapes how regimes respond to unrest. Two factors play a central role in the leader’s decision: the locality’s inherited coercive capacity and the imperfectly observed level of dissent. The model yields three main theoretical predictions. First, both repression and redistribution can emerge as equilibrium

¹See Hassan, Mattingly and Nugent (2022) for a review of research on authoritarian control tactics, including redistribution and repression.

strategies across different local contexts. Surprisingly, given a level of dissent, more coercive capacity does not always lead autocrats to prefer repression over redistribution. Second, when dissent suddenly rises, regimes are more likely to turn to redistribution in areas with low coercive capacity, where repression is either too costly or ineffective. Third, in areas with high coercive capacity, the regime is more likely to respond to sudden rises of local dissent with repression.

We exploit subnational and temporal variation as well as previously untapped primary data sources from authoritarian Mexico to provide qualitative and quantitative evidence consistent with this theoretical framework. By exploiting subnational variation within a single country, we hold constant national-level variables that have received the most attention (e.g., authoritarian-regime type). Regarding the temporal variation, we analyze the ruling Institutional Revolutionary Party (PRI)'s differentiated territorial response to a strong, sudden wave of social unrest that challenged its power in the mid-1960s. At this time, confronted by rising mobilization from below, the PRI revamped its land redistribution program and repressed worker, student, and peasant movements by using its established coercive capacity across Mexico ([Albertus et al. 2016](#); [Fergusson, Larreguy and Riaño 2022](#); [Herrera Calderón and Cedillo 2012](#)).

To measure redistribution, we rely on municipal-level data from the National Agrarian Registry (RAN), which documents the extensive land reform program that transferred over 50% of Mexico's agricultural land between 1910 and 1992 ([Sanderson 1984](#)). Repression is measured using historical intelligence reports from the General Archive of the Nation (AGN), which provide detailed accounts of surveillance operations and coercive actions. To assess coercive capacity, we use data from [Sánchez-Talanquer \(2023\)](#) identifying the locations of semi-formal rural militias active during the 1920s and 1930s. These militias were initially mobilized to defend the revolutionary regime against counterrevolutionary threats and evolved into the most expansive and enduring coercive apparatus of the postrevolutionary state. Drawing on extensive qualitative evidence, we show how these forces were gradually repurposed as tools of authoritarian control—tasked with monitoring rural populations, suppressing agrarian mobilization, and shaping land redistribution. Their presence was closely tied to the allocation of communal lands in the form of *ejidos*, which required state assistance for economic viability, thus incentivizing militias members to assist in state coercion.

Consistent with the theoretical framework, our difference-in-differences (DiD) estimates show that, after the mid-1960s and in response to the sudden wave of local unrest, the PRI redistributed significantly less land and engaged in more repression in municipalities with a greater historical presence of rural militias inherited from the revolutionary state-building period. These results underscore how coercive institutions formed during an earlier phase of

state formation shaped the geographic distribution of authoritarian strategies.

We demonstrate that these findings are not driven by differential pre-trends across municipalities with varying levels of militia presence prior to the mid-1960s. We also rule out a range of alternative explanations, including climatic and geographic municipal characteristics potentially correlated with militia presence, mean reversion and ceiling effects, differences in fiscal or bureaucratic capacity, and stronger resistance from landed elites or the Church in militia-heavy areas. Furthermore, we demonstrate robustness to concerns about potential bias in two-way fixed effects (TWFE) estimators with continuous treatment intensity arising from treatment effect heterogeneity, as well as to logarithmic transformations of our main dependent variables.²

To further bolster the causal interpretation of these findings, we complement the DiD analysis with an instrumental variables strategy that isolates exogenous variation in inherited coercive capacity within the same framework. Specifically, this approach addresses the possibility that historical militia presence may still proxy for persistent, unobserved local characteristics that jointly shaped the formation of militias during the revolutionary period and the PRI's subsequent territorial responses to unrest. Our instrument exploits a historically contingent interaction between the geographic assignment of generals during the failed 1923 *De la Huerta* rebellion, which temporarily increased the revolutionary state's demand for auxiliary forces, and predetermined cross-municipal variation in land availability that governed the feasibility of recruiting rural militias through land grants. This interaction generated plausibly exogenous differences in the expansion of local coercive capacity during the 1920s that persisted into the postrevolutionary era. Our instrumented DiD estimates confirm the model's key causal implication: Municipalities where coercive capacity was strengthened, as a result of this variation in the 1920s, experienced less redistribution and greater repression after the mid-1960s. Together with reduced-form event studies of the instrument exhibiting parallel trends, this evidence further indicates that inherited coercive power causally shaped the territorial logic of authoritarian control.

This paper contributes to the literature on authoritarian resilience, and in particular to the understanding of the conditions under which autocratic regimes choose redistributive versus repressive strategies across space to manage localized dissent. With regards to theoretically work, while early research largely abstracts from local variation in these strategies (Acemoglu and Robinson 2000, 2006; Acemoglu, Verdier and Robinson 2004), subsequent one emphasizes how selective targeting—through both benefits and repression—can deter collective action

²Our results remain robust when we follow Callaway, Goodman-Bacon and Sant'Anna (2024) and separately estimate effects comparing areas with high- and low-militia intensity to municipalities without militias, or consider the estimator proposed by Callaway, Goodman-Bacon and Sant'Anna (2025). Lastly, our results are not driven by specific transformations of the main outcome variables (Chen and Roth 2024).

among opposition and regime-aligned groups alike (Acemoglu, Verdier and Robinson 2004; Morales-Arilla 2025; Padró i Miquel 2007). Whereas these studies examine situations in which dissent has already escalated into coordinated attempts to challenge or overthrow the regime, in line with Cantoni et al. (2024), our analysis focuses on an earlier stage of political contestation, when autocrats seek to manage localized discontent before it becomes organized resistance. We study how regimes use redistribution and repression as preventive instruments to contain emerging opposition under initial *information asymmetries* about the extent of popular discontent and heterogeneity on their *inherited coercive capabilities*. By uncovering these micro-foundations of authoritarian control, the paper advances a framework for understanding how inherited state capacity shapes the spatial and temporal logic of preemptive authoritarian governance.

Turning to empirical work, research focus mostly on providing evidence on the separate use of targeted either transfers (Albertus et al. 2016; Fergusson, Larreguy and Riaño 2022; Magaloni 2006) or repression (Greitens 2016; Edwards 2022; Bautista et al. 2023; González et al. 2024; Klor, Saiegh and Satyanath 2020), but rarely both.³ The only paper we are aware of that also examines local variation in the use of redistribution and repression for authoritarian survival is contemporary work by Morales-Arilla (2025) in the context of the 2019 Venezuelan blackouts. Morales-Arilla (2025) demonstrates that Maduro, in order to survive, prioritized redistribution in regions that supported the regime and employed repression in generally more urban areas that leaned toward the opposition. In contrast, our theory and findings that focus in a context of weaker state capacity suggest the opposite, given that areas with rural militias were actually more likely to support the government. Therefore, we view our arguments and results as distinct and complementary.⁴

While not the central focus of our paper, our findings also speak to prominent debates on state-society relations (Acemoglu and Robinson 2019; Migdal 1988). Acemoglu and Robinson (2019) emphasize the importance of a balance between a strong state and a strong society for state consolidation, while Migdal (1988) argues that strong societies can undermine state-building by resisting central authority. In contrast, our case highlights how empowering societal actors —rural militias in this case— can enhance the state’s coercive capacity. These militias were drawn from land reform beneficiaries who, lacking full property rights and relying on state-controlled access to resources, remained deeply dependent on the central government. Moreover, they had strong incentives to suppress further redistribution that

³González et al. (2024) show that greater state capacity more leads to more repression and illegal allocation of agricultural plots during Stroessner’s military regime in Paraguay. However, as González et al. (2024) and Bandiera, Larreguy and Mangonnet (2025) show, such land redistribution was targeted to co-opt local elites to support the dictatorship in engaging in social control.

⁴As Cantoni et al. (2024, p. 536) puts it, while referring to the open questions in the literature, “We currently lack systematic evidence on how lower-capacity autocracies and weak democracies respond to protests. If they indeed respond to protests differently than regimes with strong state capacity, do protesters internalize such differences, and do protests differ accordingly?”

would compete for such resources, further aligning their interests with those of the regime. This illustrates how, under certain institutional arrangements, strengthening societal actors may reinforce rather than constrain authoritarian control.

The remainder of the paper is organized as follows. Section 2 develops the theoretical framework. Section 3 provides historical context, detailing the origins and role of rural militias in Mexico and qualitative evidence of our argument. Section 4 outlines our empirical strategy. Section 5 describes the data sources. Section 6 presents the main results. Section 7 and 8 explore a series of robustness checks and exercises addressing alternative explanations and endogeneity concerns. Finally, Section 9 concludes.

2 Theoretical framework

2.1 Coercive capacity and redistribution in autocracies

Authoritarian regimes commonly employ a mix of coercion and redistribution to maintain political control (Gandhi 2008; Albertus 2017). While this trade-off is well documented, existing accounts often treat strategic choice as uniform across space, attributing variation primarily to national-level factors, such as regime type or macroeconomic conditions. In contrast, we argue that subnational variation in the territorial reach of state coercive capacity is a central, yet underexplored, determinant of whether autocrats rely more heavily on repression or redistribution to manage local dissent, thereby avoiding it from escalating into a coordinated attempt to challenge or overthrow the regime.

Building on state-centered theories of political order (Migdal 1988), we posit that inherited coercive capacity conditions the menu of strategic options available to autocrats to manage local dissent. In regions where coercive infrastructure is extensive, characterized by surveillance capabilities, rapid deployment, and effective deterrence, repression is both feasible and cost-effective. In such settings, autocrats can suppress opposition directly, reducing reliance on redistributive concessions, which may entail politically costly confrontations with entrenched elites (Ritter and Conrad 2016).

In contrast, where coercive capacity is weak (typically in peripheral or rural regions with limited state presence and difficult monitoring), repression becomes less viable to deal with localized dissent. Here, regimes rely more heavily on targeted redistribution to secure compliance and mitigate local dissent (Fearon and Laitin 2003). Redistribution thus serves as a compensatory strategy when coercion is constrained.

Because coercive capacity reflects long-run state-building processes, it is difficult to adjust in response to short-term political shocks (Slater 2010; Greitens 2016). Infrastructure for repression, such as local intelligence networks and loyal security personnel, cannot be easily

redeployed or expanded overnight. As a result, regimes confronting localized dissent must make strategic allocations based on the coercive capacity they already possess.

To formalize this logic, the next section develops a model in which an authoritarian leader allocates repressive and redistributive resources across regions with heterogeneous levels of discontent and initial coercive capacity. The model highlights how spatial variation in state power shapes the equilibrium mix of authoritarian strategies in early stages of political contestation and yields testable predictions for subnational patterns of repression and redistribution.

2.2 A stylized model of autocratic responses to local dissent

Our model focuses on how autocrats manage localized dissent in early stages of political contestation to prevent it from escalating into broader, coordinated resistance. The model is structured as a dynamic game of incomplete information, capturing how the authoritarian leader balances the costs of repression and redistribution against the risk of losing power in the long run when the initial level of discontent is not perfectly observable, while citizens decide whether to challenge the regime based on their private level of discontent and the additional cost of being successfully repressed.

Players We consider a location inhabited by a continuum of citizens of mass 1, governed by an authoritarian government. Nature draws a level of popular discontent $\theta \in [0, \infty)$ from a cumulative distribution function F_θ , assumed continuously differentiable and strictly increasing on its full support.⁵ The level of dissent θ is private information among citizens.

Strategies Citizens choose whether to revolt based on their drawn level of discontent θ . If they revolt, the government, observing the revolt but not θ , selects one of two actions: (1) *Repress*, deploying forces based on some inherited coercive capacity $C > 0$, or (2) *Redistribute*, offering an amount $r \in (0, B]$, where $B > 0$ is the budget constraint. If the government chooses redistribution, citizens play again and decide whether to accept the offer or continue the revolt.⁶

⁵We assume F_θ has a density f_θ that is positive on its support. Additional regularity conditions used in the appendix are stated there.

⁶In this model, citizens' actions can be viewed as atomistic because each citizen's decision to revolt is based solely on their private level of discontent θ , which is identically drawn for all citizens from the same distribution F_θ . The continuum of citizens, with mass 1, implies that individual deviations do not affect the aggregate outcome, and the government's observation of a revolt reflects a collective action without discerning individual contributions. Thus, the model simplifies citizens' behavior to that of a representative agent, whose decision to revolt or not is determined by the single parameter θ , which captures the localized level of discontent. Notice, however, that we can also think that this game is being played in each locality from a set of places governed by the autocrat. The logic of atomistic localities would also apply in that case.

Timing The game unfolds as follows: (1) Nature draws θ . (2) Citizens, observing θ , decide whether to revolt. If they do not revolt, the game ends. (3) If citizens revolt, the government observes the revolt and chooses to repress or redistribute an amount r . (4) If repression is chosen, it succeeds with probability $p(C, \theta) \in (0, 1]$, continuously differentiable, strictly decreasing in θ , and strictly increasing in C . (5) If redistribution is chosen, citizens decide whether to accept r or continue the revolt, with the revolt's outcome determined by a success probability $1 - q(C, \theta)$, where $q(C, \theta)$ is continuously differentiable, strictly decreasing in θ , and strictly increasing in C .

Payoffs If citizens do not revolt, they receive $-\theta$, and the government receives $\Gamma > 0$. If the citizens revolt and the government represses, a successful repression yields $\Gamma - kC$ for the government and $-\theta - \delta(\theta)$ for citizens, where $\delta(\theta) > 0$ is the cost of revolting, assumed continuously differentiable and weakly decreasing in θ (so $\delta'(\theta) \leq 0$), and $k > 0$ is the marginal cost of mobilizing coercive capacity for repression. Higher C implies a greater ability to monitor, deter, or suppress dissent, increasing the success probability of repression $p(C, \theta)$, but it also entails higher costs for maintaining and deploying coercive infrastructure, such as surveillance networks, personnel, arms, and equipment.⁷ Therefore, a failed repression yields $-kC$ for the government and $\theta - \delta(\theta)$ for citizens. If the government redistributes r , incurring a cost αr , and citizens accept, citizens receive $r - \theta - \delta(\theta)$, and the government receives $\Gamma - \alpha r$. If citizens continue the revolt but fail, which occurs with probability $q(C, \theta)$, this path yields $-\theta - \rho\delta(\theta)$ for citizens (where $\rho > 1$ is the increase in revolting cost) and Γ for the government. A successful revolt in this second stage yields $\theta - \rho\delta(\theta)$ for citizens and 0 for the government.

Additional regularity assumptions For equilibrium existence and comparative statics, we assume a bounded support for θ , but also that $\delta(\theta)$ is decreasing and bounded. Similarly, we assume smoothness and monotonicity for p and q . We formalize these and further regularity conditions needed in Appendix A.

Proposition 1 (Existence of Perfect Bayesian Equilibria in Cutoff Strategies). *There exist pure-strategy Perfect Bayesian Equilibria (PBE) in cutoff strategies, where citizens revolt if their discontent θ exceeds a threshold $\theta^* \geq 0$, and the leader chooses repression or redistribution based on updated beliefs about θ . Moreover, there are parameter regions in which a redistribution equilibrium exists and parameter regions in which a repression equilibrium exists.*

⁷According to the historical background presented in Section 3 this cost could be interpreted also as (i) the potential added cost of antagonizing local elites who oppose the inherited coercive capacity or (ii) the added costs of mobilizing repression by overcoming geographic and administrative barriers.

The intuition behind this result is straightforward. The game boils down to two interlocking threshold problems. Because a citizen's net return to revolt rises monotonically with her own discontent θ when $\delta'(\theta) \leq 0$, each citizen has a unique cutoff θ^* above which revolt dominates quiescence. Observing whether a revolt occurs then gives the leader a coarse but informative signal. Bayes' rule converts this signal into a posterior, and based on that, the leader compares the expected payoffs of repression (large when coercive capacity is strong and repression costs are low) with those of redistribution. The detailed proof, which constructs these equilibria using backward induction and characterizes parameter regions that support redistribution and repression equilibria, is provided in Appendix B.1.

Remark 1. *For a given level of discontent, high coercive capacity does not always favor repression.*

Increasing coercive capacity C influences a leader's expected return to repression through two opposing mechanisms. First, the *direct payoff effect*: for any level of popular discontent θ , a higher C increases the probability of a successful crackdown, $p(C, \theta)$, while costs, kC , rise only proportionally. Holding beliefs about θ constant, this makes repression more attractive. Second, the *screening (information) effect*: citizens, facing a harsher coercive environment, revolt only if their discontent exceeds a higher threshold $\theta^*(C)$. A revolt thus signals greater discontent, leading the leader to update their estimate to a higher posterior mean $\check{\theta}(C)$. Since $p(C, \theta)$ decreases with θ , this reduces the estimated success probability of repression when force is considered.

If the screening effect's reduction in $p(C, \check{\theta}(C))$ outweighs the direct increase in p from higher C , the expected payoff from repression falls below that of redistribution, despite stronger coercive capacity. Thus, the relationship between coercive capacity and repression is non-monotonic. Beyond a critical threshold, higher capacity deters all but the most discontented citizens, and their revolt signals such high θ that repression becomes riskier than redistribution. Despite this surprising implication, the model yields two key insights:

Proposition 2 (Coercive Capacity Diminishes the Effect of Increased Dissent on Redistribution). *Let $\mu_\theta \geq 0$ parameterize a mean shift in the distribution of dissent, such that $\theta = \tilde{\theta} + \mu_\theta$, where $\tilde{\theta} \sim F_{\tilde{\theta}}$. In any pure-strategy PBE where the leader chooses redistribution and the optimal transfer is interior, an increase in μ_θ increases the equilibrium redistribution amount r^* , and higher coercive capacity C weakly attenuates this effect, formally expressed as $\frac{\partial^2 r^*}{\partial \mu_\theta \partial C} < 0$.*

The intuition for this proposition is that an increase in dissent, parameterized by μ_θ , shifts the distribution of θ upward, increasing the proportion of citizens with high discontent who

are likely to reject redistribution offers. This requires the leader to offer more redistribution to deter revolts, thus increasing r^* . However, higher coercive capacity C enhances the leader's ability to deter revolts through the threat of coercion, as reflected by a higher $q(C, \theta)$, which reduces the amount of redistribution needed. Appendix B.2 makes these effects explicit using the leader's first-order condition and the implicit function theorem under stated regularity conditions.

Proposition 3 (Coercive Capacity Amplifies the Effect of Increased Dissent on Repression). *An increase in μ_θ increases the probability that the leader chooses repression, and higher coercive capacity C amplifies this effect, formally expressed as $\frac{\partial^2 P(\text{Repress})}{\partial \mu_\theta \partial C} > 0$.*

The intuition for this result is that higher dissent shifts the conditional distribution of θ to the right. Under stated regularity assumptions, higher dissent makes acceptance less likely at the on-path offer and raises the relative advantage of repression, captured by $h(C, \theta) = p(C, \theta) - q(C, \theta)$. When h is increasing in θ , more dissent makes repression relatively more attractive. Higher coercive capacity raises this advantage further, so the shift toward repression is stronger as C rises. Appendix B.3 derives the result by rewriting the payoff difference in terms of h and the acceptance surplus and applying a standard Monotone Likelihood Ratio (MLR) ordering argument.

Testable implications The model generates clear empirical predictions about how authoritarian leaders respond to dissent.

Proposition 1 predicts that different regions may exhibit distinct strategic equilibria, with some areas relying more on repression and others on redistribution.⁸ This variation depends on local levels of coercive capacity and local dissent. Because these conditions differ across space and over time, we should observe systematic geographic variation in authoritarian strategies, rather than a uniform national pattern.

Proposition 2 suggests that, following a surge in dissent, areas with greater coercive capacity will experience a smaller increase in redistribution compared to areas with limited coercive capacity. This arises because strong coercive institutions deter revolts, reducing the need for costly redistribution.

Proposition 3 complements this by predicting that, as dissent rises, repression becomes more likely in areas with high coercive capacity, where coercive institutions are more effective, leading to a sharper increase in repressive actions compared to low-capacity areas.

⁸While mixed-strategy equilibria are theoretically plausible and may better reflect empirical settings in which repression and redistribution coexist, we focus on pure strategies for tractability. This does not preclude mixed empirical patterns; for example, localities can be classified empirically according to the dominant policy instrument, whether repression or redistribution.

These predictions motivate an empirical strategy to test two central hypotheses: first, that redistribution decreases in high coercive-capacity areas following a rise in dissent; second, that repression increases more sharply in those same areas. Since coercive capacity is assumed to be fixed in the short run, these comparative statics provide testable predictions that can be evaluated in settings with common temporal shocks to dissent and spatial variation in coercive capacity, such as twentieth-century Mexico.

3 Historical background

3.1 Rural militias, social dissent, & agrarian reform in authoritarian Mexico

Twentieth-century Mexico is an ideal context for testing our theoretical argument about the importance of inherited coercive capacity to understand the interplay between repressive and redistributive tactics under authoritarianism. From the 1920s to the 1940s, the regime born from the Mexican Revolution (1910-1917) (re)built and consolidated state and party institutions that upheld one of the world's longest authoritarian regimes ([Magaloni 2006](#)). Only in 2000 would the official party—restructured as the current PRI in 1946, marking the end of the constructive period of the Revolution—be defeated for the first time in a presidential election ([Greene 2007](#)).

Our empirical strategy examines how the coercive apparatus that emerged from the period of postrevolutionary statebuilding (roughly from the 1920s to the mid-1940s) conditioned the response of authoritarian governments to widespread dissent starting in the late 1950s and prolonging well into the 1970s, particularly their propensity to distribute land in the form of *ejidos* for political stability. Next, we describe the historical setting, along with qualitative information that supports the coercive role of rural militias in deterring and repressing rural dissent.

3.1.1 Agrarian reform and militia mobilization during state-building

Following the armed phase of the Mexican Revolution, the new governing elite adopted an ambitious program of land reform to pacify the country and redress peasant grievances that had been at the root of the conflict ([Sanderson 1984](#)). Land was distributed to peasant communities in the form of *ejidos* where property rights over the land were communal. As a result, land could not be sold, rented, or used as collateral for credit. Community members only enjoyed inheritable use rights over specific plots. Communities could petition land, but they had to go through a cumbersome bureaucratic process in which political considerations weighed heavily ([Albertus et al. 2016](#)).

Less studied has been the fact that, along with land, the regime broadly distributed arms to the peasantry, for them to serve as “the vanguard of the legion” defending the Revolution ([Secretaría de Guerra y Marina 1929](#)) and provide for their own protection, given the weakness of state institutions in the wake of the Mexican Revolution.⁹ Collaboration of irregular peasant militias was critical to regime survival during the state-building period. At various points, factionalism within the army around presidential successions during the *de la Huerta* rebellion (1923-1924) and the Escobar rebellion (1929) ([Lieuwen 1968; Plasencia 2010](#)), as well as counterrevolutionary contention from landlords and political Catholics during the Catholic Cristero rebellion (1926-1929) ([Bailey 1974](#)), put the new revolutionary regime on the brink of collapse. These internal and religious cleavages shaped the geography of peasant militia mobilization that emerged from the state-building period ([Meyer 1978; Sánchez-Talanquer 2023](#)).

Recognizing that the support from rural militias was inescapable to maintain control over the territory, the regime granted them semi-formal status.¹⁰ In the wake of the bloody Cristero rebellion (1926-1929), the army issued regulations defining the rural defenses, or *defensas rurales*, as community-based, part-time, and unsalaried militias formed by peasants who supported the ideals of the Revolution ([Secretaría de Guerra y Marina 1929](#)). They were formally put under the command of the army, but remained embedded in local communities and outside the state apparatus proper.

Militia mobilization reached unprecedented proportions during Lázaro Cárdenas’ presidency (1934-1940), when land redistribution and the associated landlord resistance also peaked. Cárdenas saw the arming of the peasantry as a key step in the forming of a citizenry that shared the values of the Revolution ([Rath 2013](#)), which would also protect the government from a coup by the more conservative segments of the army that confronted it. Land redistribution, militia mobilization, and corporatist incorporation of the peasantry into the party-state through the corporatist National Peasant Confederation (CNC) went hand in hand during this revolutionary state-building stage.

Many efforts were taken to ensure the loyalty of the rural militias to the regime and their sustained presence in the Mexican countryside. Membership into the rural defense forces was formally restricted to land reform beneficiaries, which automatically created a link of dependency on the central state. Because the agrarian reform program granted property rights over the land not to individuals but to communities, it effectively restricted access to inputs, markets, and credit via the state corporatist organizations, which allowed the central

⁹In addition to state-mobilized militias, many small groups that traced their roots to the period of fighting remained armed and, throughout the 1920s and 1930s, also started to collaborate with the new regime in exchange for land grants.

¹⁰The military warned against the risks of maintaining large irregular forces, but state-building elites settled for semi-formal incorporation given the circumstances ([Staniland 2015](#)).

government to exert an important degree of control over land reform beneficiaries ([Albertus et al. 2016](#); [de Janvry, Gonzalez-Navarro and Sadoulet 2014](#))—and consequently, over militia members. Since the land reform limited inheritance of land use rights to a single family member and these rights could not be sold ([de Janvry, Gordillo and Sadoulet 1997](#)), it also turned militia membership into an intergenerational family institution. These measures were decisive in harnessing rural militias to the state and enabling their use as socially-embedded instruments of authoritarian coercion later on.

By 1946, when the reorganization of the official party as the modern PRI signals the completion of the process of institutionalizing the Revolution, a network comprising thousands of part-time peasant militias spread throughout the vast Mexican countryside, as the coercive face of the party-state in local communities. Records of the US Military Intelligence Division report some 70,000 militia members by 1940, outnumbering regular troops at 58,000.¹¹ With the outbreak of the Second World War, the regular army focused more explicitly on potential external threats and relied heavily on rural militias for policing the countryside. A 1944 report to the Secretary of Defense and the president described the militias, “initially lacking serious organization and tied together only by camaraderie and mutual sympathies,” as critical “for maintaining public order across the country.”¹²

3.1.2 Targeted redistribution and the repressive uses of rural militias

From the late 1950s through the 1970s, the PRI regime faced mounting mobilization from below. Workers and teachers protested the corporatist control of their unions, demanding democracy and improved conditions. University students across the country called for broadened access, academic reform, and political liberalization. These movements were met with arrests, harassment, and escalating repression—including the 1968 Tlatelolco massacre in Mexico City and the 1971 *Halconazo* (Falcon Strike), where over 100 student demonstrators were killed by army and paramilitary forces. Although precise figures remain unavailable, historians have documented that during the so-called “Dirty War” (1964-1982) at least 3,000 people were disappeared or executed, 7,000 were tortured, and 3,000 were imprisoned for political reasons ([Herrera Calderón and Cedillo 2012](#)).

Dissent also ran deep in the countryside. Independent peasant movements emerged to challenge the vertical control of the official National Peasant Confederation’s (CNC) and protest the regime’s retreat from revolutionary agrarian goals. These movements drew strength from growing demographic pressure on land and mobilized longstanding grievances

¹¹ Report No. 8679, October 7, 1938, “Quasi-Military Organizations. Reserves in various Military Zones.” Records of the War Department General and Special Staffs (RG 165), Military Intelligence Division, Security Classified Correspondence and Reports, 1917-1941 (Entry A1-65), box 686, file number 2025-259/671.

¹² Comandancia del 8° Cuerpo de Infantería al C. Secretario de la Defensa Nacional, AGN, Ávila Camacho, 550/24.

around inequality and exclusion—especially in regions affected by the “agrarian counter-reform” of the 1950s ([Bartra 1985](#)). As in urban areas, unrest in the countryside was met with coercion. In 1962, Rubén Jaramillo—a former revolutionary and agrarian leader—and his family were massacred by the army in Morelos, one of the symbolic heartlands of the Revolution. According to his own account, Jaramillo’s movement had clashed with and faced harassment from both the army and its auxiliary forces, the rural militias ([Jaramillo 1967](#)). His assassination marked the regime’s willingness to eliminate dissent even among its historical peasant allies and is widely regarded as an early harbinger of the Dirty War ([McCormick 2016](#)).

Jaramillo’s killing radicalized sectors of the left. In 1964, the Grupo Popular Guerrillero (GPG) launched attacks on police and military targets in the northern state of Chihuahua, prompting an immediate counterinsurgency campaign. Archival records show that the military ordered the local Corps of Rural Defenses to track down the guerrillas—demonstrating how, from the outset, the regime turned to embedded militia forces to repress armed dissent.¹³ That same year, the army formalized the militias’ role through an official directive instructing them to act as local auxiliaries in the capture of “disturbers of order,” to serve as “organs of information” for territorial commanders, and to coordinate directly with regular army units ([Secretaría de la Defensa Nacional 1964](#)). In our empirical analysis, we therefore use 1965 as the onset of the militias’ renewed coercive role in response to rural unrest.

Rural insurgency became especially entrenched in the southern state of Guerrero. Two movements—the Partido de los Pobres (PDLP), led by Lucio Cabañas, and the Asociación Cívica Nacional Revolucionaria (ACNR), led by Genaro Vázquez—mobilized deep peasant support in mountainous regions marked by poverty, neglect, and political violence. Both leaders were radicalized schoolteachers who mobilized armed resistance against the regime. Despite sustained military campaigns, these groups persisted into the late 1970s. Among the first documented cases of enforced disappearance that occurred during this period was that of Epifanio Avilés, a member of the ACNR, who was allegedly detained in 1969 by members of the rural militias in Guerrero and never seen again ([Ovalle 2019](#)). His disappearance became a template for broader counterinsurgency repression in the years to follow. The involvement of the militias, acting in coordination with the army, again illustrates our argument that this old apparatus was mobilized for repressive purposes.

Authoritarian elites responded to unrest with a dual strategy: selectively reviving land reform while resorting to repression in areas where they inherited greater coercive capacity. We argue that inherited coercive infrastructure—specifically, the presence of locally embedded

¹³ Archivo General de la Nación (AGN), Dirección Federal de Seguridad (DFS), [Antecedentes del Prof. Arturo Gámiz García], 100-5-1-65, leg. 9, h. 48.

rural militias—shaped the regime’s calculus. By the early 1970s, estimates placed the number of rural militamen between 80,000 ([Basáñez 1981](#)) and 120,000 ([Lozoya 1976](#))—surpassing the regular army’s size. Where militias were present, repression became a more viable alternative to material concessions. Paradoxically, the militias evolved from revolutionary vanguards into enforcers of rural repression.

These militias were not just instruments of repression; they were stakeholders in its continuation. Their material and political status—rooted in prior land allocations and their integration into the rural bureaucracy—gave them strong incentives to block further redistribution to protect their privileged access to resources. As community-embedded networks, their presence enabled the regime to suppress dissent preemptively and often invisibly, reducing the need to buy off opposition. In this sense, the PRI did not merely use militias to repress; it aligned with them to preserve the rural status quo.

Archival records reinforce this interpretation. Petitions from independent peasant organizations frequently complained of militia harassment when demanding land reform.¹⁴ The final reports of the Guerrero state truth commission cite rural militias in multiple acts of repression, including disappearances and killings ([Comisión de la Verdad del Estado de Guerrero 2014](#)). Military files document militia involvement in intelligence-sharing for counterinsurgency operations.¹⁵ And during the execution of “Plan Telaraña,” a major counterinsurgency campaign in Guerrero in 1971, the army listed six rural militia units—each with multiple town-based squads—among its primary support forces.¹⁶

4 Empirical Strategy

4.1 Baseline specification

The central empirical implication of our theoretical framework is that, when authoritarian regimes face emerging social dissent, their reliance on repression versus redistribution depends on the coercive capacity inherited from the past. To test this prediction, we estimate a difference-in-differences model that leverages a national political shock that threatened the PRI’s dominance in the mid-1960s, together with cross-municipal variation in the historical presence of rural militias. Our identification strategy thus compares changes in redistributive and repressive outcomes before and after the mid-1960s across municipalities with differing levels of inherited militia presence. Formally, our baseline two-way fixed effects (TWFE)

¹⁴AGN, Fondo Secretaría de la Defensa Nacional, Estado Mayor, [Communications of the Central Campesina Independiente to the Commander of the XXI Military Zone and the Secretary of National Defense], caja 84, exp. 613, 1185.

¹⁵AGN, Estado Mayor de la Defensa Nacional, box 231, file number 373.

¹⁶AGN, Fondo Secretaría de la Defensa Nacional, Estado Mayor, "Plan Telaraña/71", caja 220, exp. 286.

specification estimating the average treatment effect on the treated (ATT) is given by:

$$\log(Y_{m,t}) = \alpha_m + \delta_t + \gamma \cdot (\text{Post } 1965_t \times \text{Militias}_m) + \varepsilon_{m,t}, \quad (1)$$

where $Y_{m,t}$ represents a measure of land redistribution or repression in municipality m at year t .¹⁷ We consider three measures of land redistribution – land grants, individuals benefited, and area granted— and three of repression – whether there was any repression event, the number of such events, and the number of individuals repressed. $\text{Post } 1965_t$ is an indicator that year t is subsequent to 1965,¹⁸ whereas Militias_m corresponds to the standardized municipal number of rural militias present in municipality m between 1932 and 1946 per 100,000 inhabitants in 1930. Finally, α_m and δ_t represents municipality and year fixed effects. We cluster standard errors at the municipality level, i.e., the level of our identifying variation. Our theoretical argument predicts then that γ should be negative (positive) and statistically significant for redistribution (repression) outcomes.

4.2 Identification assumption and dynamic effects

A potential concern in testing our theoretical argument through the proposed empirical strategy is that areas with stronger inherited rural militias might have followed systematically different trajectories of land redistribution or repression even before 1965. For instance, if these areas were historically less inclined to implement redistribution or more prone to coercive practices due to entrenched local power structures, the estimated post-1965 effects could partly capture long-standing differences rather than the consequences that followed the sudden rise in social discontent that year. To assess this concern, we examine whether the outcomes of interest evolved similarly across areas with varying levels of militia presence prior to 1965. We then test the plausibility of this parallel-trend assumption by conducting event studies via TWFE regressions. To that end, we run the following specification assessing treatment effects on our outcomes by time period:

$$\log(Y_{m,t}) = \alpha_m + \delta_t + \sum_{\tau=\underline{\tau}}^{\tau_0-1} \beta_\tau \cdot \mathbb{1}(t = \tau) \times \text{Militias}_m + \sum_{\tau=\tau_0+1}^{\bar{\tau}} \gamma_\tau \cdot \mathbb{1}(t = \tau) \times \text{Militias}_m + \varepsilon_{m,t}, \quad (2)$$

For the identification strategy to plausibly hold, the coefficients in the pre-period (i.e, all the β_τ) should be statistically insignificant. Notice that this specification also allow us to

¹⁷See, Section 7 on the dependent variable transformation.

¹⁸The choice of 1965 as a breakpoint so to define $\text{Post } 1965_t$ is *a priori* not obvious. As mentioned in Section 3.1, the social and political contestation of the PRI started in the late 1950s and lasted well into the early 1970s. However, as also mentioned in Section 3.1, the rural militias were provided an explicit counterinsurgency mandate as of 1965. As a result, we choose 1965 as the breakpoint when both the PRI's hegemony was challenged and the rural militias acquired a renewed coercive role to combat the rising rural discontent. Nonetheless, our baseline results are robust to choosing 1960 and subsequent years as breakpoints instead.

test for differential dynamic effects post 1965s, and therefore, for the potential persistence of our predictions over time.

Due to the differences in the time availability of our various outcomes, which we discuss in the next section, we simplify exposition by considering different time aggregations (t) for our land redistribution and repression measures. For land redistribution outcomes, we define t as quinquennia from 1940 to 1990, with the reference quinquennium (τ_0) being 1961 to 1965. For repression outcomes, we define t as the years from 1960 to 1980, using 1965 as the reference year.

4.3 Heterogeneity in the Estimated Effect of Militia Presence

In our baseline specification, γ captures the differential change in outcomes after 1965 between municipalities with differential levels of militia presence. Recent work indicates that TWFE estimators with continuous treatment intensity, including both ATT and event-study specifications, can be biased when treatment effects vary with such an intensity ([Callaway, Goodman-Bacon and Sant'Anna 2025](#)).

Given that militia presence and its influence likely differ across municipalities, we first follow [Callaway, Goodman-Bacon and Sant'Anna \(2024\)](#) and estimate separate effects for areas with high and low treatment intensity, defined relative to the median among treated municipalities. Both groups are compared to municipalities without militias. This design allows us to assess whether the estimated post-1965 effect of militia presence varies systematically with intensity.

Second, we compute [Callaway, Goodman-Bacon and Sant'Anna \(2025\)](#)'s estimator of the average effect over the observed distribution of militia presence. Specifically, the estimator first computes treatment effects as a function of militia presence, comparing changes in the outcome for units with a given militia presence to those with no militia presence. It then models these DiD estimates as a flexible function of militia presence using splines. Lastly, it averages the modeled effects across the observed distribution of militia presence in treated municipalities to yield the average treatment effect relative to no militia presence.

Finally, we examine the sensitivity of our results to concerns about log-type transformations when outcomes include zeros ([Chen and Roth 2024](#)).

5 Data

Our empirical analysis combines multiple data sources. Data on land redistribution in the form of *ejidos* from 1910 to 1990 is drawn from the Cadaster and History of Agrarian Nuclei (PHINA) of the National Agrarian Registry (RAN), and includes the allocation date, area

allocated, and the number of beneficiaries.¹⁹ Plots a to c in Figure 1 depict the frequency of these land redistribution measures over time. In addition to the well-known peak in land grants that occurred during the Lázaro Cárdenas administration (1934-40), plot a shows that there is a resurgence in land grants peaking in the 1965-1969 quinquennium. Plots b and c show similar patterns for area allocated and beneficiaries.

Data on repression from 1960 to 1980 is drawn from the historical intelligence records digitized by the Repression Archive project by the Mexican NGO *Artículo 19*. This collection includes government documents, primarily produced by Mexico's Federal Security Directorate (DFS by its acronym in Spanish), held at the General Archive of the Nation (AGN by its acronym in Spanish). We focus on the 18,528 records of surveillance activity compiled by the DFS between 1960 and 1980. These records report brief, structured intelligence on individuals and organizations identified as political threats. These records were geographically and thematically coded by the NGO. We leverage the thematic distinctions to identify instances of repression and the individuals repressed.²⁰ Plots d to f in Figure 1 show the frequency of these repression measures over time. Across all of them, we see a significant increase in repression after 1965. Figure 2c also shows the geographic joint distribution of repression events and rural militias.

Data on the municipal presence of rural militias between 1932 to 1946 is from [Sánchez-Talanquer \(2023\)](#), who manually collected them from the AGN. We compute the number of municipal rural militias per 100,000 inhabitants using the 1930 Census municipal population, which we compute using the National Institute of Statistics and Geography (INEGI)'s historical catalog of localities.²¹ Panels b and c of Figure 2 present, respectively, the joint spatial distributions of rural militias and repression events, and of rural militias and land grants.

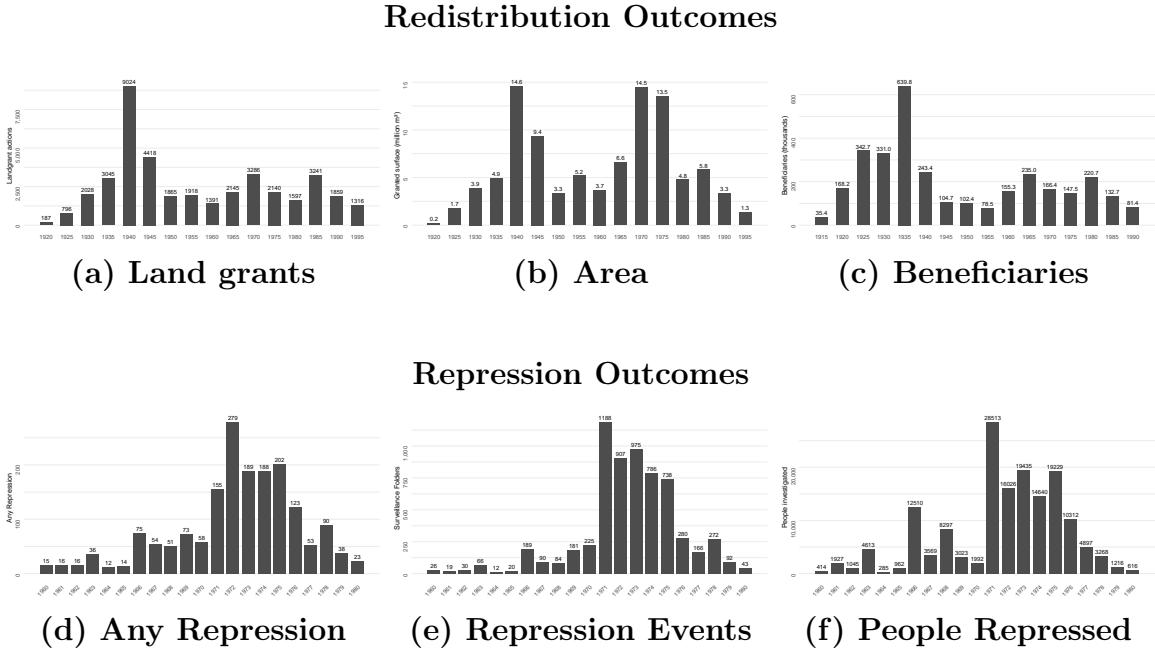
We also use data from various databases as municipal-level controls. First, we use information from INEGI on municipal area, average temperature, rainfall, and altitude, and ruggedness (variation in altitude). Second, we use census data on municipal, state and federal bureaucrats living in each municipality in 1940 digitized by [Garfias \(2018\)](#). Third, we use the 1930 municipal number of *ranchos* and *haciendas* from INEGI's historical catalog of localities. We also use municipal data on taxes and revenues per capita in 1945 from [Sánchez-Talanquer \(2023\)](#). Lastly, we construct municipal measures of land granted in the form of *ejidos* relative to the agricultural land available for redistribution in 1939, combining data from PHINA and the 2007 Agricultural Census by INEGI. Table 1 shows summary statistics for all the variables used in our empirical analyses.

¹⁹The data was scraped from <http://phina.ran.gob.mx/phina2/> by Melissa Dell, who generously shared it with us.

²⁰Supplementary Appendix D presents additional details on the construction of these variables.

²¹We accessed the historical catalog from <http://www.inegi.org.mx/geo/contenidos/geoestadistica>

Figure 1: Land redistribution (1910-1995) and repression (1960-1980)



Notes: Panels (a)–(c) plot the time path of land reform outcomes (land grants, granted area, and beneficiaries). Panels (d)–(f) plot the time path of state repression outcomes (any repression event, number of repression events, and number of people repressed). The plots highlight a renewed land-reform push in the late 1960s and a sharp increase in repression after 1965. Redistribution data are from PHINA (National Agrarian Registry); repression data are from the DFS intelligence records digitized by *Artículo 19*.

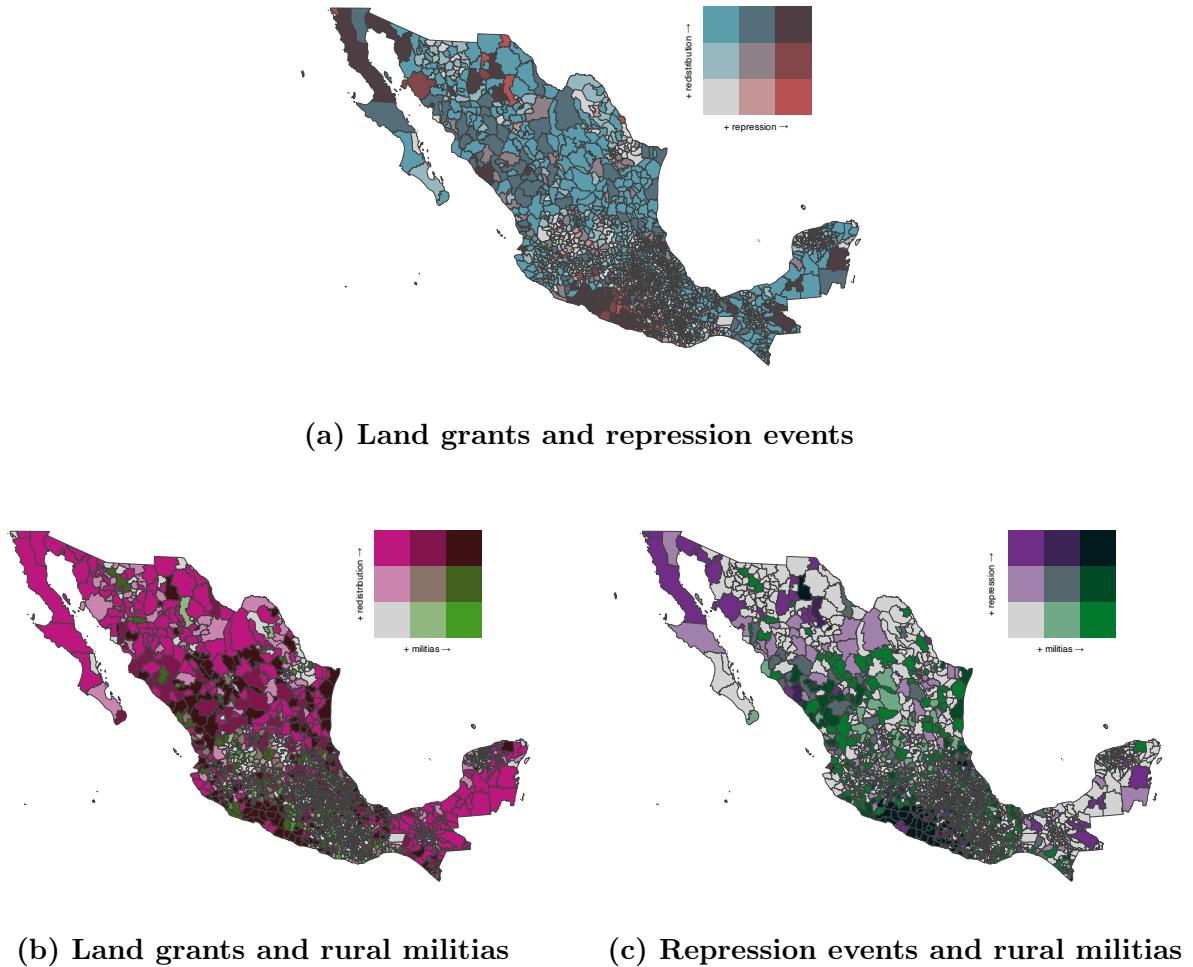
6 Results

6.1 Significant subnational variation in authoritarian strategies

We begin our empirical analysis by examining the geographic distribution of authoritarian strategies across Mexico. Figure 2 displays the spatial joint distribution of rural militias, repression events, and land grants (all measured per 100,000 inhabitants in 1930) from 1940 to 1992. These maps reveal substantial subnational variation in both coercive and redistributive strategies, offering suggestive evidence in line with the model’s core prediction that authoritarian leaders adapted their approaches to local conditions.

Panel (a) highlights the significant spatial heterogeneity in land redistribution and repression, suggesting that these strategies were unevenly deployed across regions. Panel (b) shows that rural militias—our proxy for local coercive capacity—are not systematically concentrated in areas that received high levels of land redistribution. Finally, Panel (c) illustrates that repression events and the presence of militias overlap in some regions but are mutually exclusive in others. The imperfect alignment across all three outcomes supports Proposition 1 and Remark 1, which predict the emergence of distinct local equilibria depending on underlying levels of dissent and coercive capacity. Importantly, the evidence also underscores that higher

Figure 2: Joint spatial distribution of land grants, repression, and rural militias



Notes: Each map shows the geographic distribution of the relevant variables normalized per 100,000 inhabitants in 1930. Panel (a) shows land grants from 1940 to 1992 vs. repression events from 1960 to 1980. Panel (b) plots land grants vs. rural militias. Panel (c) covers repression events vs. rural militias. All variables are binned into three categories: (i) zero to the first non-zero quantile; (ii) below the median among positive values; and (iii) above the median among positive values.

coercive capacity does not necessarily lead to more repression, particularly when accounting for the intensity of local dissent.

6.2 Strategic authoritarian responses to rises in local dissent

Table 2 presents the results of our main specification introduced in equation (1). The first three columns report the results for our three land redistribution outcomes: the logarithm of the number of land grants, including new *ejidos* and instances of extensions of existing *ejidos*, the logarithm of the total new area redistributed in column (2), and the logarithm of the total number of new beneficiaries in column (3). The last three columns show the results

Table 1: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
<i>Panel A: Varying at the municipality-year level</i>					
Log(1 + Land grants)	0.094	0.309	0.000	3.738	123,596
Log(1 + Area)	0.207	0.627	0.000	2.741	123,596
Log(1 + Beneficiaries)	0.150	0.478	0.000	2.301	123,596
Any Repression extensive	0.033	0.178	0.000	1.000	48,972
Log(1 + Repression Events)	0.036	0.232	0.000	5.425	48,972
Log(1 + People Repressed)	0.108	0.665	0.000	8.245	48,972
<i>Panel B: Varying at the municipality level</i>					
Militias (1932-1946) per 100,000 inhabitants (1930)	14.178	33.019	0.000	520.833	2,334
Standardized Local Bureaucrats 1940	0.000	1.000	-0.073	48.667	2,386
Standardized Non local Bureaucrats 1940	0.000	1.000	-0.021	48.826	2,386
Log Taxes per capita (1945)	0.416	0.901	-2.811	5.231	1,471
Log Revenue per capita (1945)	0.579	0.875	-1.948	5.232	1,471
Log Ranchos and Haciendas	2.538	1.753	0.000	7.076	2,426
Cristero Rebellion	0.273	0.445	0.000	1.000	2,260
Log Churches per capita (1939)	1.015	1.299	0.000	6.441	2,271
Log Land Available (1939)	0.000	3.409	-10.584	10.099	2,238
Share Land Redistributed (1939)	0.273	0.446	0.000	1.000	2,260
Log population 1930	8.138	1.080	1.386	12.109	2374
Log Municipality Area	5.528	1.490	1.468	10.858	2426
Average Altitude	1,440.362	874.929	0.000	3,812.900	2440
Ruggedness (variation in altitude)	255.657	188.868	0.000	1,151.310	2,440
Average Rainfall	90.593	52.026	7.113	360.990	2,426
Average Temperature	19.073	3.863	8.000	28.000	2,456
Participation on De la Huerta rebellion	0.464	0.499	0.000	1.000	2,331
Standardized land available (1923)	0.000	1.000	-0.431	20.000	2,332
Standardized land redistributed (1939)	0.000	1.000	-1.195	20.214	2,332

Notes: Panel A reports municipality-year outcomes (redistribution: 1940–1992; repression: 1960–1980). Panel B reports municipality-level variables used as controls. Militias is the number of rural militia units observed in 1932–1946 per 100,000 inhabitants in 1930; regression tables use this standardized version of this measure.

for our three repression outcomes: an indicator for whether there has been any instance of repression in column (4), the logarithm of the total repression events in column (5), and the logarithm of the total number of repressed individuals in column (6). We follow this structure consistently in the tables that follow.

Across all measures of land redistribution, the interaction term between rural militias and the Post-1965 indicator— γ in equation (1)—is negative and statistically significant. In contrast, across all repression outcomes, the interaction term between rural militias and the Post-1965 indicator is positive and statistically significant. Moreover, the event studies in Figure 3 indicate that we cannot reject the parallel-trend assumption nor the long-term persistence of the estimated effects. These results support the theoretical prediction stated in Propositions 2 and 3: facing a sudden rise in social discontent in 1965, areas with stronger

Table 2: Baseline difference-in-differences estimates

	(1)	(2)	(3)	(4)	(5)	(6)
	Land grants	Area	Beneficiaries	Any Repression	Repression Events	People Repressed
Post 1965 × Militias	-0.004*** (0.002)	-0.036*** (0.013)	-0.017*** (0.007)	0.005** (0.002)	0.013*** (0.005)	0.017** (0.008)
Observations	123,596	123,596	123,596	48,972	48,972	48,972
Number of Municipalities	2,332	2,332	2,332	2,332	2,332	2,332

Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. Militias corresponds to the standardized number of militia groups from 1932 to 1946 per 100,000 inhabitants in 1930. All variables, except column (4), are expressed in logarithms of one plus the original value. Column (4) is a binary indicator variable for the presence of any event of repression. All columns include municipality and year fixed effects. Standard errors clustered at the municipality level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

inherited rural militia presence experienced less land redistribution and more repression relative to areas with weaker militia presence.

6.3 Spatial heterogeneity in coercive capacity: The role of treatment dosage

To account for the potential bias of TWFE estimators when treatment intensity is continuous ([Callaway, Goodman-Bacon and Sant'Anna 2025](#)), we consider two complementary approaches. First, we follow [Callaway, Goodman-Bacon and Sant'Anna \(2024\)](#) and complement our baseline specification by estimating effects separately for municipalities with high and low levels of militia presence, based on whether their militia exposure is above or below the median, using municipalities without militias as the reference group. Table 3 reports DiD estimates for these subsamples in Panels A and B, respectively. The estimates are robust across subsamples, and qualitatively similar to those in Table 2.²² Moreover, the corresponding event studies in Panels A and B of Figure C2 suggest that we cannot reject the parallel-trend assumption underlying these estimates.

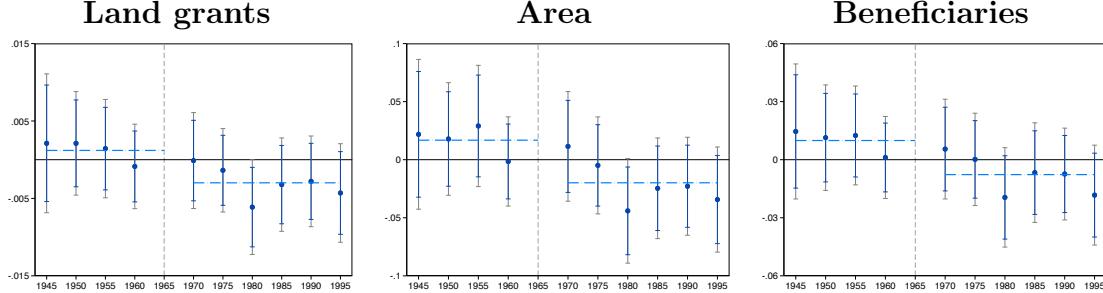
Second, we compute the estimator of the average effect over the observed distribution of militia doses proposed by [Callaway, Goodman-Bacon and Sant'Anna \(2025\)](#). Result in Panel C of Table 3 provide qualitatively similar results to those of Table 2 and quantitatively comparable results to Panels A and B in the same table.²³

²²Note that they are not comparable since results in Table 2 are marginal effects, while those in Table 3 are average effects in municipalities with militia presence relative to municipalities with no militias.

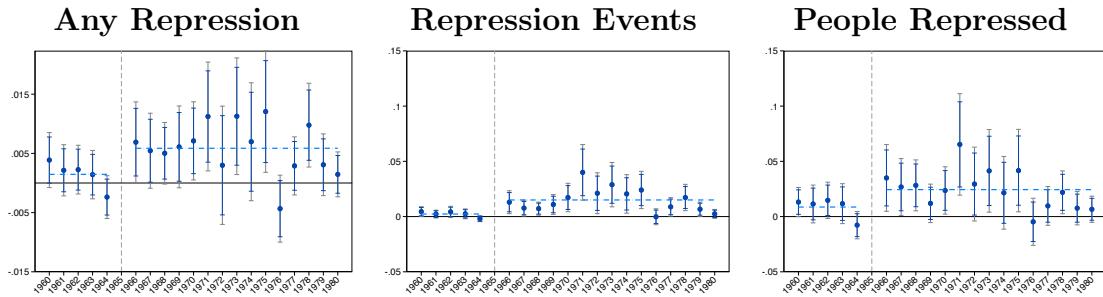
²³Figures C3 and C4 present the modeled DiD estimates by militia intensity for land redistribution and repression outcomes, respectively.

Figure 3: Baseline event studies

Panel A: Land-redistribution outcomes



Panel B: Repression outcomes



Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. All variables, except any repression, which is a binary indicator variable for the presence of any event of repression, are expressed in logarithms of one plus the original value. The estimates compare within-municipality changes relative to the 1965 quinquennium (1961–1965)/1965, for land redistribution/repression outcomes, controlling for municipality and year fixed effects. The reported coefficient is the interaction between standardized militia presence (1932–1946 militia units per 100,000 inhabitants in 1930) and quinquennium/year indicators. 95% confidence intervals with standard errors are clustered by municipality.

Turning to the magnitudes, on average, the presence of rural militias is associated with approximately a 4.6% decrease in land grants, a 11.5% decrease in area granted, and a 8.4% decrease in beneficiaries after 1965. Moreover, militia presence leads to an average 3.2% increase in the likelihood of a repression event, 6.3% increase in repression events, and 15.7% increase in repressed individuals. Overall, these consistent results across estimation methods provide strong support for our theoretical argument.

7 Ruling out potential confounders and alternative explanations

Next, we present additional empirical exercises around our baseline specification that deal with possible confounders and the main alternative mechanisms that could drive our main estimates of interest.

Potential Confounders There is a potential concern that our estimates are driven by omitted state- and municipal-level factors that correlate with rural militia presence. Much

Table 3: Robustness to accounting for varying militia intensity

	(1)	(2)	(3)	(4)	(5)	(6)
	Land grants	Area	Beneficiaries	Any Repression	Repression Events	People Repressed
<i>Panel A: High-militia intensity – TWFE Estimates</i>						
Post 1965 × Militia	-0.019*** (0.007)	-0.097*** (0.037)	-0.053** (0.023)	0.023*** (0.006)	0.049*** (0.011)	0.08*** (0.021)
Observations	101,442	101,442	101,442	40,194	40,194	40,194
<i>Panel B: Low-militia intensity – TWFE Estimates</i>						
Post 1965 × Militia	-0.027*** (0.008)	-0.159*** (0.041)	-0.085*** (0.025)	0.052*** (0.007)	0.06*** (0.009)	0.153*** (0.026)
Observations	101,442	101,442	101,442	40,194	40,194	40,194
<i>Panel C: Spline-based ATT estimator of Callaway, Goodman-Bacon and Sant'Anna (2025)</i>						
Post 1965 × Militia	-0.0463*** (0.0132)	-0.1153*** (0.0284)	-0.0840*** (0.0210)	0.0316*** (0.0044)	0.0629*** (0.0096)	0.1567*** (0.0234)
Observations	123,596	123,596	123,596	48,972	48,972	48,972

Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. All variables, except column (4), are expressed in logarithms of one plus the original value. Column (4) is a binary indicator variable for the presence of any event of repression. All specifications include municipality and year fixed effects. The TWFE Panels A and B report the ATT of militia presence from separate estimation samples. Municipalities are divided into high- and low-intensity treated groups based on whether their militia exposure is above or below the median of the positive distribution. Each treated group is compared to never-treated municipalities. The spline-based ATT estimator of Callaway, Goodman-Bacon and Sant'Anna (2025) uses all of the sample and is reported in Panel C. Standard errors are shown in parentheses. Statistical significance legend per method: TWFE *** p<0.01, ** p<0.05, * p<0.1. Spline estimator *** confidence interval does not cover 0

of Mexican politics, including land redistribution and repression, was determined at the state level, raising the concern that distinct trends of land redistribution and repression across states drive our results. Moreover, geographic and climatic municipal variables could potentially both correlate with rural militias and affect land redistribution and repression. For example, climatic characteristics such as rain and temperature likely affect agricultural land productivity, while geographic characteristics such as ruggedness might affect the importance and cost of surveillance and repression.

We test for the relevance of these concerns by adding as controls in our equation (1) state-year trends and the interactions of the demeaned pre-treatment geographic municipal characteristics in Table 1 with the post-1965 indicator. The results in Panel A of Table 4 indicate that it is unlikely that these potentially confounding variables can account for our main results. The TWFE estimates on the interaction between an indicator for post-1965

and rural militias generally remain statistically significant and have similar magnitudes to those reported in Table 2.

Table 4: Accounting for Potential Confounders, Mean Reversion and Ceiling Effects

	(1)	(2)	(3)	(4)	(5)	(6)
	Land grants	Area	Beneficiaries	Any Repression	Repression Events	People repressed
<i>Panel A: Controlling for covariates</i>						
Post 1965 × Militias	-0.0063*** (0.0018)	-0.0444*** (0.0129)	-0.0233*** (0.0070)	0.0036** (0.0015)	0.0098*** (0.0028)	0.0160*** (0.0054)
Post 1965 × Covariates	✓	✓	✓	✓	✓	✓
State & Year trends	✓	✓	✓	✓	✓	✓
Observations	123,331	123,331	123,331	48,867	48,867	48,867
<i>Panel B: Controlling for land available for redistribution in 1939</i>						
Post 1965 × Militias	-0.005** (0.002)	-0.037** (0.015)	-0.018** (0.008)	0.005** (0.002)	0.014*** (0.005)	0.019** (0.009)
Post 1965 × Land available (1939)	0.019*** (0.002)	0.133*** (0.014)	0.069*** (0.008)	-0.007*** (0.002)	-0.010*** (0.003)	-0.029*** (0.008)
Observations	113,049	113,049	113,049	44,793	44,793	44,793
<i>Panel C: Controlling for share of land granted in 1939</i>						
Post 1965 × Militias	-0.004** (0.002)	-0.032*** (0.012)	-0.016** (0.006)	0.004** (0.002)	0.013*** (0.004)	0.016** (0.007)
Post 1965 × Share land granted (1939)	-0.028*** (0.003)	-0.187*** (0.017)	-0.078*** (0.010)	0.023*** (0.002)	0.030*** (0.004)	0.075*** (0.010)
Observations	123,596	123,596	123,596	48,972	48,972	48,972

Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. Militias corresponds to the standardized number of militia groups from 1932 to 1946 per 100,000 inhabitants in 1930. All columns include municipality and year fixed effects. All variables, except column (4), are expressed in logarithms of one plus the original value. Column (4) is a binary indicator variable for the presence of any event of repression. Panel A includes state-year trends and interactions between the post-1965 indicator and the pre-treatment geographic and climatic covariates in Table 1 demeaned. Standard errors clustered at the municipality level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Mean reversion and ceiling effects Another potential concern is that our estimates, particularly regarding land redistribution, could be influenced by mean reversion or ceiling effects. Since rural militias were associated with past land redistribution, municipalities with more rural militias might have had less land available for redistribution over time. As a result, our findings on land redistribution could potentially be attributed to variations in the land available for redistribution. Similarly, our findings on repression could reflect increased

social dissent due to the greater accumulation of demands from a larger number of ejido members in those areas.

To address these potential concerns empirically, we include an interaction term in our equation (1) that combines the post-1965 indicator with the demeaned stock of agricultural land still available for redistribution in 1939—the last year before our sample of land redistribution outcomes begins—or the demeaned share of agricultural land allocated by 1939. Specifically, in the first case, we subtract the land granted between 1914 and 1939, according to PHINA, from the total agricultural land reported in INEGI’s 2007 Agricultural Census. In the second case, we consider the ratio instead.

Panels B and C of Table 4 present the results with these controls applied one at a time, assessing whether our findings are influenced by ceiling effects or mean reversion. The estimates show that, while historical land granting did impact land redistribution and repression after 1965, the coefficients on the interaction between rural militias and the post-1965 indicator remain significant and similar in magnitude to those reported in Table 2 across all outcomes. Overall, these findings alleviate concerns that our results may reflect ceiling effects or mean reversion.

Bureaucratic and fiscal capacity Turning to alternative explanations, it could be the case that places with more initial bureaucratic and fiscal capacity were the places where the PRI was able to redistribute more land in earlier years. Similarly, such state capacities might have also facilitated repression after 1965. If such capabilities were related to the presence of rural militias, our results on land redistribution and repression might be explained by differences in such state capacities.

To rule out this alternative interpretation of our findings, we add as controls to our equation (1) different bureaucratic and fiscal capacity measures interacted with the post-1965 indicator. The estimates on Panel A of Table 5 consider two measures of state capacity: the number of municipal and non-municipal bureaucrats living in the municipality in 1940. The data comes from [Garfias \(2018\)](#), who computes the numbers of federal, state, and municipal bureaucrats using micro-level data from population censuses. The estimates of Panels B and C separately consider two measures of fiscal capacity: the logarithm of the taxes and revenues per capita in 1945, respectively, from [Sánchez-Talanquer \(2023\)](#).

The results in Panels A, B1 and B2 of Table 5 suggest that, even though municipalities with greater bureaucratic and fiscal capacity exhibit significantly more repression, but not land redistribution, after 1965, controlling for such effects only increases the magnitude of the coefficient on the interaction between rural militias and the post-1965 indicator relative to those in Table 2. These results then reduce the concern that bureaucratic and fiscal capacity

differences account for our findings.

Strength of local elites Another potential alternative explanation behind our results is that of a higher resistance of landed elites in places with more rural militias. As highlighted in Section 3.1, landed elites were set up by the government to counter the power of landed elites and defend the revolution. Moreover, later on, more aligned with the PRI government, such elites might have succeeded in pushing against more land redistribution and for more repression. To lessen the concern about this alternative explanation, in Panel C of Table 5, we control for the interaction between the number of large landholdings – *ranchos* and *haciendas*— capturing the strength of those elites, and the post-1965 indicator.

The estimates suggest that, while in municipalities with more large landholdings, there was more repression, but not land redistribution, after 1965, the size and statistical significance of the coefficients of interest are in line with those of our baseline results in Table 2. These estimates, therefore, alleviate the concern that our findings are driven by stronger local elites in municipalities with more rural militia presence.

Conflict with the Church Related to our last concern, Sánchez-Talanquer (2017) shows that the Catholic Cristero Rebellion (1926-1929), which was crushed by the state, shaped the location of rural militias across Mexican municipalities. There is then the possibility that places with greater Church presence, particularly where the Cristero Rebellion took place, might have also been more likely to express dissent during the mid-1960s.

To address the possibility of this alternative explanation, we add as controls to our equation (1) measures of Church presence and Cristero Rebellion from Sánchez-Talanquer (2023) interacted with the post-1965 indicator. Specifically, in Panel D1 of Table 5, we consider the number of churches per capita in 1939, and in Panel D2 an indicator for whether a municipality was involved in the Cristero Rebellion. The results indicate that, even though places with more Church presence and municipalities involved in the Cristero Rebellion effectively experienced less land redistribution and more repression after 1965, our coefficients of interest remain statistically significant and similar in size to our baseline results in Table 2. These results lessen the concern that our findings are driven by a greater Church presence.

Sensitivity to dependent variable transformations One important concern that arises from our main estimating equation is that the presence of zero outcomes may render our standard log-type transformations sensitive to arbitrary scaling choices since they implicitly weight the extensive margin (i.e., the transition from zero to positive outcomes) in ways that depend on the units in which Y is measured, potentially distorting treatment effect

Table 5: Ruling out alternative explanations

	(1)	(2)	(3)	(4)	(5)	(6)
	Land grants	Area	Beneficiaries	Any Repression	Repression Events	People repressed
<i>Panel A: Accounting for differences in bureaucratic capacity</i>						
Post 1965 × Militias	-0.0041** (0.0017)	-0.0336*** (0.0130)	-0.0157** (0.0067)	0.0065*** (0.0023)	0.0153*** (0.0048)	0.0237*** (0.0083)
Post 1965 × Local Bureaucrats 1940	0.0011 (0.0038)	0.0163 (0.0231)	0.0118 (0.0119)	0.0211*** (0.0076)	0.0281*** (0.0103)	0.0835*** (0.0298)
Post 1965 × Non-Local Bureaucrats 1940	0.0051* (0.0029)	0.0252 (0.0206)	0.0158 (0.0106)	0.0093*** (0.0031)	0.0080** (0.0039)	0.0235** (0.0116)
Observations	123,596	123,596	123,596	48,972	48,972	48,972
<i>Panel B1: Accounting for differences in fiscal capacity (Tax per capita)</i>						
Post 1965 × Militias	-0.0101*** (0.0036)	-0.0879*** (0.0270)	-0.0444*** (0.0146)	0.0152*** (0.0052)	0.0391*** (0.0113)	0.0592*** (0.0198)
Post 1965 × Log Taxes per capita 1945	0.0032 (0.0036)	0.0165 (0.0240)	0.0064 (0.0130)	0.0221*** (0.0040)	0.0298*** (0.0080)	0.0920*** (0.0174)
Observations	77,592	77,592	77,592	30,744	30,744	30,744
<i>Panel B2: Accounting for differences in fiscal capacity (Revenue per capita)</i>						
Post 1965 × Militias	-0.0098*** (0.0036)	-0.0858*** (0.0270)	-0.0435*** (0.0146)	0.0158*** (0.0052)	0.0399*** (0.0114)	0.0619*** (0.0199)
Post 1965 × Log Revenue per capita 1945	0.0045 (0.0035)	0.0295 (0.0240)	0.0122 (0.0131)	0.0193*** (0.0041)	0.0254*** (0.0081)	0.0808*** (0.0175)
Observations	77,592	77,592	77,592	30,744	30,744	30,744
<i>Panel C: Accounting for local elite presence</i>						
Post 1965 × Militias	-0.004*** (0.002)	-0.036*** (0.013)	-0.017*** (0.007)	0.005** (0.002)	0.013*** (0.004)	0.018** (0.008)
Post 1965 × Ranchos and Haciendas	0.000 (0.003)	-0.017 (0.021)	0.001 (0.011)	0.017*** (0.002)	0.022*** (0.003)	0.048*** (0.007)
Observations	123,596	123,596	123,596	48,972	48,972	48,972
<i>Panel D1: Accounting for differences in conflict with the Church</i>						
Post 1965 × Militias	-0.0045*** (0.0017)	-0.0359*** (0.0129)	-0.0174*** (0.0067)	0.0048** (0.0022)	0.0136*** (0.0048)	0.0183** (0.0081)
Post 1965 × Log Churches per capita 1939	-0.0064*** (0.0019)	-0.0444*** (0.0138)	-0.0078 (0.0076)	0.0059*** (0.0016)	0.0034 (0.0023)	0.0211*** (0.0058)
Observations	119,674	119,674	119,674	47,418	47,418	47,418
<i>Panel D2: Accounting for differences in conflict with the Church</i>						
Post 1965 × Militias	-0.003* (0.002)	-0.021* (0.011)	-0.009 (0.006)	0.005** (0.002)	0.014*** (0.005)	0.019** (0.008)
Post 1965 × Cristero Rebellion Municipality	-0.028*** (0.005)	-0.218*** (0.037)	-0.102*** (0.021)	0.025*** (0.005)	0.041*** (0.009)	0.088*** (0.021)
Observations	118,243	118,243	118,243	46,851	46,851	46,851

Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. Militias corresponds to the standardized number of militia groups from 1932 to 1946 per 100,000 inhabitants in 1930. All columns include municipality and year fixed effects. All variables, except column (4), are expressed in logarithms of one plus the original value. Column (4) is a binary indicator variable for the presence of any event of repression. Standard errors clustered at the municipality level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

estimates (Chen and Roth 2024). To assess the relevance of this issue in our context, Table C1 presents estimates of the average treatment effect under different functional forms. We compare the baseline log specification with a scaled version, $\log(1 + 100 \cdot Y)$, and report the contribution of the extensive margin explicitly. We observe notable variation in estimated

effects across specifications. For instance, the ATT for *Land grants* increases in absolute magnitude from -0.004 under $\log(Y)$ to -0.021 under the scaled log transformation, with a non-negligible percentage change attributable to the extensive margin. Similar patterns are evident across other outcomes, indicating that the extensive margin plays a nontrivial role in shaping estimated treatment effects.

To address this issue, and rule out that our results are simply the reflection of the arbitrary functional form, Table C1 reports results using the transformation proposed by [Chen and Roth \(2024\)](#), which retains the logarithmic structure for positive outcomes while assigning a constant value—equal to the negative of the smallest non-zero observation—to zero outcomes. This approach ensures scale invariance and makes explicit the trade-off between extensive and intensive margins. Importantly, when adopting this transformation, the main qualitative results remain unchanged: treatment effects retain their sign, statistical significance, and relative magnitudes across outcomes. While some coefficients are attenuated, their economic interpretation remains consistent with the baseline findings. These results suggest that although the concern about transformation-induced sensitivity is empirically relevant, our main conclusions are robust when applying the more principled approach suggested by [Chen and Roth \(2024\)](#).

8 Moving beyond observable confounders of militia presence

While the analysis in Section 7 addresses a broad range of potential confounders, it remains possible that the historical state strategically established militias in areas where subsequent redistribution or repression would later differ after 1965 for reasons unobserved to us. To further address this concern, we complement our difference-in-differences design with an Instrumented Difference-in-Differences (DiD-IV) approach that leverages a plausibly exogenous historical shock to the state’s demand for auxiliary coercive forces, interacted with local variation in its ability to recruit militias.

Historical logic of the instrument The shock component of our instrument is provided by the 1923-1924 *de la Huerta* rebellion, a brief but far-reaching uprising by military elites that fractured the revolutionary army. Eight of the thirty-five military-zone commanders rebelled against President Álvaro Obregón, temporarily eroding the regime’s ability to control all its territory. Because the rebellion was an intra-elite succession conflict rather than a response to local conditions, it can be regarded as plausibly exogenous to the long-run determinants of agrarian redistribution and repression.

To defeat the rebellion, the government relied on recruiting rural militias in areas where

commanders rebelled, which was shaped by the extent of land suitable for redistribution. Recruitment depended on the government's ability to promise it would reward peasants with land. The interaction of the areas where commanders rebelled and local availability of land for redistribution, therefore, provides a plausibly exogenous instrument for local militia presence.

Formally, let $\text{Commander rebelled}_m$ denote whether municipality m belonged to a military zone whose commander rebelled in 1923, and let $\text{Land available}_{m,1923}$ measure land available for redistribution at that time. Their product, $Z_m = \text{Commander rebelled}_m \times \text{Land available}_{m,1923}$, captures plausibly exogenous cross-sectional variation in the regime's expansion of its local coercive infrastructure during the rebellion. Consistent with this logic, the event study in Figure C5 and estimates in Table C2 show that, after controlling for $\text{Commander rebelled}_m$ and $\text{Land available}_{m,1923}$, municipalities with higher Z_m display greater land redistribution, immediately after the rebellion.

Two-stage least squares specification We then implement an IV version of the baseline DiD specification in equation (1), in which the potentially endogenous interaction between militia presence and the post-1965 indicator is instrumented with the triple interaction of the post-1965 indicator, an indicator for whether a municipality belonged to a military zone whose commander rebelled in 1923, and the stock of land available for redistribution in the municipality. Formally, the first stage is given by:

$$\begin{aligned} \text{Post 1965}_t \times \text{Militias}_m = & \gamma \cdot (\text{Post 1965}_t \times \text{Land available}_{m,1923} \times \text{Commander rebelled}_m) \\ & + \pi \cdot (\text{Post 1965}_t \times \text{Land available}_{m,1923}) \\ & + \phi \cdot (\text{Post 1965}_t \times \text{Commander rebelled}_m) \\ & + \eta \cdot (\text{Post 1965}_t \times \text{Land distributed}_{m,1939}) + \alpha_m + \delta_t + \varepsilon_{m,t}, \end{aligned} \quad (3)$$

where the excluded instrument is the triple interaction term $\text{Post 1965}_t \times \text{Land available}_{m,1923} \times \text{Commander rebelled}_m$. The inclusion of both lower-order interactions ensures that identification derives solely from the triple interaction, which isolates the plausibly exogenous state's needs for auxiliary coercive forces and local variation in state's ability to recruit militias. Importantly, we control for $\text{Post 1965}_t \times \text{Land distributed}_{m,1939}$ to account for a possible exclusion violation restriction since, as Figure C5 and Table C2 show, the excluded instrument also predicts greater land redistribution after the 1923-24 rebellion.

Table 6: First-stage results and weak-instrument tests

	(1)	(2)
<i>Panel A: Estimates</i>		
Dependent variable: Post 1965 \times Militias		
Post 1965 \times Land available (1923) \times Commander rebelled	0.258*** (0.081)	0.286*** (0.081)
Post 1965 \times Land available (1923)	-0.043*** (0.012)	-0.300*** (0.071)
Post 1965 \times Commander rebelled	0.113*** (0.042)	0.111*** (0.042)
Post 1965 \times Land distributed (1939)		0.257*** (0.068)
Observations	48,951	48,951
Kleibergen–Paap rk Wald F-statistic (excluded instrument)	9.320	11.944
Number of Municipalities	2,332	2,332
<i>Panel B: Test under the null hypothesis that instruments are weak</i>		
		Critical value (result)
<u>Stock–Yogo test (i.i.d. errors)</u>		
$b = 20\%$	6.66 (Rejected)	6.66 (Rejected)
$b = 15\%$	8.96 (Rejected)	8.96 (Rejected)
$b = 10\%$	16.38 (Not rejected)	16.38 (Not rejected)
<u>Montiel Olea–Pflueger test (auto-correlated errors)</u>		
$\tau = 20\%$	15.062 (Not Rejected)	15.062 (Not Rejected)
$\tau = 10\%$	23.109 (Not Rejected)	23.109 (Not Rejected)
$\tau = 5\%$	37.418 (Not Rejected)	37.418 (Not Rejected)
<i>Panel C: Robust inference with potentially weak instruments</i>		
(H_0) : Post 1965 \times Militias = 0		
Anderson–Rubin Test (χ^2)	14.88	12.08
p-value (Prob $> \chi^2$)	0.0001	0.0005
(H_0) : Post 1965 \times Militias = 0 and orthogonality conditions are valid		
Stock–Wright LM J Test (χ^2)	12.37	15.27
p-value (Prob $> \chi^2$)	0.0004	0.0001

Notes: Panel A reports the estimates of the first stage equation in (3). All specifications include municipality and year fixed effects. Standard errors, reported in parentheses, are clustered at the municipality level. Panel A reports the heteroskedasticity-robust Kleibergen–Paap rk Wald F-statistic for the excluded instrument(s). Panel B reports weak-instrument diagnostics: Stock–Yogo critical values for maximal relative bias (b) under i.i.d. errors (formally for the Cragg–Donald F-statistic) and Montiel Olea–Pflueger effective F critical values for worst-case size distortions (τ) that are robust to heteroskedasticity and autocorrelation. Panel C reports weak-instrument-robust χ^2 statistics, including the Anderson–Rubin and Stock–Wright LM tests, for inference on the endogenous regressor. *** p<0.01, ** p<0.05, * p<0.1.

The second stage is then estimated as:

$$\begin{aligned} \log(Y_{m,t}) &= \gamma^{IV} \cdot (\text{Post } 1965_t \times \text{Militias}_m) + \pi \cdot (\text{Post } 1965_t \times \text{Land available}_{m,1923}) \\ &\quad + \phi \cdot (\text{Post } 1965_t \times \text{Commander rebelled}_m) \\ &\quad + \eta \cdot (\text{Post } 1965_t \times \text{Land distributed}_{m,1939}) + \alpha_m + \delta_t + \varepsilon_{m,t}. \end{aligned} \tag{4}$$

with $(\text{Post } 1965_t \times \text{Militias}_m)$ instrumented by $\text{Post } 1965_t \times \text{Land available}_{m,1923} \times \text{Commander rebelled}_m$.

The coefficient γ^{IV} indicates the causal effect of inherited coercive capacity on post-1965 redistribution and repression among municipalities whose militia presence was historically shaped by the variation captured by the instrument.

Table 7: Instrumental-variable estimates

	(1)	(2)	(3)	(4)	(5)	(6)
	Land grants	Area	Beneficiaries	Any Repression	Repression Events	People Repressed
<i>Panel A: IV estimates</i>						
Post 1965 \times Militias	-0.219** (0.100)	-0.489** (0.195)	-0.300** (0.133)	0.170*** (0.050)	0.386*** (0.108)	0.572*** (0.177)
Observations	123,543	123,543	123,543	48,951	48,951	48,951
<i>Panel B: DiD estimates with the same controls</i>						
Post 1965 \times Militias	-0.003* (0.002)	-0.006** (0.003)	-0.009** (0.004)	0.004** (0.002)	0.013*** (0.005)	0.018** (0.008)
Observations	123,543	123,543	123,543	48,951	48,951	48,951

Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. Militias corresponds to the standardized number of militia groups from 1932 to 1946 per 100,000 inhabitants in 1930. All variables, except column (4), are expressed in logarithms of one plus the original value. Column (4) is a binary indicator variable for the presence of any event of repression. Two-stage least squares estimates in Panel A. The potentially endogenous regressor, Post 1965 $_t \times$ Militias $_m$ is instrumented with Post 1965 $_t \times$ Land available $_{m,1923} \times$ Commander rebelled $_{m,1923}$. All specifications including controls for lower-order terms, (Post 1965 $_t \times$ Land available $_{m,1923}$), (Post 1965 $_t \times$ Commander rebelled $_{m,1923}$), and (Post 1965 $_t \times$ Land distributed $_{m,1939}$), as well as municipality and year fixed effects as controls. Standard errors clustered at the municipality level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

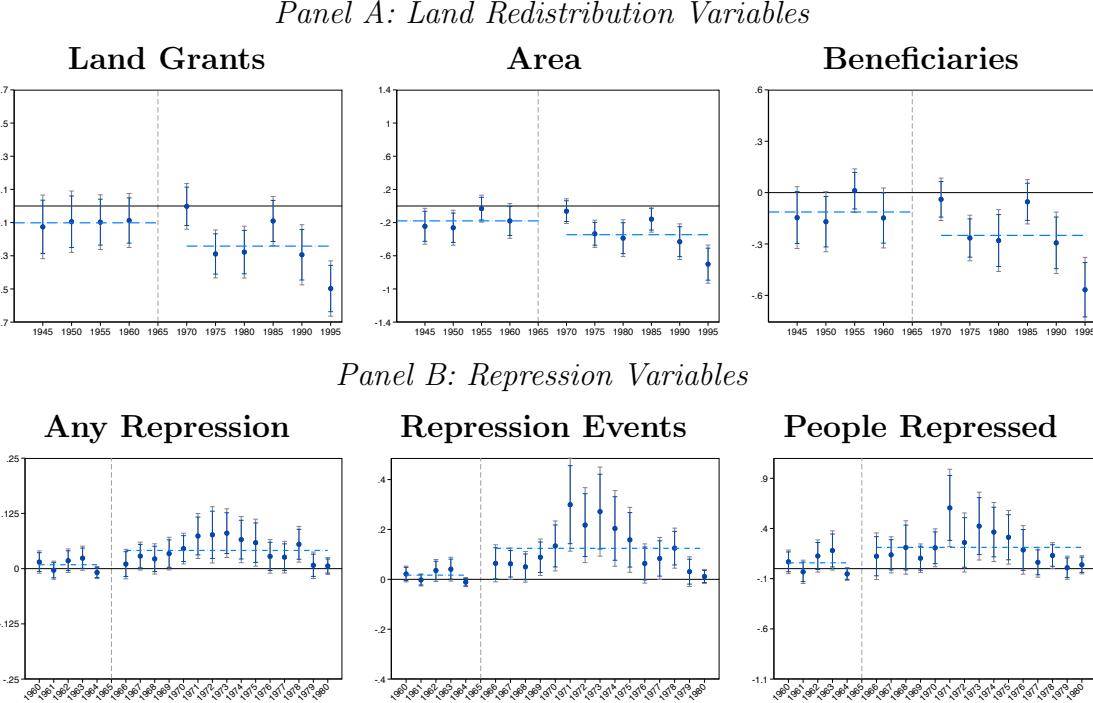
Instrumental-variable estimates Panel A of Table 6 present the results of the first stage. The results indicate that municipalities in military zones whose commanders rebelled in 1923 and with abundant land for redistribution had a larger number of militias, and are robust to account for the possible exclusion violation that such municipalities experienced more land redistribution after the 1923-24 rebellion. A series of tests reported at the bottom of Panel A and in Panels B and C support the strength of the excluded instrument.

Panel A of Table 7 presents the IV estimates. For comparison, Panel B presents the coefficients of the baseline DID specification, while also including controls for Post 1965 $_t \times$ Land available $_{m,1923}$, Post 1965 $_t \times$ Commander rebelled $_{m,1923}$, and Post 1965 $_t \times$ Land distributed $_{m,1939}$, as the first stage and reduced form specification. The IV estimates mirror but are larger than the baseline DiD ones. Municipalities whose coercive apparatus was arguably exogenously strengthened by the militia growth around the rebellion display persistently lower land redistribution and higher repression after 1965. The larger magnitudes relative to OLS are consistent with attenuation from measurement error in militia data and with the local nature

of the estimated treatment effect on the treated.

Importantly, Figure 4 presents the event studies of the reduced form, which indicate no differential pre-trends in outcomes before 1965 in municipalities under commanders who rebelled in 1923-34 and with abundant land for redistribution in 1923, but lower redistribution and higher repression after 1965. Moreover, the results in Table 8 replicate those in 5, ruling out alternative explanations also for instrumental variable specification.

Figure 4: Event studies of the reduced form



Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. All variables, except any repression, which is a binary indicator variable for the presence of any event of repression, are expressed in logarithms of one plus the original value. The reported coefficient is the interaction between *Commander rebelled*, *Land available in 1923*, and quinquennium/year indicators, where *Commander rebelled* indicates whether the commander in charge of the municipality supported the 1923-24 rebellion. All event studies include the interaction of *Land available_{m,1923}*, *Commander rebelled_m*, and *Land distributed_{m,1939}* with quinquennium/year indicators, as well as municipality and year fixed effects as controls. 95% confidence intervals with standard errors are clustered by municipality.

9 Conclusion

We examine theoretically and empirically how historical variation in coercive state capacity shapes the strategies authoritarian regimes use to respond to localized social dissent. Our theoretical framework emphasizes that autocrats must often respond to localized dissent under uncertainty about its severity and reach. Importantly, we posit that coercive capacity is relatively sticky: it reflects long-term investments in institutions of control that cannot be

Table 8: Ruling out alternative explanations (IV estimates)

	(1)	(2)	(3)	(4)	(5)	(6)
	Land grants	Area	Beneficiaries	Any Repression	Repression Events	People repressed
<i>Panel A: Accounting for differences in bureaucratic capacity</i>						
Post 1965 \times Militias	-0.217** (0.099)	-0.482** (0.194)	-0.295** (0.131)	0.112*** (0.032)	0.374*** (0.104)	0.547*** (0.167)
Post 1965 \times Local Bureaucrats 1940	-0.005 (0.007)	-0.013 (0.014)	-0.007 (0.009)	0.011*** (0.004)	0.021** (0.010)	0.047** (0.019)
Post 1965 \times Non-Local Bureaucrats 1940	-0.002 (0.001)	-0.003* (0.002)	-0.002 (0.001)	0.003*** (0.001)	0.006*** (0.002)	0.015*** (0.005)
Observations	123,543	123,543	123,543	48,951	48,951	48,951
R-squared	0.118	0.075	0.120	0.158	-0.059	0.228
<i>Panel B1: Accounting for differences in fiscal capacity</i>						
Post 1965 \times Militias	-0.224** (0.102)	-0.500** (0.201)	-0.305** (0.136)	0.128*** (0.035)	0.406*** (0.109)	0.627*** (0.178)
Post 1965 \times Log Taxes per capita 1945	-0.010 (0.006)	-0.024* (0.013)	-0.013 (0.009)	0.022*** (0.004)	0.047*** (0.012)	0.127*** (0.023)
Observations	123,543	123,543	123,543	48,951	48,951	48,951
R-squared	0.110	0.064	0.113	0.104	-0.156	0.183
<i>Panel B2: Accounting for differences in fiscal capacity</i>						
Post 1965 \times Militias	-0.221** (0.101)	-0.492** (0.199)	-0.301** (0.135)	0.120*** (0.034)	0.389*** (0.107)	0.580*** (0.175)
Post 1965 \times Log Revenue per capita 1945	-0.016** (0.007)	-0.037** (0.015)	-0.021** (0.010)	0.023*** (0.004)	0.052*** (0.012)	0.131*** (0.024)
Observations	123,543	123,543	123,543	48,951	48,951	48,951
R-squared	0.114	0.069	0.116	0.130	-0.106	0.208
<i>Panel C: Accounting for Local Elite Presence</i>						
Post 1965 \times Militias	-0.205** (0.103)	-0.451** (0.198)	-0.271** (0.135)	0.068** (0.031)	0.298*** (0.100)	0.379** (0.166)
Post 1965 \times Ranchos and Haciendas	-0.002 (0.004)	-0.005 (0.008)	-0.004 (0.005)	0.006*** (0.001)	0.011** (0.005)	0.024*** (0.007)
Observations	123,543	123,543	123,543	48,951	48,951	48,951
R-squared	0.131	0.092	0.134	0.253	0.116	0.290
<i>Panel D1: Accounting for differences in conflict with the Church</i>						
Post 1965 \times Militias	-0.230** (0.111)	-0.511** (0.219)	-0.321** (0.149)	0.122*** (0.038)	0.414*** (0.122)	0.577*** (0.196)
Post 1965 \times Log Churches per capita 1939	-0.000 (0.003)	-0.000 (0.008)	0.002 (0.005)	0.001 (0.002)	-0.003 (0.006)	0.004 (0.009)
Observations	119,621	119,621	119,621	47,397	47,397	47,397
R-squared	0.107	0.060	0.105	0.112	-0.200	0.194
<i>Panel D2: Accounting for differences in conflict with the Church</i>						
Post 1965 \times Militias	-0.234* (0.124)	-0.522** (0.244)	-0.314* (0.164)	0.121*** (0.043)	0.418*** (0.137)	0.570*** (0.218)
Post 1965 \times Cristero Rebellion Municipality	0.002 (0.018)	0.005 (0.038)	-0.001 (0.025)	0.002 (0.008)	-0.011 (0.025)	0.016 (0.041)
Observations	118,190	118,190	118,190	46,830	46,830	46,830
R-squared	0.105	0.056	0.112	0.126	-0.180	0.206

Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. Militias corresponds to the standardized number of militia groups from 1932 to 1946 per 100,000 inhabitants in 1930. All columns include municipality and year fixed effects. All variables, except column (4), are expressed in logarithms of one plus the original value. Column (4) is a binary indicator variable for the presence of any event of repression. The potentially endogenous regressor, Post 1965_t \times Militias_m is instrumented with Post 1965_t \times Land available_{m,1923} \times Commander rebelled. All specifications including controls for lower-order terms, (Post 1965_t \times Land available_{m,1923}), (Post 1965_t \times Commander rebelled), and (Post 1965_t \times Land distributed_{m,1939}), as well as municipality and year fixed effects as controls. Standard errors clustered at the municipality level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

rapidly adjusted in response to sudden threats. When coercive infrastructure is already in place, repression becomes a more reliable and cost-effective strategy for containing unrest,

even at the risk of fueling further grievances. In contrast, in areas where the regime lacks such tools, redistribution may serve as the best response to defuse mobilization. This asymmetry between inherited capacity and short-term dissent dynamics creates predictable patterns in authoritarian responses across space.

Our empirical analysis support this logic. It leverages a mid-1960s surge in dissent in Mexico against the PRI and three novel data sources on land redistribution, the presence of rural militias, and repression. These militias, originally organized as popular defense units, were gradually absorbed into the machinery of authoritarian control. By the 1960s, they had become key instruments of surveillance and repression, especially in rural areas. Difference-in-differences and instrumental variable estimates indicate that municipalities with a higher presence of rural militias were more likely to experience repression and less likely to receive land redistribution following the mid-1960s wave of dissent against the PRI. Our results highlight how inherited coercive structures constrained the menu of policy responses available to the regime when dissent threatened its local authority.

Beyond the Mexican case, these findings speak to broader debates about the subnational logic of repression and redistribution in authoritarian regimes. They underscore that these strategies are shaped by historically accumulated coercive capacity. Where coercive tools are deeply embedded, regimes are less likely to deploy redistribution, even in the face of widespread dissent. Instead, repression becomes the more likely instrument for maintaining control because it is organizationally feasible and comparatively cost-effective given existing repressive infrastructure.

These findings have important implications for understanding the spatial heterogeneity of autocratic governance and for the design of policy interventions. Efforts to curb repression or promote redistribution must contend with the durable and uneven infrastructure of state coercion—an institutional legacy that often persists beyond the conditions that produced it. This insight is particularly salient amid renewed authoritarian expansion and democratic backsliding across many regions of the world. As regimes transition, historically accumulated coercive capacities continue to delimit the feasible set of responses to dissent, shaping when repression remains organizationally viable and when redistribution or reform becomes politically and administratively attainable.

Our findings open several avenues for further research. Future work could examine whether similar legacies of coercive state-building shape policy responses to dissent in other authoritarian regimes, and how such infrastructures persist or adapt under democratic transitions. More broadly, connecting historical investments in coercion to contemporary patterns of governance can deepen our understanding of how the architecture of state control continues to constrain redistribution and reform long after authoritarian rule has receded.

Appendix

A Theoretical Assumptions

A.1 Assumptions and regularity conditions

Assumption A1 (Distribution) θ has bounded support $[0, \bar{\theta}]$, with density f_θ positive on its support. Any location shift $\theta = \tilde{\theta} + \mu_\theta$ is generated by a log-concave density $f_{\tilde{\theta}}$, which implies monotone likelihood ratio (MLR) ordering in μ_θ and guarantees that the conditional distribution $\theta | \theta > \theta^*$ shifts right as μ_θ increases.

Assumption A2 (Revolt cost) $\delta(\theta)$ is continuously differentiable, decreasing, and bounded: there exist constants $0 < \underline{\delta} \leq \bar{\delta}$ such that $\underline{\delta} \leq \delta(\theta) \leq \bar{\delta}$ for all θ . For the acceptance fixed-point and uniqueness of the acceptance cutoff, we assume further that δ is strictly decreasing on $[0, \bar{\theta}]$, so δ^{-1} is single-valued and continuous.

Assumption A3 (Technology) $p(C, \theta)$ and $q(C, \theta)$ are continuously differentiable, with $p_C > 0$, $p_\theta < 0$, $q_C > 0$, and $q_\theta < 0$ on the support. For the comparative statics in Propositions 2 and 3, we also assume $p_{C\theta} \leq 0$ and $q_{C\theta} \leq 0$ (single-crossing in $(C, -\theta)$).

Assumption A4 (Leader optimization and interior cutoffs) The leader's expected payoff from redistribution is strictly concave in r on $(0, B]$, and the optimum is interior. Under the acceptance-cutoff parameterization $r = R(\theta^a, C)$, the objective is strictly concave in θ^a . We also restrict attention to parameter regions where (i) whenever redistribution is optimal, $r^*(\theta^*) \in (\underline{\delta}, \bar{\delta})$ (e.g., $B \geq \bar{\delta}$ and $r^*(\theta^*) > \underline{\delta}$); (ii) the interior cutoff conditions $g_R(\bar{\theta}) > 0$ and $g_Q(\bar{\theta}) > 0$ hold, where $g_R(\theta) = \theta(2 - 2p(C, \theta)) - \delta(\theta)$ and $g_Q(\theta) = \theta(2 - 2q(C, \theta)) - \rho\delta(\theta)$; and (iii) in the acceptance subcase the consistency condition $r^*(\theta^*) \geq \delta(\hat{\theta}(r^*(\theta^*)))$ holds. Under these restrictions, the first-order condition is necessary and sufficient, the implicit function theorem applies, and the cutoffs in Proposition 1 are interior.

Scope of A5–A6 The next two assumptions are additional regularity conditions used only for the comparative statics in Propositions 2 and 3.

Assumption A5 (Redistribution choice: regularity of the tradeoff) Let $R(\theta, C) = 2\theta(1 - q(C, \theta)) + (1 - \rho)\delta(\theta)$ denote the transfer that makes a type θ indifferent between accepting and rejecting. We assume:

1. *More discontent requires more compensation.* For any fixed C , higher θ requires weakly larger transfers to accept, and the extra transfer required for a given increase in θ does not rise when C is higher. This captures that coercive capacity substitutes for transfers at the margin.
2. *The marginal gain from expanding acceptance is monotone.* For any acceptance cutoff θ^a , define

$$J(\theta^a, \theta, C) = \Gamma - \alpha R(\theta^a, C) - \Gamma q(C, \theta).$$

We assume J is increasing in θ and weakly decreasing in C on the relevant range. Intuitively, including more discontented types yields a larger marginal gain, while higher coercive capacity weakens the marginal value of buying acceptance.

3. *Ordered shifts in dissent.* The conditional distribution of θ given $\theta > \theta^*$ is ordered by MLR in μ_θ (as in Assumption A1).

These are reasonable regularity conditions in our context: more discontented citizens are harder to buy off, coercive capacity and transfers are substitutes, and mean shifts in dissent preserve likelihood-ratio ordering.

Assumption A6 (Repression choice: relative sensitivity) Let the on-path offer be the leader's optimal transfer after observing a revolt, $r^*(\theta^*)$, and define the associated acceptance cutoff $\theta^{a*} = \hat{\theta}(r^*(\theta^*))$. Let $A(\mu_\theta, C)$ denote the share of revolting types who accept the on-path offer, conditional on $\theta > \theta^*$. We assume:

1. *Acceptance becomes harder as dissent rises.* The acceptance share $A(\mu_\theta, C)$ is weakly decreasing in μ_θ , and the decline is weakly stronger when C is higher.
2. *Acceptance is payoff-improving for the leader.* For accepting types, acceptance weakly increases the leader's payoff relative to their rejection: $J(\theta^{a*}, \theta, C) \geq 0$ for all $\theta \leq \theta^{a*}$, where J is defined in Assumption A5.
3. *Repression gains are steeper at higher dissent.* The relative advantage of repression, $h(C, \theta) = p(C, \theta) - q(C, \theta)$, is weakly increasing in θ , and the effect of higher coercive capacity on $h(C, \theta)$ is weakly stronger for higher θ .
4. *Acceptance surplus shrinks with dissent.* The aggregate acceptance surplus term

$$S(\mu_\theta, C) = \int_{\theta^*}^{\theta^{a*}} J(\theta^{a*}, \theta, C) g(\theta \mid \theta > \theta^*) d\theta$$

is weakly decreasing in μ_θ and has decreasing differences in (μ_θ, C) .

5. *Truncation monotonicity.* For any cutoff t , the conditional expectation $\mathbb{E}[h(C, \theta) | \theta > t]$ is weakly increasing in t , and the increase is weakly larger when μ_θ is higher.

These are typical or mild regularity conditions for comparative statics with heterogeneous types. In particular, higher dissent makes acceptance harder and shifts mass toward tougher types, higher coercive capacity reduces the marginal value of buying acceptance, and the repression technology becomes relatively more valuable for higher-discontent types. The acceptance-surplus condition rules out perverse cases in which shifts in dissent or coercive capacity expand the aggregate acceptance surplus despite a shrinking acceptance region; it is satisfied by common parametric forms where J and g are monotone in θ . The truncation condition ensures that raising the revolt threshold only strengthens the expected advantage of repression among those who revolt.

B Theoretical Proofs

B.1 Equilibrium existence, Proposition 1

Proof. We construct pure-strategy PBE using backward induction, ensuring strategies and beliefs are consistent at each stage. A PBE consists of strategies $\sigma_1^C(\theta)$, σ_2^L , $\sigma_3^C(r, \theta)$ for citizens and the leader, and beliefs about θ updated via Bayes' rule where possible.

Step 1 Citizens' decision in the last period. After the leader offers redistribution $r \in (0, B]$, citizens decide whether to accept or reject the offer. The payoff for accepting is

$$\pi^C(\text{Accept}) = r - \theta - \delta(\theta).$$

If citizens reject and continue the revolt, the expected payoff is

$$\begin{aligned} \mathbb{E}[\pi^C(\text{Reject})] &= (1 - q(C, \theta))[\theta - \rho\delta(\theta)] + q(C, \theta)[- \theta - \rho\delta(\theta)] \\ &= \theta(1 - 2q(C, \theta)) - \rho\delta(\theta). \end{aligned}$$

Citizens accept if

$$r - \theta - \delta(\theta) \geq \theta(1 - 2q(C, \theta)) - \rho\delta(\theta).$$

Solving for the indifference redistribution level $\bar{r}(\theta)$ yields

$$\bar{r}(\theta) = 2\theta(1 - q(C, \theta)) + (1 - \rho)\delta(\theta).$$

Because $q_\theta < 0$ and $\delta'(\theta) \leq 0$,

$$\frac{d\bar{r}}{d\theta} = 2(1 - q(C, \theta)) + 2\theta(-q_\theta(C, \theta)) + (1 - \rho)\delta'(\theta) > 0.$$

Therefore $\bar{r}(\theta)$ is strictly increasing and $\hat{\theta}(r)$ defined by $\bar{r}(\hat{\theta}(r)) = r$ is well defined.

The citizens' strategy in the last period is then

$$\sigma_3^C(r, \theta) = \begin{cases} \text{Accept} & \text{if } r \geq \bar{r}(\theta), \\ \text{Reject} & \text{otherwise.} \end{cases}$$

Step 2 Leader's problem. Given a revolt and a citizen cutoff θ^* , the leader's posterior is

$$\mu(\theta \mid \theta > \theta^*) = \frac{f_\theta(\theta)}{1 - F_\theta(\theta^*)}, \quad \theta > \theta^*.$$

If the leader represses, the expected payoff is

$$\mathbb{E}[\pi^L(\text{Repress}) \mid \theta > \theta^*] = \int_{\theta^*}^{\bar{\theta}} [p(C, \theta)\Gamma - kC] \frac{f_\theta(\theta)}{1 - F_\theta(\theta^*)} d\theta.$$

If the leader offers to redistribute r , the expected payoff is

$$\mathbb{E}[\pi^L(\text{Redistribute}, r) \mid \theta > \theta^*] = \int_{\theta^*}^{\hat{\theta}(r)} (\Gamma - \alpha r) \frac{f_\theta(\theta)}{1 - F_\theta(\theta^*)} d\theta + \int_{\hat{\theta}(r)}^{\bar{\theta}} q(C, \theta)\Gamma \frac{f_\theta(\theta)}{1 - F_\theta(\theta^*)} d\theta.$$

The leader chooses

$$r^* = \arg \max_{r \in (0, B]} \mathbb{E}[\pi^L(\text{Redistribute}, r) \mid \theta > \theta^*].$$

By continuity and compactness, r^* exists; under Assumption A4 it is interior. The leader's strategy is

$$\sigma_2^L = \begin{cases} \text{Redistribute } r^* & \text{if } \mathbb{E}[\pi^L(\text{Redistribute}, r^*) \mid \theta > \theta^*] \geq \mathbb{E}[\pi^L(\text{Repress}) \mid \theta > \theta^*], \\ \text{Repress} & \text{otherwise.} \end{cases}$$

Step 3 Citizens' first-period decision. Each citizen observes θ , so expected payoffs are conditional on θ . The expected payoff from not revolting is

$$\mathbb{E}[\pi^C(\text{Not Revolt}) \mid \theta] = -\theta.$$

Citizens revolt if $\mathbb{E}[\pi^C(\text{Revolt}) \mid \theta] \geq \mathbb{E}[\pi^C(\text{Not Revolt}) \mid \theta]$. The payoff from revolting depends on the leader's action.

Case 1: Leader chooses repression. The expected payoff for a citizen who revolts is

$$\mathbb{E}[\pi^C(\text{Revolt}) \mid \theta] = \theta(1 - 2p(C, \theta)) - \delta(\theta).$$

Citizens revolt if $\theta(2 - 2p(C, \theta)) \geq \delta(\theta)$. Define $g_R(\theta) = \theta(2 - 2p(C, \theta)) - \delta(\theta)$. Then

$$\frac{dg_R}{d\theta} = 2 - 2p(C, \theta) - 2\theta p_\theta(C, \theta) - \delta'(\theta) > 0,$$

so g_R is strictly increasing. Because $g_R(0) = -\delta(0) < 0$ and $g_R(\bar{\theta}) > 0$, there is a unique cutoff θ_R^* solving $g_R(\theta_R^*) = 0$.

Case 2: Leader chooses redistribution. If the leader offers redistribution r^* , citizens accept in period 3 when $\theta \leq \hat{\theta}(r^*)$. The expected payoff for revolting in period 1 is

$$\mathbb{E}[\pi^C(\text{Revolt}) \mid \theta] = \begin{cases} r^* - \theta - \delta(\theta) & \text{if } \theta \leq \hat{\theta}(r^*), \\ \theta(1 - 2q(C, \theta)) - \rho\delta(\theta) & \text{if } \theta > \hat{\theta}(r^*). \end{cases}$$

Citizens revolt if $\mathbb{E}[\pi^C(\text{Revolt}) \mid \theta] \geq \mathbb{E}[\pi^C(\text{Not Revolt}) \mid \theta]$. We consider two subcases.

Subcase 2.1: $\theta^ \leq \hat{\theta}(r^*)$.* For $\theta \leq \hat{\theta}(r^*)$, the expected payoff from revolting is

$$\mathbb{E}[\pi^C(\text{Revolt}) \mid \theta] = r^* - \theta - \delta(\theta),$$

and the expected payoff from not revolting is $\mathbb{E}[\pi^C(\text{Not Revolt}) \mid \theta] = -\theta$. Hence

$$\mathbb{E}[\pi^C(\text{Revolt}) \mid \theta] - \mathbb{E}[\pi^C(\text{Not Revolt}) \mid \theta] = r^* - \delta(\theta).$$

By Assumption A2, δ is strictly decreasing, so the right-hand side is increasing in θ . If $r^* \in [\underline{\delta}, \bar{\delta}]$, there is a unique cutoff θ_A^* solving $\delta(\theta_A^*) = r^*$. Citizens revolt for $\theta > \theta_A^*$. This subcase is consistent when $\theta_A^* \leq \hat{\theta}(r^*)$, equivalently $r^* \geq \delta(\hat{\theta}(r^*))$.

Subcase 2.2: $\theta^ > \hat{\theta}(r^*)$.* For $\theta > \hat{\theta}(r^*)$, citizens reject and revolt if $\theta(2 - 2q(C, \theta)) \geq \rho\delta(\theta)$.

Define $g_Q(\theta) = \theta(2 - 2q(C, \theta)) - \rho\delta(\theta)$. Then

$$\frac{dg_Q}{d\theta} = 2 - 2q(C, \theta) - 2\theta q_\theta(C, \theta) - \rho\delta'(\theta) > 0,$$

so g_Q is strictly increasing. There is a unique cutoff θ_Q^* solving $g_Q(\theta_Q^*) = 0$. This subcase is consistent when $\theta_Q^* > \hat{\theta}(r^*)$, i.e., when $r^* < \delta(\hat{\theta}(r^*))$.

Step 4 Existence across parameter regions. Let $r^*(\theta^*)$ denote the leader's optimal transfer given a cutoff θ^* . By the maximum theorem and Assumption A4, $r^*(\theta^*)$ is continuous in θ^* .

Acceptance subcase. Define the (generalized) inverse cutoff

$$T(\theta^*) = \delta^{-1}(r^*(\theta^*)),$$

where δ^{-1} is well defined on $[\underline{\delta}, \bar{\delta}]$ because δ is continuous and strictly decreasing (Assumption A2). If $r^*(\theta^*) \in [\underline{\delta}, \bar{\delta}]$ for all $\theta^* \in [0, \bar{\theta}]$ (e.g., when $B \geq \bar{\delta}$ and parameters ensure $r^*(\theta^*) \geq \underline{\delta}$), then T maps $[0, \bar{\theta}]$ into itself and is continuous. By Brouwer's fixed-point theorem, there exists θ^* such that $\theta^* = T(\theta^*)$, i.e., $\delta(\theta^*) = r^*(\theta^*)$. Any such fixed point that also satisfies $\theta^* \leq \hat{\theta}(r^*(\theta^*))$ yields an acceptance-type redistribution equilibrium.

Rejection subcase. The cutoff θ_Q^* solving $g_Q(\theta) = 0$ is unique and independent of θ^* . If $r^*(\theta_Q^*) < \delta(\hat{\theta}(r^*(\theta_Q^*)))$, then $\theta^* = \theta_Q^*$ is consistent with rejection, yielding a rejection-type redistribution equilibrium.

Repression equilibrium. The cutoff θ_R^* solving $g_R(\theta) = 0$ is unique; if the leader's payoff difference $\Delta(\theta_R^*) \geq 0$, repression is optimal and a repression equilibrium exists.

Finally, $\Delta(\theta^*)$ is continuous in parameters. Increasing the repression cost k shifts Δ downward, while increasing the redistribution cost α shifts Δ upward. Therefore there are parameter regions with $\Delta(\theta_R^*) < 0$ where redistribution is optimal and regions with $\Delta(\theta_R^*) > 0$ where repression is optimal. This establishes the existence of both types of cutoff equilibria for appropriate parameter values. \square

B.2 Coercive capacity diminishes the effect of increased dissent on redistribution

Proof. Consider a pure-strategy PBE where citizens revolt if $\theta > \theta^*$, and the leader chooses redistribution. Because $\bar{r}(\theta)$ is strictly increasing (Appendix B.1, Step 1), the leader can equivalently choose an *acceptance cutoff* θ^a and implement it with

$$r = R(\theta^a, C) = 2\theta^a(1 - q(C, \theta^a)) + (1 - \rho)\delta(\theta^a).$$

By Assumption A5(i), R is increasing in θ and its incremental slope does not rise with C . Differentiating gives $R_\theta = 2(1 - q(C, \theta^a)) - 2\theta^a q_\theta(C, \theta^a) + (1 - \rho)\delta'(\theta^a) > 0$ and $R_{\theta C} = -2q_C(C, \theta^a) - 2\theta^a q_{C\theta}(C, \theta^a) \leq 0$. Let $g(\theta | \theta > \theta^*, \mu_\theta)$ denote the conditional density and

$$G(\theta^a; \mu_\theta) = \int_{\theta^*}^{\theta^a} g(\theta | \theta > \theta^*, \mu_\theta) d\theta$$

the acceptance probability. The leader's expected payoff from choosing θ^a is

$$V(\theta^a; \mu_\theta, C) = (\Gamma - \alpha R(\theta^a, C))G(\theta^a; \mu_\theta) + \Gamma \int_{\theta^a}^{\bar{\theta}} q(C, \theta) g(\theta | \theta > \theta^*, \mu_\theta) d\theta.$$

Assumptions A5(ii)–(iii) imply that increasing the cutoff has a larger payoff impact when μ_θ is higher and a weaker impact when C is higher. Equivalently, V exhibits increasing differences in (θ^a, μ_θ) and decreasing differences in (θ^a, C) . Together with concavity (Assumption A4), monotone comparative statics imply that the optimal cutoff $\theta^{a*}(\mu_\theta, C)$ is increasing in μ_θ , i.e. $\partial\theta^{a*}/\partial\mu_\theta > 0$, and has decreasing differences in (μ_θ, C) , i.e. $\partial^2\theta^{a*}/\partial\mu_\theta\partial C < 0$. Since $r^* = R(\theta^{a*}, C)$, the chain rule implies that $\partial r^*/\partial\mu_\theta = R_\theta(\partial\theta^{a*}/\partial\mu_\theta) > 0$ and that $\partial^2 r^*/\partial\mu_\theta\partial C = R_{\theta C}(\partial\theta^{a*}/\partial\mu_\theta) + R_\theta(\partial^2\theta^{a*}/\partial\mu_\theta\partial C) < 0$. This establishes the claim. \square

B.3 Coercive capacity amplifies the effect of increased dissent on repression

Proof. In a pure-strategy PBE, citizens revolt if $\theta > \theta^*$, and the leader chooses repression if

$$\mathbb{E}[\pi^L(\text{Repress}) | \theta > \theta^*] \geq \mathbb{E}[\pi^L(\text{Redistribute}, r^*) | \theta > \theta^*].$$

Define the payoff difference

$$\Delta(\theta^*, \mu_\theta, C) = \mathbb{E}[\pi^L(\text{Repress}) | \theta > \theta^*] - \mathbb{E}[\pi^L(\text{Redistribute}, r^*) | \theta > \theta^*].$$

Let $P(\text{Repress})$ be any selection that is weakly increasing in Δ . We consider two cases.

Case 1: rejection equilibria ($\theta^ \geq \theta^{a*}$).* In this region the redistribution payoff does not depend on r , and

$$\Delta(\theta^*, \mu_\theta, C) = \Gamma \int_{\theta^*}^{\bar{\theta}} [p(C, \theta) - q(C, \theta)] \frac{f_\theta(\theta)}{1 - F_\theta(\theta^*)} d\theta - kC = \Gamma \mathbb{E}[h(C, \theta) | \theta > \theta^*] - kC.$$

The cutoff θ^* solves $g_R(\theta) = 0$ in a repression equilibrium and $g_Q(\theta) = 0$ in a redistribution equilibrium; in either case it does not depend on μ_θ , so μ_θ -derivatives treat θ^* as fixed. Because $p_C > 0$ and $q_C > 0$, both g_R and g_Q shift downward in C ; since each is strictly increasing in θ , the implicit function theorem implies $\partial\theta^*/\partial C \geq 0$. Under MLR ordering (Assumption A1), a higher μ_θ shifts the conditional distribution right. By Assumption A6(iii), $h(C, \theta)$ is increasing in θ , so $\mathbb{E}[h(C, \theta) | \theta > \theta^*]$ increases with μ_θ . Hence $\partial\Delta/\partial\mu_\theta > 0$. For the cross-partial,

$$\frac{\partial\Delta}{\partial C} = \Gamma \mathbb{E}[h_C(C, \theta) | \theta > \theta^*] - k.$$

When θ^* depends on C , there is an additional truncation term from the moving cutoff. By Assumption A6(iii), $h_C(C, \theta)$ is increasing in θ , so $\mathbb{E}[h_C(C, \theta) | \theta > \theta^*]$ increases with μ_θ . By Assumption A6(v), the truncation term is nonnegative and becomes larger when μ_θ is higher. Together with $\partial\theta^*/\partial C \geq 0$, this implies $\partial^2\Delta/\partial\mu_\theta\partial C > 0$.

Case 2: acceptance equilibria ($\theta^ < \theta^{a*}$)*. Write the redistribution payoff as

$$\mathbb{E}[\pi^L(\text{Redistribute}, r^*) | \theta > \theta^*] = \Gamma \mathbb{E}[q(C, \theta) | \theta > \theta^*] + \int_{\theta^*}^{\theta^{a*}} J(\theta^{a*}, \theta, C) g(\theta | \theta > \theta^*) d\theta,$$

where $J(\theta^{a*}, \theta, C) = \Gamma - \alpha r^* - \Gamma q(C, \theta)$ and g is the conditional density. Hence

$$\Delta(\theta^*, \mu_\theta, C) = \Gamma \mathbb{E}[h(C, \theta) | \theta > \theta^*] - kC - S(\mu_\theta, C),$$

with $S(\mu_\theta, C) = \int_{\theta^*}^{\theta^{a*}} J(\theta^{a*}, \theta, C) g(\theta | \theta > \theta^*) d\theta$. By Assumption A6(iv), $S_\mu \leq 0$. Under Assumption A6(iii) and MLR ordering, $\mathbb{E}[h(C, \theta) | \theta > \theta^*]$ increases with μ_θ , so $\partial\Delta/\partial\mu_\theta > 0$. For the cross-partial, Assumption A6(iv) implies $S_{\mu C} \leq 0$. Assumption A6(iii) implies $\partial^2\mathbb{E}[h]/\partial\mu_\theta\partial C > 0$. Therefore $\partial^2\Delta/\partial\mu_\theta\partial C > 0$. \square

References

- Acemoglu, Daron and James A. Robinson. 2000. “Democratization or repression?” *European Economic Review* 44(4):683–693.
- Acemoglu, Daron and James A. Robinson. 2001. “A Theory of Political Transitions.” *American Economic Review* 91(4):938–963.
- Acemoglu, Daron and James A. Robinson. 2019. *The Narrow Corridor: States, Societies, and the Fate of Liberty*. New York: Penguin Press.
- Acemoglu, Daron and James Robinson. 2006. *Economic Origins of Dictatorship and Democracy*. New York: Cambridge University Press.
- Acemoglu, Daron, Thierry Verdier and James A. Robinson. 2004. “Kleptocracy and Divide-and-Rule: A Model of Personal Rule.” *Journal of the European Economic Association* 2(2-3):162–192.
- Albertus, Michael. 2017. “Landowners and Democracy: The Social Origins of Democracy Reconsidered.” *World Politics* 69(2):233–276.
- Albertus, Michael, Alberto Diaz-Cayeros, Beatriz Magaloni and Barry R. Weingast. 2016. “Authoritarian Survival and Poverty Traps: Land Reform in Mexico.” *World Development* 77:154–170.

- Bailey, David. 1974. *Viva Cristo Rey! The Cristero Rebellion and the Church-State Conflict in Mexico*. Austin: University of Texas Press. OCLC: 723007.
- Bandiera, Antonella, Horacio Larreguy and Jorge Mangonnet. 2025. “Family Ties, Social Control, and Authoritarian Distribution to Elites.” *American Political Science Review*, *early view*.
- Bartra, Armando. 1985. *Los herederos de Zapata: movimientos campesinos posrevolucionarios en México, 1920-1980*. México, D.F.: Ediciones Era. OCLC: 13439067.
- Basáñez, Miguel. 1981. *La lucha por la hegemonía en México, 1968-1980*. México, D.F.: Siglo Veintiuno Editores. HOLLIS number: 000406835.
- Bautista, María Angélica, Felipe González, Luis R. Martínez, Pablo Muñoz and Mounu Prem. 2023. “The Geography of Repression and Opposition to Autocracy.” *American Journal of Political Science* 67(1):101–118.
- Callaway, Brantly, Andrew Goodman-Bacon and Pedro H. C. Sant’Anna. 2024. “Event Studies with a Continuous Treatment.” *AEA Papers and Proceedings* 114:601–05.
- Callaway, Brantly, Andrew Goodman-Bacon and Pedro HC Sant’Anna. 2025. “Difference-in-differences with a continuous treatment.” *NBER Working Paper 32117*.
- Cantoni, Davide, Andrew Kao, David Y. Yang and Noam Yuchtman. 2024. “Protests.” *Annual Review of Economics* 16:519–543.
- Centeno, Miguel. 2002. *Blood and Debt: War and the Nation-State in Latin America*. University Park: Pennsylvania State University Press.
- Chen, Jiafeng and Jonathan Roth. 2024. “Logs with zeros? Some problems and solutions.” *The Quarterly Journal of Economics* 139(2):891–936.
- Comisión de la Verdad del Estado de Guerrero. 2014. “Informe Final.”
- Davenport, Christian. 2007. *State Repression and the Domestic Democratic Peace*. New York: Cambridge University Press. OCLC: 85783418.
- de Janvry, Alain, Gustavo Gordillo and Elisabeth Sadoulet. 1997. *Mexico’s Second Agrarian Reform: Household and Community Responses, 1990-1994*. La Jolla: Center for U.S.-Mexican Studies, University of California, San Diego. OCLC: 36372409.
- de Janvry, Alain, Marco Gonzalez-Navarro and Elisabeth Sadoulet. 2014. “Are Land Reforms Granting Complete Property Rights Politically Risky? Electoral Outcomes of Mexico’s Certification Program.” *Journal of Development Economics* 110:216–225.
- Edwards, Pearce. 2022. “Political Competition and Authoritarian Repression: Evidence from Pinochet’s Chile.” *World Politics* 74(4):479–522.
- Fearon, James and David Laitin. 2003. “Ethnicity, Insurgency, and Civil War.” *American Political Science Review* 97(1):75–90.

- Fergusson, Leopoldo, Horacio Larreguy and Juan Felipe Riaño. 2022. “Political Competition and State Capacity: Evidence from a Land Allocation Program in Mexico.” *The Economic Journal* 132(648):2815–2834.
- Gandhi, Jennifer. 2008. *Political Institutions under Dictatorship*. New York: Cambridge University Press. OCLC: 212858798.
- Garfias, Francisco. 2018. “Elite Competition and State Capacity Development: Theory and Evidence from Post-Revolutionary Mexico.” *American Political Science Review* 112(2):339–357.
- González, Felipe, Josepa Miquel-Florensa, Mounu Prem and Stéphane Straub. 2024. “The Dark Side of Infrastructure: Roads, Repression and Land in Authoritarian Paraguay.” *The Economic Journal* 135(666):653–669.
- Greene, Kenneth F. 2007. *Why Dominant Parties Lose: Mexico’s Democratization in Comparative Perspective*. New York: Cambridge University Press. OCLC: 126227679.
- Greitens, Sheena Chestnut. 2016. *Dictators and Their Secret Police: Coercive Institutions and State Violence*. New York: Cambridge University Press. OCLC: 946254731.
- Hassan, Mai, Daniel Mattingly and Elizabeth R. Nugent. 2022. “Political Control.” *Annual Review of Political Science* 25:155–174.
- Herrera Calderón, Fernando and Adela Cedillo, eds. 2012. *Challenging Authoritarianism in Mexico: Revolutionary Struggles and the Dirty War, 1964-1982*. New York: Routledge. OCLC: 712124152.
- Jaramillo, Rubén. 1967. *Autobiografía*. México: Nuestro Tiempo.
- Klor, Esteban F, Sebastian Saiegh and Shanker Satyanath. 2020. “Cronyism in State Violence: Evidence from Labor Repression During Argentina’s Last Dictatorship.” *Journal of the European Economic Association* 19(3):1439–1487.
- Kuran, Timur. 1989. “Sparks and Prairie Fires: A Theory of Unanticipated Political Revolution.” *Public Choice* 61(1):41–74.
- Lieuwen, Edwin. 1968. *Mexican Militarism: The Political Rise and Fall of the Revolutionary Army, 1910-1940*. Albuquerque: University of New Mexico Press.
- Lozoya, Jorge Alberto. 1976. *El ejército mexicano*. México: Colegio de México. OCLC: 651371765.
- Magaloni, Beatriz. 2006. *Voting for Autocracy: Hegemonic Party Survival and Its Demise in Mexico*. New York: Cambridge University Press.
- McCormick, Gladys. 2016. *The Logic of Compromise in Mexico: How the Countryside Was Key to the Emergence of Authoritarianism*. Chapel Hill: The University of North Carolina Press. OCLC: 914136832.

- Meyer, Jean. 1978. *La Cristiada. Vol. 3: Los cristeros*. México: Siglo XXI Editores.
- Migdal, Joel. 1988. *Strong Societies and Weak States: State-Society Relations and State Capabilities in the Third World*. Princeton, N.J: Princeton University Press.
- Morales-Arilla, Jose. 2025. “Autocrats in crisis mode: Strategic favoritism during economic shocks.”.
- Ovalle, Camilo Vicente. 2019. *Tiempo Suspendido: Una Historia de La Desaparición Forzada En México, 1940-1980*. Ciudad de México: Bonilla Artigas Editores.
- Padró i Miquel, Gerard. 2007. “The Control of Politicians in Divided Societies: The Politics of Fear.” *The Review of Economic Studies* 74(4):1259–1274.
- Plasencia, Enrique. 2010. *Historia y organización de las fuerzas armadas en México, 1917-1937*. México: Universidad Nacional Autónoma de México. OCLC: 741292564.
- Rath, Thomas. 2013. *Myths of Demilitarization in Postrevolutionary Mexico, 1920-1960*. Chapel Hill: University of North Carolina Press. HOLLIS number: 013675468.
- Ritter, Emily Hencken and Courtenay R. Conrad. 2016. “Preventing and Responding to Dissent: The Observational Challenges of Explaining Strategic Repression.” *American Political Science Review* 110(1):85–99.
- Sánchez-Talanquer, Mariano. 2017. States Divided: History, Conflict, and State Formation in Mexico and Colombia Ph.D. Dissertation Cornell University United States – New York: .
- Sánchez-Talanquer, Mariano. 2023. “Legacies of Revolution: Popular Militias and the Rule of Law.”.
- Sanderson, Susan Walsh. 1984. *Land Reform in Mexico, 1910-1980*. Orlando: Academic Press. OCLC: 10275677.
- Secretaría de Guerra y Marina. 1929. “Reglamento de Organización y Funcionamiento de Las Defensas Rurales.”.
- Secretaría de la Defensa Nacional. 1964. “Instructivo Para La Organización, Funcionamiento y Empleo de Los Cuerpos de Defensas Rurales.”.
- Slater, Dan. 2010. *Ordering Power: Contentious Politics and Authoritarian Leviathans in Southeast Asia*. New York: Cambridge University Press.
- Soifer, Hillel. 2015. *State Building in Latin America*. New York: Cambridge University Press.
- Staniland, Paul. 2015. “Militias, Ideology, and the State.” *Journal of Conflict Resolution* 59(5):770–793.

Supplemental Appendix

Figures in the Appendix

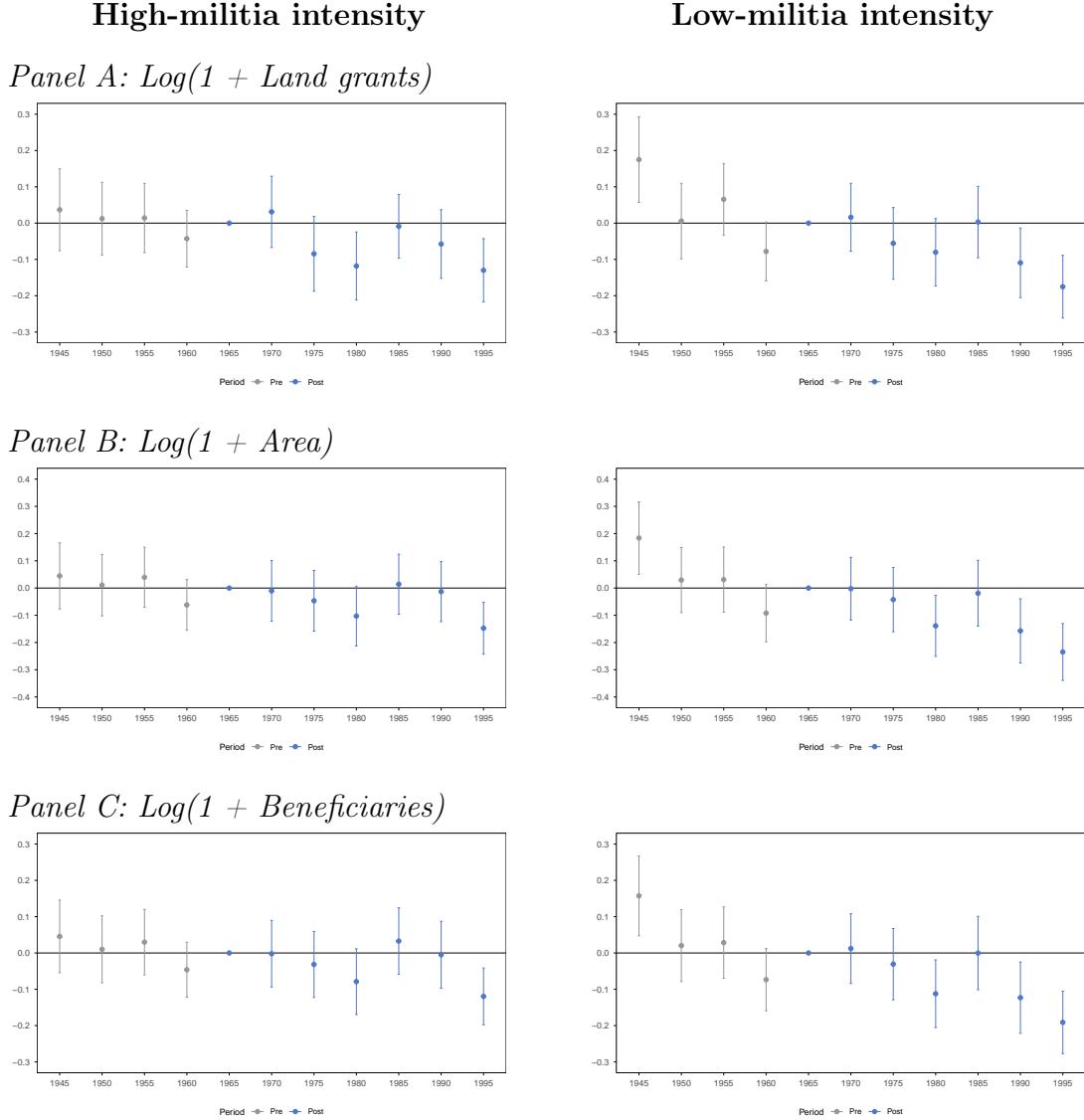
C1	Event studies on land redistribution by high- and low-militia intensity	2
C2	Event studies on repression by high- and low-militia intensity	3
C3	Estimates on land redistribution by militia intensity following Callaway, Goodman-Bacon and Sant'Anna (2025)	4
C4	Estimates on repression by militia intensity following Callaway, Goodman- Bacon and Sant'Anna (2025)	5
C5	Dynamic effects of the instrument on land redistribution between 1914 - 1940	6
D1	Intelligence Report on Surveillance of Organizations Classified as Dissident .	10
D2	Example of standardized metadata recorded for individual surveillance files within the Mexican political intelligence archive	11
D3	Daily surveillance report documenting the routine activities of an individual linked by the state to dissident political networks	12

Tables in the Appendix

C1	Sensitivity of results to scale transformations	7
C2	De la Huerta Rebellion, land availability, and land granting	8

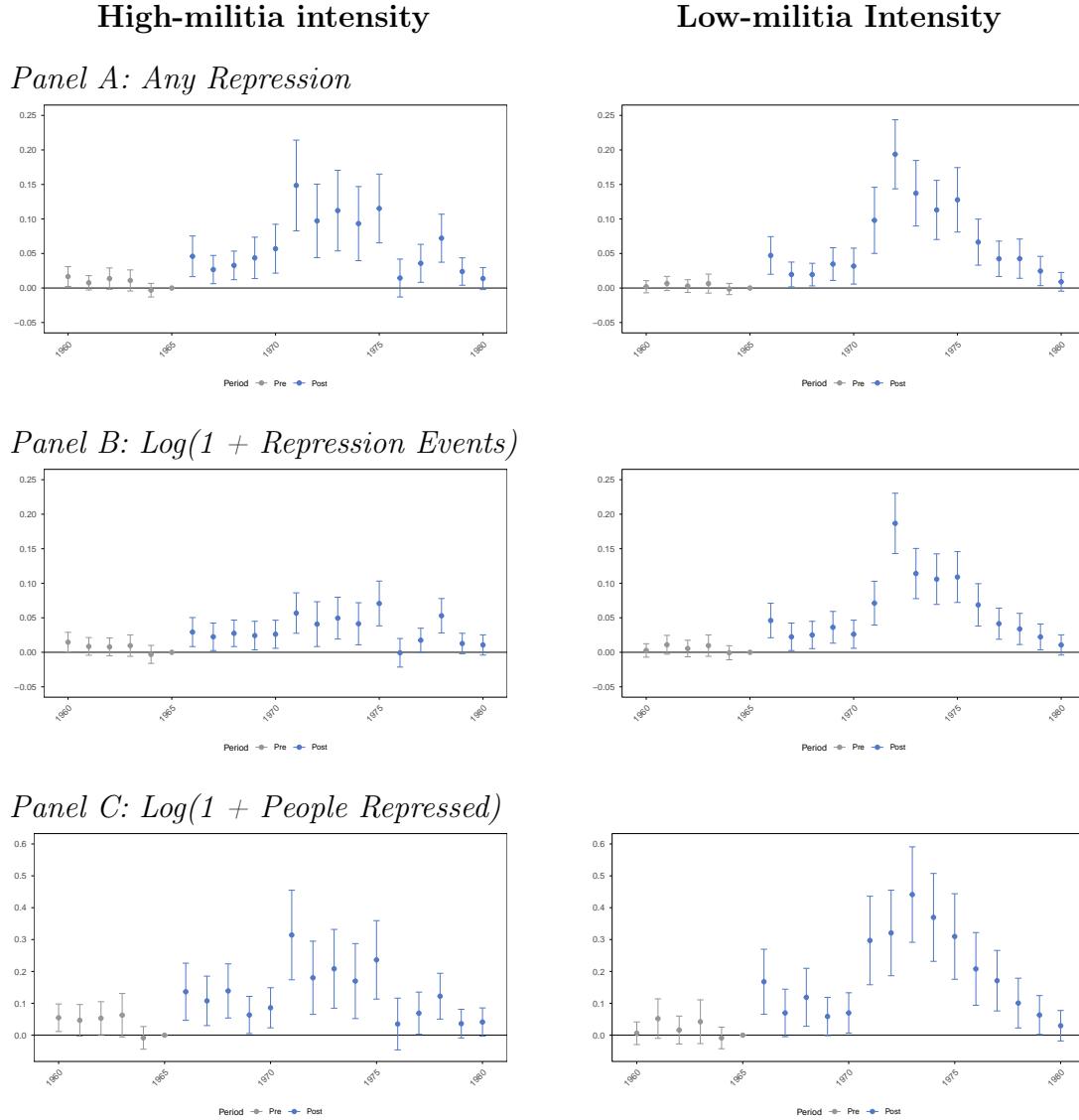
C Additional Empirical Exercises

Figure C1: Event studies on land redistribution by high- and low-militia intensity



Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992. The estimates compare within-municipality changes relative to the 1965 quinquennium (1961-1965), controlling for municipality and year fixed effects. The reported coefficient is the interaction between indicator of either militia presence above (below) the median of the positive distribution and quinquennium indicators on the left (right). 95% confidence intervals with standard errors are clustered by municipality.

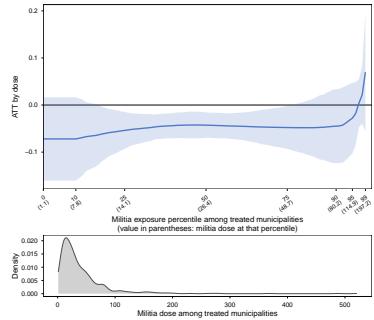
Figure C2: Event studies on repression by high- and low-militia intensity



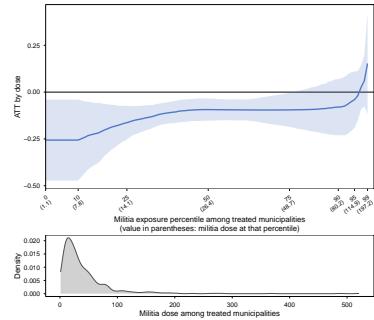
Notes: Observations are at the municipality-year level. Repression data from 1960 to 1980. The estimates compare within-municipality changes relative to 1965, controlling for municipality and year fixed effects. The reported coefficient is the interaction between indicator of either militia presence above (below) the median of the positive distribution and year indicators on the left (right). 95% confidence intervals with standard errors are clustered by municipality.

Figure C3: Estimates on land redistribution by militia intensity following Callaway, Goodman-Bacon and Sant'Anna (2025)

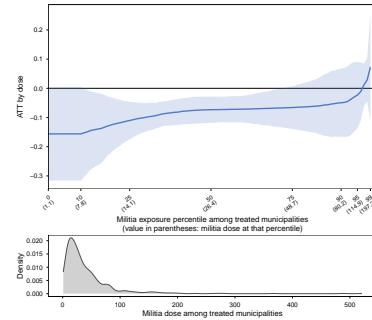
Panel A: Log(1 + Land grants)



Panel B: Log(1 + Area)

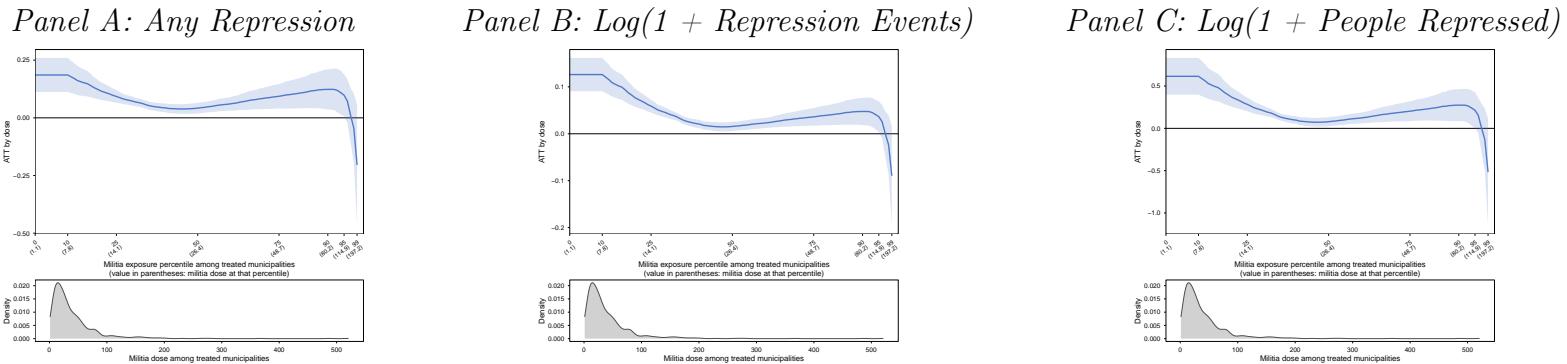


Panel C: Log(1 + Beneficiaries)



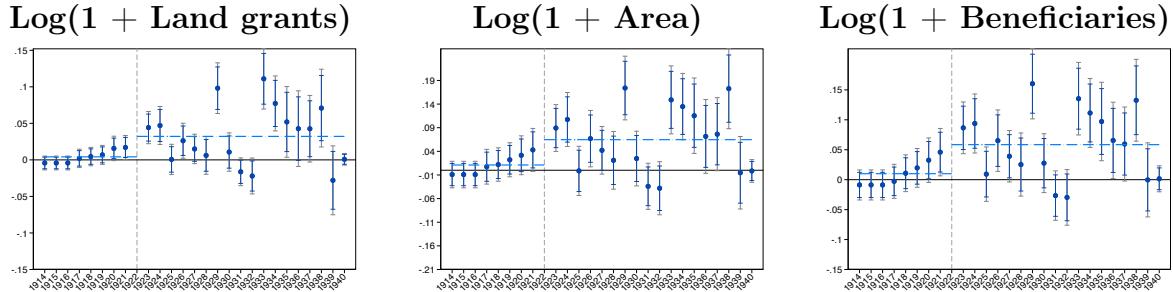
Notes: The top plot in each panel presents the estimated effects by militia intensity following Callaway, Goodman-Bacon and Sant'Anna (2025). The horizontal axis is the percentile of militia intensity among treated municipalities (0–99); numbers in parentheses report the militia intensity at that percentile. Shaded areas are 95% confidence bands. The bottom plot present militia intensity density.

Figure C4: Estimates on repression by militia intensity following Callaway, Goodman-Bacon and Sant'Anna (2025)



Notes: The top plot in each panel presents the estimated effects by militia intensity following Callaway, Goodman-Bacon and Sant'Anna (2025). The horizontal axis is the percentile of militia intensity among treated municipalities (0–99); numbers in parentheses report the militia intensity at that percentile. Shaded areas are 95% confidence bands. The bottom plot present militia intensity density.

Figure C5: Dynamic effects of the instrument on land redistribution between 1914 - 1940



Notes: Observations are at the municipality-year level. Land grant data is from 1914 to 1940. All variables are expressed in logarithms of one plus the original value. The reported coefficient is the interaction between *Commander rebelled*, *Land available in 1923*, and year indicators, where *Commander rebelled* indicates whether the commander in charge of the municipality supported the 1923-24 rebellion. All event studies include the interaction of *Land available_{m,1923}*, *Commander rebelled_m*, and *Land distributed_{m,1939}* with year indicators, as well as municipality and year fixed effects as controls. 95% confidence intervals with standard errors are clustered by municipality.

Table C1: Sensitivity of results to scale transformations

Outcome	Estimated ATT Using:			Change from	
	$\log(1 + Y)$	$\log(1 + 100 \cdot Y)$	Extensive Margin	Raw	% Change
<i>Panel A1: Redistribution Outcomes</i>					
Land grants	-0.004*** (0.002)	-0.021** (0.008)	-0.004** (0.002)	-0.017	-425
Area	-0.036*** (0.013)	-0.054*** (0.021)	-0.004** (0.002)	-0.018	-50
Beneficiaries	-0.017*** (0.007)	-0.032** (0.013)	-0.003** (0.001)	-0.016	-94
<i>Panel A2: Repression Outcomes</i>					
Repression Events	0.013*** (0.005)	0.034** (0.014)	0.005** (0.002)	0.021	61
People Repressed	0.017** (0.008)	0.038** (0.017)	0.005** (0.002)	0.021	80
<i>Panel B: Outcome transformation</i>					
$m(y) = \begin{cases} \log(y) & y > 0 \\ -\min(y > 0) & y = 0 \end{cases}$					
Land grants		Area	Beneficiaries	Repression Events	People Repressed
Post 1965 × Militias	-0.006** (0.003)	-0.038*** (0.014)	-0.021** (0.008)	0.018*** (0.006)	1.494* (0.805)
Observations	123,596	123,596	123,596	48,972	48,972
R-squared	0.034	0.030	0.031	0.040	0.015
Number of Municipalities	2,332	2,332	2,332	2,332	2,332

Notes: Observations are at the municipality-year level. Land grant data is from 1940 to 1992, and repression data from 1960 to 1980. Militias corresponds to the standardized number of militia groups from 1932 to 1946 per 100,000 inhabitants in 1930. All columns include municipality and year fixed effects. Standard errors clustered at the municipality level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table C2: De la Huerta Rebellion, land availability, and land granting

	(1)	(2)	(3)
	Land grants	Beneficiaries	Area
Post 1923 × Land available (1923) × Commander rebelled	0.028*** (0.009)	0.046*** (0.012)	0.051*** (0.015)
Post 1923 × Land available (1923)	0.080*** (0.006)	0.116*** (0.009)	0.146*** (0.010)
Post 1923 × Commander rebelled	-0.014 (0.008)	-0.017 (0.012)	-0.028* (0.014)
Observations	62,937	62,937	62,937
R-squared	0.269	0.249	0.258
Number of Municipalities	2,332	2,332	2,332

Notes: Observations are at the municipality-year level. Land grant data is from 1914 to 1940. Land available (1923) captures land available for redistribution in 1923, and Commander rebelled indicates whether a municipality belonged to a military zone whose commander rebelled in 1923. All columns include municipality and year fixed effects. Standard errors clustered at the municipality level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

D Coding of events of state repression

We study digitized Mexican state security records made publicly available through the *Archivos de la Represión* initiative.²⁴ Our empirical analysis focuses on the *Ficheros* collection, which consists of 18,528 short-form intelligence summaries produced by the *Dirección Federal de Seguridad* (DFS) between 1960 and 1980. These records follow a standardized reporting format and are organized into dossiers associated with specific individuals, organizations, or political movements.

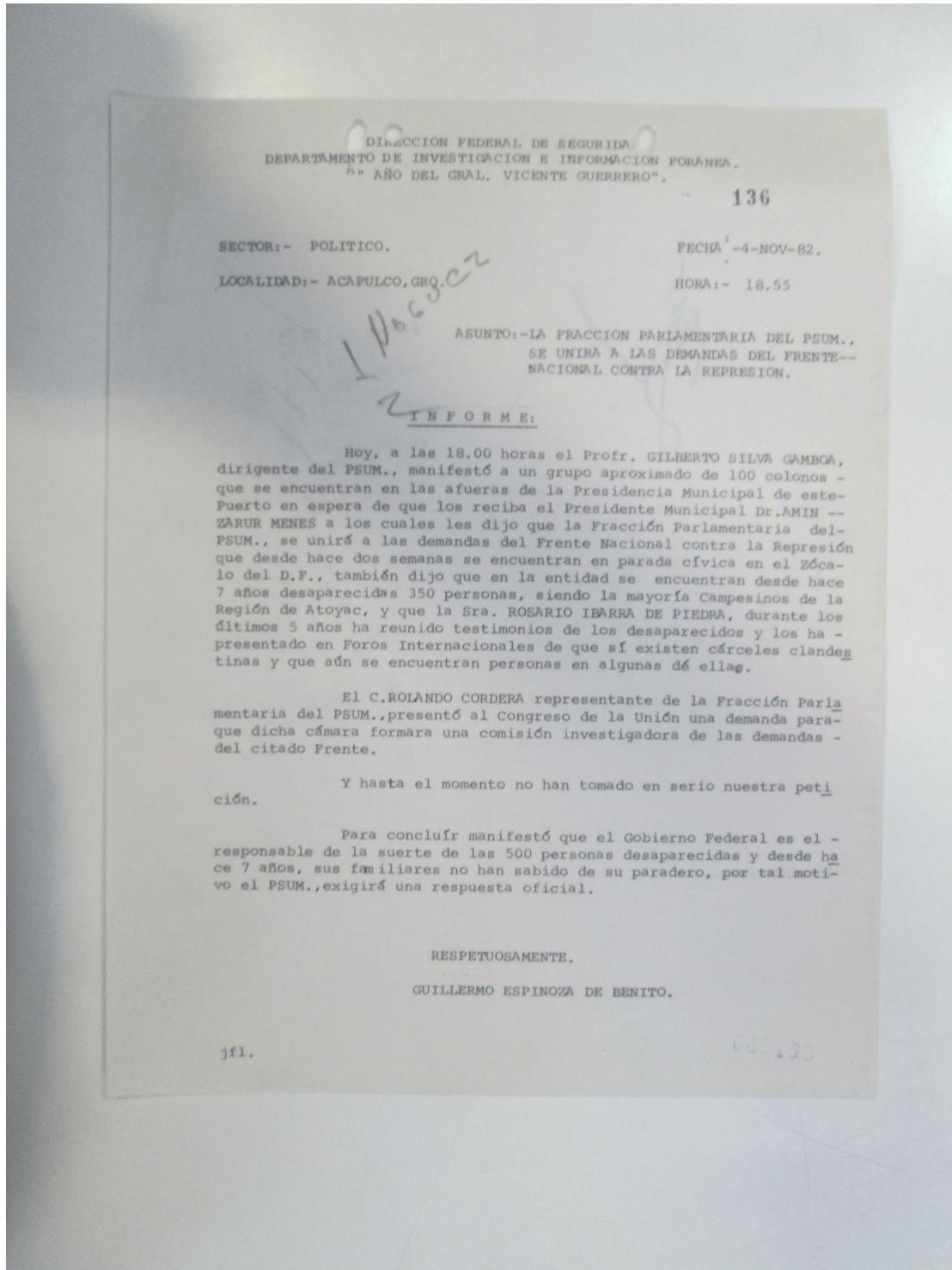
Figures D1 through D3 present representative examples of the primary archival materials we use to measure political surveillance and repression. Together, these documents illustrate both the bureaucratic infrastructure of political intelligence and the micro-level implementation of coercive capacity in authoritarian Mexico, providing direct evidence on how the state identified, monitored, and responded to social dissent. Rather than studying the full universe of intelligence activity, we restrict attention to dossiers that specialist archivists at COMVERDAD and *Artículo 19* classified as pertaining to repression-related themes. Specifically, we code a municipality–year repression event when a dossier is opened or updated with at least one of the following archival tags: extrajudicial executions or detentions, Dirty War activity, political imprisonment, political persecution, forced disappearance, counterinsurgency operations, armed conflict, or armed movements. These classifications are assigned directly within the archival metadata and are not generated by the authors.

Using this tagged dossier-level metadata, we construct three municipality–year outcome measures: (i) *Any Repression*, an indicator equal to one if at least one repression-tagged dossier is active in municipality i in year t ; (ii) *Repression Events*, defined as the total number of repression-tagged dossier entries in i, t ; and (iii) *People Repressed*, the number of distinct individuals appearing in repression-tagged dossiers in i, t . We study these measures over the period 1960–1980 as our primary outcomes capturing the local incidence and intensity of state repression.

Several features of the data mitigate common measurement concerns. First, the dossiers were produced contemporaneously by state security agencies for internal use rather than retrospective documentation, reducing concerns about ex post reinterpretation. Second, while the archival records do not capture the full universe of coercive activity, our measures reflect variation in the intensity and geographic allocation of surveillance and repression as perceived by the state. To the extent that measurement error remains, it is likely to attenuate estimated effects rather than generate spurious correlations.

²⁴The underlying documents originate from the holdings of the *Archivo General de la Nación* (AGN) and were digitized, catalogued, and curated by professional archivists and research teams. The online platform is hosted by the Mexican NGO *Artículo 19* (<https://archivo.archivosdelarepresion.org>).

Figure D1: Intelligence Report on Surveillance of Organizations Classified as Dissident



Notes: This document is an internal intelligence report generated by the Dirección Federal de Seguridad (DFS), detailing monitoring activities directed at political organizations deemed “subversive;; by the federal government. The report summarizes observed demonstrations, organizational meetings, leadership identities, and demands articulated by dissident groups, including claims regarding political repression and forced disappearances. Such reports illustrate the bureaucratic production of political intelligence and the routine surveillance practices that underpinned state coercive capacity in authoritarian Mexico. Source: Archivo Íntegro Memorial de la Guerra Sucia, compiled by Artículo 19 and COMVERDAD.

Figure D2: Example of standardized metadata recorded for individual surveillance files within the Mexican political intelligence archive

Fecha inicial del recurso	19 June 1973
Fecha final del recurso	8 September 1975
Descripción	2 fojas mecanografiadas. Incluye 1 tarjeta. Interrogatorio realizado a Roberto García Rivera (a) "Luis" en las instalaciones de la 21/o compañía de la policía. Declara ser miembro del Frente Armado de Liberación (F.A.L.), ser originario de Huetamo, Michoacán, casado con Teresa Morales Castro con quien tiene dos hijos. Se asienta que fue detenido al 19 de junio de 1973 y consignado por los delitos de asociación delictuosa, portación de arma prohibida, y transportación, almacenamiento y compra de explosivos. Permaneció hasta el 5 de agosto de 1975 en la cárcel preventiva de la Ciudad de México, donde salió bajo fianza. Se hace referencia a que en la crujía "O", se encontraban un grupo de procesados de nombres: Fabio, Cornelio, Carlos Navarro, Francisco Castrejón Torres y Wenceslao José García. Firman al calce Miguel Ángel Castro Prado, Jesús Macías y Guillermo Lira, en la tarjeta, con fechada el 5 de agosto de 1975, se registran los pormenores del pago de fianza fijada al interrogado por el Magistrado del II Tribunal Unitario del I Circuito, Lic. Santiago Rodríguez Roldán.
Anotaciones	Desconocemos los nombres completos de Fabio y Cornelio; la documentación no aporta mayor información.
Expediente	Ficheros/Federacion_de_Estudiantes_Socialistas
Personas mencionadas en los archivos	Roberto García Rivera (a) "Luis" Teresa Morales Castro Carlos Navarro Wenceslao José García Francisco Castrejón Torres [Roberto García Morales] [Eugenio García Morales]
Sujetos Estatales mencionados	Miguel Ángel Castro Prado Jesús Macías Leal Santiago Rodríguez Roldán Guillermo Lira Murrieta
Organizaciones investigadas	Comité Armado de Liberación "Patria y Libertad" Frente Armado de Liberación (F.A.L.) Universidad Nacional Autónoma de México (U.N.A.M.)/Colegio de Ciencias y Humanidades (C.C.H.)
Lugares mencionados	Av. Universidad 1571, Florida, Álvaro Obregón, 01030 Ciudad de México, México Calle Cairo 301, Héroes de Cerro Prieto, Gustavo A. Madero, Ciudad de México, México Huetamo, Puruándiro, Michoacán, México
Temas	Guerra sucia o terrorismo de Estado Movimientos armados

Notes: This figure displays the structured metadata associated with a single surveillance file maintained by Mexican security agencies. The metadata include start and end dates of surveillance, narrative descriptions of monitored activities, named individuals, organizations, state agents involved, locations, and thematic classifications (e.g., armed movements, state terrorism). This standardized structure enables systematic reconstruction of the scope, intensity, and targets of political surveillance. The example shown corresponds to the Federación de Estudiantes Socialistas folder. Metadata digitized and organized by Artículo 19.

Figure D3: Daily surveillance report documenting the routine activities of an individual linked by the state to dissident political networks

FORMA C G 2 A
D.F.S.- 28-IX-65.

Av. Tlalpan

RESULTADO DE LA VIGILANCIA A ISABEL VILLA LINARES

Tiene su domicilio particular en Norte 90 No. 3214, Departamento 2, de la Colonia Malinche de esta ciudad, donde vive en unión libre con el Dr. ALFONSO GOMEZ VALDIVIESO, de ideología comunista, con el que ha procreado una hija que cuenta con 5 años de edad.

Es enfermera del Hospital General de la S.S.A., adscrita al Pabellón No. 17, puesto que logró por recomendación del Dr. JOSE ALVAREZ AMEZQUITA, ex-Secretario de Salubridad y Asistencia, quien mantenía amistad con el padre de la vigilada, Ing. IRINEO VILLALBA.

El Dr. ALFONSO GOMEZ VALDIVIESO, desempeña sus labores en el Hospital de la Mujer.

ISABEL VILLA LINARES vive sola la mayor parte del tiempo y mientras está trabajando, deja a la niña en la Guardería del Hospital General. Ha manifestado a sus vecinas que el Dr. ALFONSO GOMEZ VALDIVIESO no es católico y por esta causa no se casó con ella por ninguna ley: que los padres de ella sí son católicos y por eso nunca han aprobado su unión libre.

En la Jefatura de Enfermeras del Hospital General, existen antecedentes de sus frecuentes faltas sin permiso, de las que busca su justificación con incapacidades por enfermedad que obtiene en la Clínica "Guadalupe" del I.M.S.S. al que pertenece.

Durante los días 22, 23 y 24 del presente mes, no salió de su casa, sabiéndose que estaba atendiendo de una enfermedad, consecuencia de un embarazo. Una niña que le sirve de criada, se encargaba de hacer las compras de alimentos. Gozó de una incapacidad de 6 días, que falleció el día 25 de este mismo mes.

El citado día 25 permaneció recluida en sus habitaciones hasta las 19.00 horas, en que salió a hacer una llamada telefónica a una caseta cercana, regresando a su casa.

El día 26 salió a Misa y posteriormente al mercado "Cerro Prieto", donde hizo algunas compras, retornando a su domicilio.

El día 27 permaneció en su casa, habiendo salido únicamente su criada a comprar alimentos.

Se tuvo conocimiento que el día de ayer, fue dada de baja tanto del Pabellón 17 del Hospital General, como de la Comisión que desempeñaba en la Jefatura de Enfermeras de ese nosocomio, como consecuencia de sus frecuentes faltas, sin autorización.

Notes: This archival intelligence report records day-by-day observations of the movements, employment, and personal interactions of Isabela V., identified by security forces as the partner of an individual associated with dissident ideologies. The report exemplifies the micro-level surveillance practices employed during Mexico's Dirty War, extending political monitoring beyond activists to family members and social contacts. Such documents provide evidence of the breadth and depth of state repression and the administrative capacity required to sustain continuous individual surveillance. Source: Archivo Íntegro Memorial de la Guerra Sucia, curated by Artículo 19 and COMVERDAD.