Vigilante Mobilization and Local Order: Evidence from Mexico

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Abstract

Why do some communities engage in armed mobilization in response to disorder and insecurity, while others do not? Can these communities improve local order in the absence of a strong and impartial state? We study the sources of self-defense mobilization (*autodefensas*) in Mexico and how these groups affect contemporary levels of crime. We argue that historical experiences of armed mobilization can have long-lasting effects on local preferences and institutions, which can facilitate armed collective action and the provision of local order in contexts of rampant insecurity. Our empirical approach traces the sources of recent self-defense groups to the early twentieth century Cristero rebellion and, using an instrumental variables approach, we show that contemporary community mobilization has succeeded in reducing a broad range of crimes.

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1. Introduction

Why do some communities engage in armed mobilization in response to disorder, insecurity, and repression, while others do not? Many communities face repressive local political orders across a wide variety of contexts. In civil wars, ordinary civilians are forced to navigate the at-times draconian rules imposed on them by incumbent counterinsurgent forces and rebel groups. In authoritarian regimes, communities must calibrate their behavior to avoid repression by state armed forces, secret police, and regime-aligned militias. In weakly institutionalized democracies, corrupt local officials, criminal organizations, and street gangs establish the rules of the game locally, negatively affecting human rights and undermining the rule of law. Indeed, recent work has challenged the Weberian assumption that the emergence and maintenance of order must be tied to a strong state, showing how armed non-state groups build and maintain order in civil war (Weinstein 2007; Mampilly 2011; Arjona 2015).

Despite the frequency with which armed group institutions for governance are built and sustained in a variety of contexts, previous research has been limited to the study of non-state governance in civil war. Thus, while the literature has witnessed a turn towards the study of armed group institutions, we know comparatively little about institutions built by armed non-state actors *outside* of civil war settings. With a few notable exceptions (Bateson 2013; Heinle, Molzahn and Shirk 2015; Skarbek 2011; Wolff 2015), this lack of scholarly attention is surprising, given that political and criminal actors such as "vigilante" groups, mafias, drug trafficking organizations (DTOs), gangs, and militias frequently and effectively control territory in the shadow of the law. When armed groups opt to reconfigure formal and informal institutions to manage violence, regulate disputes, and pro-

vide goods to civilians residing in these communities, are property rights more effectively upheld? Is crime reduced? In short, can communities reshape political order absent the state? Answering these questions should provide insights into understanding conflict processes, how ordinary citizens manage persistent insecurity, and have relevance for current debates about state-building in fragile countries.

This paper extends the study of local non-state order to conditions of pervasive "criminal violence," and in particular to the Mexican drug war. Specifically, we ask why *some* communities autonomously organize to violently reshape local governance where organized crime is pervasive and where state actors are weak, and what the consequences of these forms of mobilization are. Under what conditions will communities take up arms to rebuild and reshape local political order, and can these communities autonomously reduce local levels of crime? We estimate the effect of *autodefensa* (self-defense or vigilante forces) activity on the provision of local order in Mexico. Drawing on a novel measure of the presence of vigilante groups, using machine-coded news reports, we show that these groups lead to substantially lower levels of crime. Our identification strategy, an instrumental variables approach, relies on plausibly exogenous variation in the emergence of vigilante groups, which we trace back to the pro-Catholic armed rebellion during the 1920s. While the Cristero rebellion had a strong effect on the appearance of vigilante groups nearly ninety years later, it is not directly related to contemporary levels of crime due to the dramatic escalation of criminal violence in response to several shocks. Most importantly, criminal violence surged in reaction to a centrally directed wave of government repression during the Calderón presidency, a development that severely disrupted the relationship between criminal organizations and local communities (Guerrero 2011*b*,*c*; Osorio 2013). This escalation was

reinforced by Colombian interdiction efforts that fueled criminal violence by disrupting the Mexican cocaine market (Castillo, Mejía and Restrepo 2014) and the expiration of the ban on assault weapons in the US that increased the availability of guns (Dube, Dube and Garcia-Ponce 2013).

Our contribution in this paper is twofold. First, we show that local levels of crime can be significantly reshaped through armed community mobilization and, as such, that vigilante groups can have a demonstrable impact on security under conditions of extreme volatility and risk. At least in the short term, the organization of ordinary citizens into self-defense forces can improve political order and the enforcement of property rights in the absence of a central authority.

Second, we show that the roots of contemporary armed mobilization can be traced to historical processes. In particular, we argue and demonstrate that the contemporary mobilization of vigilante groups in Mexico has its roots in an armed political movement in the 1920s, the Cristeros rebellion, in which ordinary citizens took up arms to protest repressive anti-Catholic policies. Following Nunn (2009), we move beyond facile claims that "history matters" and specify both under what conditions and why it matters in explaining contemporary conflict processes. We show how path dependent processes produce enduring legacies that, given the right confluence of events, lead to radical changes in social, economic, and political life (e.g. Pierson 2004). In Mexico, capabilities and preferences for mobilization remained latent until a spike in violence — driven by a state crackdown on DTOs — presented a need for autonomous solutions to alarming levels of insecurity. These historical legacies explain why some communities chose armed resistance against violent incursions, while others did not. Therefore, while the causal effect we identify is very "local" in a spatial and temporal sense, our paper also sheds

light on the broader historical legacies of political violence.[1]

The next section presents our theoretical argument of how prior armed mobilization contributes to the emergence of contemporary self-defense groups. It then connects the formation of such groups to efforts to reshape local order. The third section offers our empirical strategy for identifying the causal effect of vigilante groups on contemporary crime. After presenting our results in section four, the final section discusses the findings and considers avenues for future research.

2. Violence and Local Order

The construction and maintenance of political order - defined as the formal and informal institutions that sustain political stability and control violence, or "who rules, how much, and in what ways" - relies in large measure upon the threat or application of violent force (Tilly 1985; North 1982; Staniland 2012). The classic Weberian state, defined by its ability to monopolize the use of violence, compels adherence to the law and has the power to enforce compliance. In weak states, however, state presence is unevenly distributed geographically and, in many cases, state institutions are subject to capture by well-organized non-state actors with access to the tools of violence (O'Donnell 1993). Deals struck between political and economic actors provide some measure of predictability, yet the equilibrium outcome may be violent and economically stifling to local residents. In such

[1]Our paper also constitutes a contribution to literature on the Mexican Drug War, which has thus far failed to explain why vigilantes emerge in some places but not in others. One exception is Phillips (2015), which argues that inequality is the key driver in explaining cross-sectional variation in *autodefensa* formation.

cases, communities may take matters into their own hands to mobilize against threats to life and property (Jentzsch, Kalvyas and Schubiger 2015). The militarization of civil society in the form of armed self-defense groups has occurred in societies as different as Sierra Leone (Civil Defense Forces), Iraq (Mahdi Army), Nigeria (Bakassi Boys), Peru (*Rondas Campesinas*), South Sudan (self-defense forces in the tribal areas) and Colombia (*Autodefensas Unidas de Colombia*). While such groups display tremendous diversity in their organization, goals, ideology, and relationship to both local and national elites, they are often politically autonomous (at least in their early stages) and are able to grow quickly in size and strength.

Yet not all communities have the same propensity to challenge powerful local actors that undermine predictability and stability, whether those actors are street gangs, rebel groups, or drug trafficking organizations. We argue that variation in exposure to historical processes of armed mobilization provides differing preferences and resources that shape whether communities will mobilize to build new local orders. The extent to which *preferences* for mobilization exist depends on at least two factors. First, communities will have a desire to mobilize where the status quo is particularly bad. Where armed groups severely disrupt economic activity, target community members with high levels of violence, and where rules are arbitrarily applied we should expect local communities to have incentives to mobilize. While armed groups typically use extortion and protection rackets to harness some portion of economic activity for their own benefit (Olson 2000; Gambetta 1996), particularly exploitative armed groups are likely to trigger resentment, both among ordinary citizens and local elites. Thus, where external threats to the community in the form of repressive national governments or violent non-state armed groups are extremely violent and rapacious, such that even "compliance" with armed group rules is not rewarded, we should expect to see

communities willing to reshape local political orders.

Contemporary preferences, however, are not fashioned *de novo* but rather are shaped by past experiences. This brings us to the second factor affecting preferences for self-protection. Legacies of violence and collective action shape contemporary behavior in patterned ways.[2] In the context of civil war, for example, prior experiences with insurgency predict well future instances of insurgent collective action (Daly 2012) and exposure to certain forms of state violence may trigger counterinsurgent resistance (Schubiger 2013). Violence-affected communities have also shown increasing social cohesion that helps them to band together to cope with common threats (Gilligan, Pasquale and Samii 2014). So too should the actions of self-defense groups outside civil wars be shaped by the past: We argue that where norms of self-protection were particularly salient historically — where communities mobilized to protect themselves against an external threat in the past — contemporary support for armed self-defense will be more likely.

The *ability* of communities to mobilize in favor of self-protection, in turn, is likewise shaped by the past. First of all, armed self-defense requires organizational know-how as a key determinant of collective action (Tarrow 1994; Tilly 2003). Just as communities may look to their neighbors for guidance on whether and how to engage in collective action (Huntington 1991; Diamond 2008), com-

[2]Exposure to violence has been shown to affect political preferences, individuals' engagement in political life, vote choice, preferences for local armed groups, and economic activity, among many other outcomes (e.g. Berrebi and Klor 2006; Bellows and Miguel 2006; Berrebi and Klor 2008; Blattman 2009; Bateson 2012; Balcells 2012; Lyall, Blair and Imai 2013; Getmansky and Zeitzoff 2014; Schubiger 2013; Weintraub, Vargas and Flores 2015).

munities that have undertaken collective action in the past can reflect upon their own history to guide them. This is particularly true if past experiences are passed down from generation to generation, either in familial, private settings or through institutional channels (Acharya, Blackwell and Sen 2014, 37). These conditions appear to be met in Mexico, where stories about the Cristero rebellion were communicated locally through heroic tales of resistance and where the Catholic Church provided a reliable institutional transmission belt for preserving a strong spirit of self-reliance and autonomy (Meyer 1973*a*; Tuck 1982). In short, past experiences with armed mobilization can help communities overcome barriers to collective action via intra- and inter-generational political socialization.

Second, armed mobilization for self protection requires the credible threat and application of force against foes, which itself necessitates tactical and organizational skills such as training in firearms, patrolling, surveillance, and forcible detention of perceived enemies. It also involves political activities, including building local support for self-defense, even among those who may never formally take up arms in support of the cause. Engagement with local elites who are tired of extortion and depressed economic output, for example, may be willing to bankroll the purchase of more sophisticated arms to drive out local armed actors. In some cases, self-defense groups may also rally support from regional or national governments. We expect that communities that have historically engaged either in offensive or defensive armed activity will — through "long memories" and preserved organizational and tactical legacies — possess skills that can be used to organize and initiate armed self-defense campaigns.

Third, villagers that seek to mobilize against predatory armed groups also need high quality information. They must know who is part of the armed group that threatens local security — by singling out those who do not "belong" in the

community — as well as those who are complicit in allowing the predatory armed group to operate. Local politicians and law enforcement agents, for example, may be particular targets of community mobilization if they have facilitated or protected the activity of predatory actors. Beyond identifying those involved with the threat to peaceful local order, community self-defense groups must be capable of taking action to directly neutralize hostile entities. We assume that past experiences of high-risk mobilization can forge, consolidate and sustain cross-generational social networks that facilitate access to such high quality information, even in the long run.

In short, we argue that preferences for mobilization and the skills required to mount such endeavors depend crucially upon a combination of historical antecedents and current harassment. Historical experiences with mobilization in favor of community protection provide a clear advantage and make some communities more capable of protecting themselves when facing contemporary security threats.

3. The Mexican Context

Applying our theoretical framework to the Mexican context, we argue that the Cristero rebellion exerted an influence on contemporary mobilization of vigilante groups through several distinct but related mechanisms. First, anti-clerical measures in the 1917 Constitution and a number of subsequent anti-Catholic laws turned local-level attitudes against an encroaching, repressive state. The peaceful resistance of pro-Catholic citizens escalated to armed rebellion in the mid-to-late 1920s, an uprising that shaped local norms and attitudes over several genera-

tions.[3] Second, organizational legacies of violence — more concretely, know-how for armed resistance, tactical repertoires, and organizational networks — were more available to communities that had already successfully mobilized two generations earlier (Daly 2012). These pre-existing repertoires of contention allowed the population to overcome problems of collective action to protect their communities when levels of organized criminal violence reached a breaking point following a crackdown against DTOs early in the Calderón presidency (Tarrow 1998; McAdam, Tarrow and Tilly 2001). Communities that had latent organizational capacity inherited from the Cristero rebellion were better able to mobilize and neutralize DTOs.

3.1 The Cristero Rebellion

During the 19th century, a series of Liberal governments in Mexico conducted institutional efforts to regulate church and state relationships with the intention of undermining the political power of the Catholic Church. The factious violence of the 1910 revolution paused these endeavors for more than a decade. The victorious post-revolutionary leaders, having coalesced under the National Revolutionary Party (PNR in Spanish), resumed these efforts in a much more combative manner after the end of the revolution.

The so-called "Calles Law," signed on June 14, 1926 by President Plutarco Elias Calles, reformed the penal code by outlining penalties for both priests and individuals who violated anticlerical provisions enshrined in the 1917 Constitution.

[3]Similar arguments for the inter-generational transmission of preferences have been made in evaluating the effect of slavery on contemporary political attitudes (Acharya, Blackwell and Sen 2014).

Penalties included fines for wearing clerical garb in public and imprisonment of priests who spoke out against the government. Alongside the imposition of punitive measures for the violation of these laws, the state took concrete steps to weaken the influence of the Catholic Church by confiscating church property and closing religious institutions such as Catholic schools. These measures helped solidify anti-government mobilization, most notably in the form of National League for the Defense of Religious Liberty (LNDLR in Spanish), which helped rally support among Catholic civil society and political organizations. A core feature of mobilization included standing guard against potential incursions by the government: "[i]t is the age of permanent assemblies, the moment in which a whole town stands guard, night and day, men, women, children, and the elderly, in their churches. Meanwhile the pilgrimages, processions, and public displays of penitence bring many people together and become a kind of non-violent uprising that scoffs at the government's laws" (Meyer 1973*a*, 102).[4] These actions - particularly communal policing against the incursion of hostile actors - would be mirrored many years later in these same communities by vigilante groups.

The political conflict escalated quickly after the Calles Law banned all public masses. Catholic bishops endorsed plans in July 1926 for an economic boycott against the government, which included public transportation boycotts, Catholic teacher resignations at secular schools, among other measures. Public discontent about anti-clerical policies magnified animosity already caused by the *reparto agrario* (agrarian reform) that the post-revolutionary government strove to implement. The parceling of large lands became highly disruptive for the traditional social organization of agrarian communities, which magnified social exasperation

[4]Our translation.

in these sectors (Sánchez Gavi 2009).

By August of 1926, armed uprisings had begun across a number of Mexican states. In Guadalajara, for example, Catholics who had taken refuge in a church exchanged gunfire with government troops, ultimately resulting in 18 deaths. A day later, in Sahuayo, Michoacán, over two hundred government troops stormed the town, killing its priest and vicar, while in Chalchihuites, Zacatecas, a week and a half later, the leader of the Association of Catholic Youth was killed by government troops in an attempt to curtail pro-Catholic activities (Tuck 1982, 40).

Rebel mobilization likewise occurred swiftly. René Capistrán Garza capitalized on widespread, popular discontent to mobilize what would become one of the central fronts of rebels, located in Jalisco.[5] In Guanajuato, after government troops defeated a local popular uprising, a retreat into the mountains made possible the group's reorganization as a guerrilla force.

The uprising was particularly successful in Michoacán. This state recruited the largest concentration of Cristero rebels with 12,000 men, about 25% of the total insurgents (Meyer 1973*b*, 17). In addition, the rough terrain and the lack of railroads for quickly mobilizing government troops favored effective guerrilla warfare by the Cristeros. In Michoacán, "the government did not venture without large expeditions of several thousand men, always being forced to fight in retreat and condemned to lose half if not two thirds of their troops" (Meyer 1973*b*, 191).[6]

Initial rebel successes, staged from insurgent bases in the Sierra Madre mountains, both helped increase recruitment and drew concern from the United States,

[5]The revolution was commanded, in part, by old military hands from the Mexican Revolution fighting alongside priests.

[6]Our translation.

leading US government to provide arms to the Mexican government and to push for a negotiated end to the conflict. The ultimate political settlement, reached in June 1929, included provisions that allowed churches to reopen, provide religious education, and pursue legal reform. While reliable estimates of rebel forces are difficult to come by, the most accepted figures indicate that 50,000 combatants fought on the side of the Catholics during the rebellion (Meyer 1973*b*, I,90).

Why might the Cristeros rebellion help explain the contemporary mobilization of vigilante groups? First, the Cristero uprising provided a successful experience of civil resistance against hostile forces deemed disruptive to traditional social organization at the community level. At its core, the rebellion tried to maintain the religious, social and economic status quo by confronting the official anti-clerical policies of the government and agrarian reform. This experience generated lasting changes in local attitudes through a series of knowledge transmission processes (Schönpflug 2008). On one hand, it likely generated a strong sense of self-determination, convincing the community that it was capable of directing its own course. On the other hand, it likely have caused a deep distrust and watchfulness towards the state and other external actors. This conservative character emerged in violent protests in the following years, during the Second Cristiada in the 1930s, the Sinarquism movement in the 1940s, and anti-communist lynching mobs in the 1960s (Meyer 2003; Guerra Manzo 2005; Santamaría 2015).

Second, institutional legacies of the Cristero rebellion made it easier for militias in subsequent periods — that is, almost one century later — to mobilize to provide local security. These "receptacles of collective action" (Daly 2012), once re-mobilized, were able to provide local communities with coercive power vis-à-vis both common crime and cartel-related criminal activities. Part of the tactical success of the Cristeros came from the experience of their leaders, forged in

combat during an even earlier period of armed conflict, the Mexican Revolution (1910-1920). However, the Cristero rebellion entailed more than military tactics, as it required the sustained and effective engagement of the community to provide logistics and supplies for self-defense against intruding government forces. As mentioned by Tilly (1995, 42), repertoires are "learned cultural creations" that can be revived and adapted for a variety of purposes that the community might need.

3.2 Why the Cristero Rebellion?

While Mexico experienced several violent uprisings before, the character of the Cristero rebellion was unique in several ways. To begin with, it was a mass social reaction driven by grass root religious associations. The catholic church played a small role in organizing the military effort, and elites lacked the major role they had occupied in the Independence War. This grass roots character also had tactical implications, with guerrilla warfare paramount — in stark contrast to the major military incursions during the fight against the US or France, and the large armies dominating the Mexican Revolution.

Moreover, the Cristero rebellion was directed against intrusive policies of the Mexican state, instead of a foreign power — such as Spain, France, or the US – or specific persons (e.g., Porfirio Diaz, Maximiliano, Huerta). At the same time, the Cristero rebellion — while aimed at forcing the government to change its policy towards the church — lacked a revolutionary or secessionist aim, or the goal to affect the political system on a broader scale. Instead, the public reacted against the state intervening in highly personal issues — people's religious practices and beliefs. The intrusion of the state was deeply disruptive to the traditional way of

life, in which religion played a crucial role. The Cristero movement was, in other words, parochial both in terms of its local orientation and its religious connotation. This parochial characteristic set it apart from other armed movements that had occurred in Mexico before.

In short, the Cristeros were different from other armed movements in Mexican history that had relied on large mobile armies, fought in open battlefields, and marched to overthrow rulers and conquer forts and territories. The Cristeros fought in protection of their communities and their traditional way of life, implemented tactics towards "cleaning" their villages from unwelcome individuals and "protecting" them from external incursions.

This parochial character of the Cristero rebellion gave some communities a particular predisposition to resist incursions against external threats. Moreover, the actual experience of armed mobilization instilled a specific set of norms and values, and a distinct repertoire of tactics and know-how.

3.3 Cartel Violence and the State Crackdown as a Trigger Event

In December 2006, then-president Felipe Calderón launched a full-fledged offensive against drug trafficking organizations across the country. In comparison to his predecessors, who chose not to forcefully combat criminal groups, Calderón made the country-wide war on drugs the mark of his administration: Calderón deployed the military in 173 major harassment operations against DTOs between 2006 and 2010 (Osorio 2013, 274).[7] There is broad consensus in the academic lit-

[7]This is in contrast to the "Safe Mexico Operation" (*Operación México Seguro*), the major counter-narcotics effort conducted by Calderón's predecessor, President Vicente Fox.

erature that Calderón's generalized, punitive approach largely contributed to the escalation of violence between criminal groups (Dell 2011; Guerrero 2011*a*; Duran-Martinez 2013; Osorio 2013; Lessing 2015; Osorio 2015). Sustained law enforcement efforts disrupted the capabilities of large DTOs in conducting transnational operations, which hindered their income. These shocks forced criminals to diversify their business strategies and become predatory against their host communities in order to maintain their earnings. The escalation of violence was further reinforced by external developments. First, Colombian interdiction efforts fueled criminal violence by disrupting the Mexican cocaine market (Castillo, Mejía and Restrepo 2014), which likewise hindered the income of DTOs. Second, the expiration of a ban on assault weapons in the US sharply increased the availability of guns, which fueled violence in its own right (Dube, Dube and Garcia-Ponce 2013). As a consequence, racketeering and kidnapping grew to unprecedented levels (Guerrero 2011*b*,*c*).

This predatory shift deeply transformed the relationship between criminal groups and their host communities. Before the escalation of the Mexican drug war, drug lords were often considered benefactors by their communities. Criminal organizations frequently provided public goods (e.g. jobs, parties, building churches or sports facilities) in exchange for social protection and cooperation. Indeed, recent studies have revealed the tremendous extent of the social embeddedness of criminal organizations in Mexico (Diaz-Cayeros et al. 2011); yet as a result of the government's large-scale punitive effort, criminal organizations quickly replaced this symbiotic relationship with a wave of harassment and extortion, reinforced by exemplary violence against those who refused the terms offered by criminals. In a context of weak state capacity, citizens were left largely unprotected by government authorities.

3.4 Vigilante Group Mobilization

Mexican self-defense groups emerged in at least two waves, in response to two distinct sources of insecurity. The first groups emerged in the late 1990s, in response to common or petty crime locally. These groups - not precisely vigilantes, because they are legally regulated under the framework of customary law known as "*usos y costumbres*"- were geographically-contained, drawing on experience garnered through communal policing and predominantly located in indigenous communities and agrarian societies (Gómez Durán 2012; Rea 2012). The second set of groups mobilized in the mid-to-late 2000s in response to violence and organized crime perpetrated by DTOs, following the Calderón crackdown. These vigilantes had more maximalist goals than earlier forms, seeking to rid their communities of the influence of criminal organizations, to roll back the crushing weight of extortion of local business, and to construct a different kind of political and social order that purged corrupt local politicians and law enforcement agents (Rea 2013; Velásquez 2014).[8]

As Panel (a) in Figure 1 shows, *autodefensa* mobilization has been concentrated in the states of Guerrero and Michoacán, particularly during the mid-2000s.[9] Yet as criminal organizations ratcheted up violence in response to state repression, similar self-defense groups mobilized in nearly *every* state of the country, with particularly high concentrations in Jalisco, Chiapas, Veracruz by 2012 and 2013. A map of the prevalence of *autodefensas* appears in Panel (b) of Figure 1.

[Figure 1 about here]

[8]Indeed, many of these groups appealed to Mexicans abroad, particularly in the United States, for financial support (Wilkinson and Becerra 2014).

[9]We discuss the coding procedure for this variable below.

The surge of self-defense groups in 2013 generated ambivalent reactions of support and repression from the government, which soon recognized both the political and military advantages of collaborating with *autodefensas*. For example, after initially repressing *autodefensas* in Michoacán, Mexican authorities went beyond simply tolerating these groups to eventually legalizing and providing them with uniforms and assault rifles (AFP 2014). Attempts by the government to unify them under the banner of the "Rural Defense Force" witnessed the registration of 3,000 individuals in Michoacán alone, out of an estimated 20,000 in total.

4. Estimation Approach

What effect did vigilante mobilization have on local levels of crime? The challenge to answering this question lies in the fact that *autodefensas* may be most likely to emerge where violence and crime are pressing problems, making it difficult to identify the effect of *autodefensas* on levels of crime in subsequent periods. To overcome this challenge, we rely on an instrumental variable approach that exploits the lasting effect of the Cristero uprising on communities' propensity for *autodefensa* mobilization, while at the same time not being directly related to contemporary crime due to the latter's escalation in response to the repression campaigns of the Calderón period.

We use a two-stage least squares (2SLS) instrumental variable (IV) approach to assess the impact of *autodefensas* on various crime outcomes Angrist and Pischke (2009); Khandker, Koolwal and Samad (2010); Sovey and Green (2011). We first assess the effect of the Cristeros rebellion on the presence of *autodefensas* in 2013, when the mobilization of *autodefensas* was at its height, and then evaluate the impact of vigilante groups on different kinds of crime in 2014. Our data are,

therefore, structured as a cross-section of the full set of 2,457 Mexican municipalities; robustness checks are conducted on the most 'shocked' municipalities that experienced the most extreme increase in crime in response to the centrally directed repression campaign during the Calderón administration.

Formally let Y_i represent the level of crime in a given municipality i, X_i a vector of observables (we omit the intercept), ϵ_1 an error term, and A_i an indicator for *autodefensa* mobilization in municipality i:

$$Y_i = \beta A_i + \delta X_i + \epsilon_{1i} \tag{1}$$

The problem with equation (1) is that the presence of *autodefensas* is endogenous such that $cov(A_i, \epsilon_{1i}|X_i) \neq 0$. We rely on a variable measuring a community's past participation in the Cristero rebellion C_i to tease out the exogenous part of A_i. In order to be a valid instrument, participation in the Cristero insurgency in the 1920s has to be correlated with contemporary *autodefensa* mobilization: $cov(C_i, A_i|X_i) \neq 0$. Moreover, the instrument must not be correlated with the error term such that $cov(C_i, \epsilon_{1i}|X_i) = 0$.

The impact of the instrument on "treatment take-up" is assessed in the first stage, which can be written as:

$$A_i = \mu C_i + \varphi X_i + \epsilon_{2i} \tag{2}$$

where A_i again represents whether a vigilante group was present in municipality i in 2013, and C_i denotes whether the Cristero rebellion occurred in municipality i in the 1920s. In a model with a single endogenous regressor and one instrument, the IV estimate is equivalent to the ratio of the effect of the instrument on the outcome ("reduced form"), to the first stage (Angrist, Imbens and Rubin 1996; Angrist 2006). The reduced form or intention-to-treat effect can be written as:

$$Y_i = \alpha C_i + \eta X_i + \epsilon_{3i}. \tag{3}$$

Finally, the second stage is obtained by replacing the endogenous regressor with the fitted values from the first stage, given by:

$$Y_i = \gamma \hat{A}_i + \rho X_i + \epsilon_{4i}. \tag{4}$$

Y_i again denotes levels of crime in 2014 in municipality i, and $\hat{A}_i$ represents the predicted value of vigilante mobilization caused by the Cristero rebellion in municipality i. Note that the covariates, captured in the X term, are consistent across the equations.

For the IV approach to give valid estimates of the local average treatment effect (LATE),[10] several core assumptions must be met, not all of which are directly testable (Angrist, Imbens and Rubin 1996; Sovey and Green 2011; Keele and Minozzi 2013). First, the instrument must be *relevant*, meaning that the Cristero instrument has to be correlated with *autodefensa* mobilization in contemporary Mexico even after taking covariates into account. The relevance of the instrument can be assessed empirically in the first-stage relationship. As we will show below, the relevance of our instrument is sufficiently high and very robust.

Second, the assumption of *independence* requires the instrument to be "as-if" randomly assigned (Dunning 2012), or at least conditionally independent of unmeasured determinants of contemporary crime (Sovey and Green 2011). As our instrument is non-randomly assigned, conditional independence is more plausible here. We include several pre-Cristero covariates that are potentially related

[10]Estimates are "local" because they are informative only for those *autodefensa* communities affected by the Cristero rebellion (Angrist, Imbens and Rubin 1996).

to the propensity of communities for armed resistance during the Cristero period (see section 4.4).

Third, the instrument must meet the *exclusion restriction*, which is met if the Cristero rebellion in the 1920s has no effect on contemporary crime other than through *autodefensa* mobilization (Sovey and Green 2011). We believe this assumption to be plausible due to the non-local drivers of local variation in crime during the period under study. Contemporary crime in Mexico has to a large extent been driven by supra-local networks of DTOs and organized criminal groups. These groups were heavily affected by exogenous shocks in recent years, such as the shortage of cocaine production in Colombia (Castillo, Mejía and Restrepo 2014) and the availability of assault weapons from the United States (Dube, Dube and Garcia-Ponce 2013). Moreover, as outlined above, we focus on a period still affected by a surge in criminal violence following a centrally directed (and hence locally exogenous) war on drugs, which further increases our confidence that the exclusion restriction is valid.

We undertake a few tests to increase our confidence in the exclusion restriction. First, we show in Table 1 (discussed in detail below) that the instrument is not correlated with pre-*autodefensa* levels of crime. Second, we restrict our sample to *only* those municipalities that experienced the largest increase in homicides between the pre-Calderón period and during the Calderón administration. By doing so, we seek to ensure that the determinants of crime are most likely to be exogenous to other unmeasured factors that might be correlated with the instrument. These results appear in the Appendix and are consistent with the core findings. We also show robustness to restricting our analysis to municipalities that featured the greatest increase in DTO activity between the pre-Calderón period and during the Calderón administration, for the same reason. Third, also

in the Appendix, we report the results of models that include as controls several post-instrument variables that might be correlated with both our instrument and the outcome variables.

Fourth, the stable unit treatment value assumption (SUTVA) must hold, implying that the treatment of one unit has no effect on other units (Sovey and Green 2011). As in most social scientific research, this assumption is potentially violated, especially given the fact that the Cristero rebellion occurred in certain geographic areas but not others. The bias could go both directions. For example, municipalities with no vigilante groups might see an increase in local crime as a response to *autodefensa* mobilization in neighboring units, given that cartels may relocate to avoid local *autodefensas*, bringing with them increased crime. Conversely, municipalities with no vigilante groups might see lower levels of crime as cartels choose to abandon collections of municipalities. The presented estimates might therefore be biased into either direction. The Appendix (section A.3) discusses potential SUTVA violations and why these especially are mitigated in the subset analysis described above.

Finally, the *monotonicity* assumption holds that while the instrument may have no effect on some units, all those units affected by the instrument should be affected in the same way, i.e., positively or negatively. In other words, we assume that there are no "defier" communities that, in response to having received the Cristero "treatment," are *less* likely to form *autodefensas* as a result (Angrist, Imbens and Rubin 1996).

4.1 Dependent Variables: Types of Crime

We evaluate the effect of self-defense forces on a variety of crimes for which the exclusion restriction plausibly holds. The set of dependent variables consists of different types of crimes including: cattle rustling (*abigeato*); property damage (*daño en propiedad*); land dispossession (*despojo*); larceny (*robo sin violencia*); robbery (*robo con violencia*); breach of trust (*abuso de confianza*); fraud (*fraude*); threats (*amenazas*); extortion (*extorsión*); intentional injury (*lesiones dolosas*); intentional homicide (*homicido doloso*); and kidnapping (*secuestro*). The dependent variables measure the number of crimes (by category) at the municipal level in 2014 as reported by the Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2015). Each is logged in order to address problems of hyperdispersion that leads to long tails. Despite the disaggregated nature of the data, crime statistics in Mexico have their limitations, given that victims sometimes do not report crime incidents to the authorities. According to de la Barreda Solórzano et al. (2009), time-consuming procedures and pervasive distrust towards authorities are the main reasons for citizens not to report crimes. Due to the mismatch between the actual, yet unobserved, number of crimes and those reported to the authorities, the data used in this study are likely to under-report the incidence of crime.

4.2 Endogenous Variable: *Autodefensa* Mobilization

The measure of *Autodefensas* is coded as a dichotomous variable taking the value of 1 when the media reported the presence of a vigilante group at the municipal level, and zero otherwise. To build this variable, we used Eventus ID, a computerized protocol for event coding from text written in Spanish (Osorio and Reyes 2016), in combination with Named Entity Recognition software (The Stanford

Natural Language Processing Group 2014). To minimize concerns of coverage bias in news reports (Davenport and Ball 2002; Davenport 2009), the information gathering considered daily reports from five different Mexican newspapers between January 1st and December 31st of 2013.[11] The variable identifies the presence of self-defense forces in 229 municipalities. Most *autodefensas* were geographically concentrated in the states of Michoacán (22.7%) and Guerrero (19.2%), while the rest are distributed across 25 other states.

4.3 Instrumental Variable: Cristero Rebellion

The instrumental variable, *Cristeros*, is coded as a dummy variable taking the value of one for those municipalities that had the presence of Cristero rebels in 1929, and zero otherwise. To code this variable, we digitized and geo-referenced the military maps of the Cristero rebellion presented by Meyer (1973*b*, 12), the most authoritative work on the topic. According to these data, Cristeros were active in 1,192 municipalities (about 48% of Mexico's total territory) at the peak of the insurgency. Panel (a) in Figure 2 shows the territory within which the Cristeros were active.

[Figure 2 about here]

4.4 Covariates

The core analysis in this paper includes covariates measured prior to the Cristeros rebellion, in addition to some geographical measures described below. First, *Rail-*

[11] The newspapers used in this research are: *La Jornada*, *El Sol de México*, *Milenio*, *Reforma*, and *El Universal*.

ways measures whether a given municipality included a railroad line in 1919. *Railways* are important for understanding exposure to the Cristero rebellion: Meyer (1973*b*) discusses the difficulties the Mexican Army faced in suppressing the Cristeros because it could only deploy troops to areas that were well-connected by the country's limited railroad network, allowing rebels a comparative territorial and military advantage. To gather these data, we digitized and geo-referenced a map produced by Great Britain's Naval Intelligence Division (*A Handbook of Mexico* 1919). Panel (b) in Figure 2 shows the railways network in 1919.

The second, *Telegraphs*, is a dichotomous variable measuring whether a given municipality had a telegraph line in 1919.[12] These data are drawn from a Great Britain Naval Intelligence Division map that we digitized and geo-referenced (*A Handbook of Mexico* 1919). *Telegraphs* provides an additional measure of state strength, and helps capture the distance between periphery and the center. Panel (d) in Figure 2 shows the telegraphs network.

Third, we include a number of variables that measure prior experiences with violence, both in terms of rebellions and external invasions that took place prior to the Cristero rebellion. Four variables code the principal independence campaigns undertaken in Mexico between 1810 and 1821: *Hidalgo and Allende insurgency* (1810-1811), *Morelos insurgency* (1810-1815), *Mina insurgency* (1817), and *Guerrero insurgency* (1816-1821). These data are adapted from maps in García de Miranda and Falcón de Gyves (1972), which we digitized and geo-referenced. Panel (c) in Figure 2 shows the distribution of these rebellions across space. *French intervention* codes operations of the French Army, the Imperialist Mexican Army, and the Republican Army during the War of the French Intervention, which took place

[12]This variable excludes telegraph lines that are located along railway lines.

between 1862 and 1867. These data are also digitized and geo-referenced from maps in García de Miranda and Falcón de Gyves (1972). Panel (d) in Figure 2 displays these areas of operation.

The final variable capturing violent dynamics in the pre-Cristero period is *Rurales*, which codes whether a given municipality featured the presence of a rural police force in 1910, during the rule of Porfirio Díaz (one year before his overthrow). The *rurales* provided important policing functions, albeit frequently serving local political interests: "the corpsmen were to serve local public security needs as dictated by the jefe político or the ranking municipal official" (Vanderwood 1992, 125). Because they provided important community policing functions, it is possible that communities where *rurales* existed would be more likely to rebel during the period of the Cristeros. To code the presence of the *rurales* we digitized and geo-referenced a map published in Vanderwood (1992, 123), one of the most authoritative historical accounts of the Mexican police. Panel (b) in Figure 2 shows the areas of *rurales* activity.

We include some geographic variables. *Elevation* indicates the altitude of each municipality; measured in meters above the average sea level, this serves as a proxy of rough terrain that could be associated with insurgent activity. *Distance to Center* measures a municipality's distance from Mexico City, indicating how difficult it was for the government to repress peripheral territories. A third measure, *Elevation*Distance to Center*, is an interaction of the two aforementioned variables capturing the difficulties of the government reaching distant and rugged territory.

As outlined above, we also check the robustness of our results to the inclusion of covariates that qualify as more proximate causes of different types of

crime.[13] Given that post-Cristero covariates are likely to induce endogeneity, our core specification excludes these covariates. In the Appendix we report results from additional models that include covariates measured in the post-Cristeros period, or those that capture post-instrument dynamics via geography, all of which are described here. First, following Lee and Zhang (2013), we include a variable measuring age heaping in the national census to proxy for the presence of the state at the local level. Specifically, we include the Myers' blended index at the municipality level, which is an indicator for the prevalence of incorrect age reporting (Myers 1940), in our case as measured in the 2010 census (INEGI N.d.).[14] The Myers index measures deviations from the naturally occurring smooth age distribution. These deviations are detectable in the data in the form of terminal digit preference (for example a clustering of reported ages that end with the digits 0 and 5).[15] The assumption is that these digit preferences arise from a lack of knowledge about one's true age, which in turn is indicative of weak state presence, in particular as regards public service provision such as schooling (Lee

[13] On the inclusion/exclusion of post-instrument covariates in IV estimation see, for example, Deuchert and Huber (2014).

[14] While we follow Lee and Zhang (2013) in proxying state capacity through age heaping, we do not adopt their strategy of eliminating the wealth component from the Myers' index.

[15] The Myers' blended index measures the deviation from a smooth age distribution by taking into account mortality, which – due to its increase with age – leads to an overstatement of certain digit preferences if this not taken into account (Myers 1940). Our Myer's score calculations are based on the code of Christian Mueller (2015). Myers index for R: v0.9. Zenodo. url10.5281/zenodo.33616.

and Zhang 2013). *Myers* is, accordingly, our measure for local state presence. High values of the Myers score indicate low state capabilities. Second, based on the data produced by Transparencia Mexicana (2012), the variable *Corruption* represents the percentage of the population at the state level who reported being asked by the police to pay a bribe in order to avoid being arrested. Third, to control for economic determinants of criminal behavior, we include levels of *Poverty* at the municipal level, measured as an index of social development reported by Mexico's *Consejo Nacional de Evaluación de la Política de Desarrollo Social* (CONEVAL 2012). In addition, *Unemployment* measures the average percentage of unemployed population at the state level. Finally, demographic factors include the log of the municipal *Population*, taken from the *Instituto Nacional de Estadística y Geografía* (INEGI 2011*b*). These socioeconomic variables are measured in 2010, the latest pre-treatment period available.

To account for the presence of criminal organizations, variable *All DTOs* indicates the number of main drug trafficking organizations (DTOs) active at the municipal level. The organizations included in this variable are the Tijuana Cartel, Sinaloa Cartel, Juarez Cartel, Golfo Cartel, La Familia Michoacana, Los Zetas, Cartel de Jalisco Nueva Generación, La Barbie, Cartel de los Beltrán Leyva, Cartel del Milenio, Cartel de Jalisco, Nuevo Cartel de Acapulco, La Resistencia, Los Caballeros Templarios, Cartel de Colima, Cartel de Oaxaca, La Empresa, La Mano con Ojos, Limpia Mazateca, Los Cachines and other minor criminal groups. The data came from Osorio (2015).

We also include geographic characteristics that favor drug-related activities. Here, we rely on four different measures: The variable *Drug production* reflects areas of marijuana and poppy cultivation as reported by the Secretaría de la Defensa Nacional (2011), using a four-level scale. *Gulf* and *Pacific* represent areas favorable

for the reception of maritime drug shipments coming from South America. These measures take the value of 1 for the strip of three adjacent municipalities located along the Gulf of Mexico or the Pacific coast, and zero otherwise. Finally, *North* indicates the belt of municipalities located along the Mexico–U.S. border, which have easier access to the drug markets in the U.S. Data for these geographic variables comes from INEGI (2011*a*).

5. Results

This section analyzes the impact of *autodefensas* on a number of measures of criminal behavior: cattle rustling; property damage; land dispossession; larceny; robbery; breach of trust; fraud; threats; extortion; intentional injury; intentional homicide; and kidnapping. To do so, we use three different specifications. The first specification includes only Cristeros as the instrument, *autodefensas* as the endogenous variable, and the respective outcome variable. The second specification adds all pre-instrument covariates. Finally, the third specification includes all pre-instrument covariates plus the full set of post-instrument covariates. Due to space limitations, the discussion concentrates on the second specification. The Appendix reports results for all specifications. The robustness checks also report the results of a sub-set analysis in which we restrict our estimation to the following samples: municipalities that featured the largest increases in homicides between years prior to and during the Calderón presidency,[16] and municipalities

[16]For these models we show robustness to defining the temporal windows in different ways: one in which the pre-Calderón period is 2000-2006 and another in which it is 2000-2007.

that featured the greatest increased in the presence of DTOs between years prior to and during the Calderón presidency.

5.1 The Cristero Rebellion and Its Long-Run Effects

Prior to presenting the instrumental variable results, we begin by assessing whether the Cristero rebellion had lasting effects on contemporary outcomes other than crime in 2014.

[Table 1 about here]

Table 1 uses an OLS estimator to establish whether Cristeros has an effect on corruption, state presence, poverty, unemployment, population size, homicide rates (2000-2006 and 2007-2010), drug seizures (2000-2006 and 2007-2010), gun seizures (2000-2006 and 2007-2010), and the presence of DTOs (2000-2006 and 2007-2010). Cristeros has a persistent effect on only a few economic and institutional strength measures (*Corruption, Poverty, Unemployment*) and one demographic measure (*Population*) but most critically does not affect any of the measures of pre-*autodefensa* crime levels or government repression of DTOs. Nevertheless, in addition to including all of these measures in one of our core specifications, we replicate our analysis based on several subsets of units that were most heavily affected by the escalation of criminal violence in recent years, and for which the exclusion restriction is most likely to hold as a result.

5.2 First Stage

We begin by presenting the first-stage results in Table 2 and Figure 3. The first column of Table 2 gives the result for the first specification (no covariates), the second column includes all pre-Cristero covariates, and the third shows all covariates

discussed above. As expected, *Cristeros* has a positive and statistically significant effect on contemporary vigilante mobilization. This supports our claim that the legacy of the Cristero armed movement in the 1920s influences contemporary vigilante activity. The F statistic in the first stage, corresponding to the multivariate Angrist and Pischke test, is above the conventional threshold of 10 in all specifications, indicating that it is a strong instrument across specifications (Stock and Yogo 2005; Angrist and Pischke 2009).[17]

[Table 2 and Figure 3 about here]

5.3 Reduced Form

As Angrist (2006, 33) states, "If you can't see your causal effect in the reduced form, it ain't there." In Table 3 we evaluate the reduced form results, which show a consistent, statistically significant, negative effect of *Cristeros* on crime across all models. The reduced form provides increased confidence that we are identifying true causal effects.

[Table 3 about here]

5.4 Second Stage

The second-stage results, presented in Table 4 and Figure 4, show that the emergence of *autodefensas* has a statistically significant and substantively large negative effect on contemporary levels of *many* different kinds of criminal behavior. As the Appendix shows, these results are consistent when comparing the core models

[17]Note that we lose observations in Model 3 of Table 2 due to missing values on the murder rate variables.

presented here with those that include no covariates and those with both pre-Cristero and post-Cristero/pre-*autodefensa* covariates.[18] Based on the exogenous emergence of self-defense forces derived from the *Cristero* rebellion, our results show that *autodefensas* have a considerable negative effect on contemporary levels of crime. Since the dependent variables are logged, we discuss the effects in terms of the number of crimes and percentage change with respect to their geometric mean (GM). Results indicate that the presence of *autodefensas* results in 3.5 fewer events of cattle rustling (a 92.6% reduction from the GM), reduces by 10 the expected incidents of property damage (100% reduction from the GM), generates 4.7 fewer land dispossessions (99.9% reduction from the GM), reduces by 23.4 the number of larceny incidents (100% reduction from the GM), results in 11.8 fewer robberies (100% reduction from the GM), 5.1 fewer incidents of breach of trust (99.8% reduction from the GM), 6.8 fewer instances of fraud (99.8% reduction from the GM), 7.4 fewer threats (99.9% reduction from the GM), 3.1 fewer incidents of extortion (96.2% reduction from the GM), 14.5 fewer events of intentional injuries (100% reduction from the GM), 4.1 fewer murders (96.3% reduction from the GM), and 1.2 fewer kidnappings (63.1% reduction from the GM). Nine of these twelve results are significant at 99% confidence (Models 2-10), while the other three are significant at 95% of confidence (Models 1, 11 and 12). In general, community mobilization for the provision of public security through *autodefensas* has been extremely effective at reducing a broad range of criminal behaviors.

[18] In models with post-Cristero/pre-*autodefensa* covariates, the effect of *autodefensas* on cattle-rustling, kidnapping, and homicide does not remain statistically significant. As discussed in the Appendix these are the models in which we should have least confidence given that these may reintroduce endogeneity.

[Table 4 and Figure 4 about here]

6. Conclusion

Armed conflicts profoundly reshape social networks and institutions (Wood 2008), and often do so in long-lasting ways. We have argued that vigilante groups are most likely to emerge and be effective at providing order at the intersection of three factors: where urgent security risks exist, where strong community norms against external intrusions prevail, and where residual resources of past armed collective action can be harnessed. In these communities, vigilante groups are more likely to provide local security in ways that national authorities cannot.

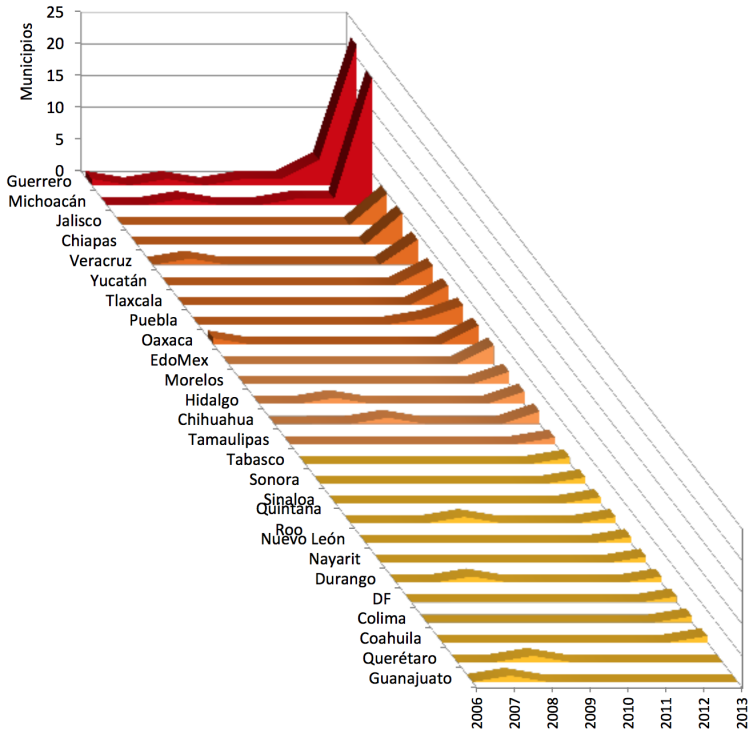
Using an instrumental variables approach, we show that substantial variation in *autodefensa* mobilization in Mexico can be traced to the Cristero rebellion in the 1920s, and that contemporary vigilante groups have succeeded in curbing a broad range of crimes. To our knowledge, ours is the first paper to rigorously test the causal effect of vigilante mobilization on subsequent levels of violence and crime.

While these results suggest the effectiveness of vigilante group mobilization in the transformation of local order, we caution against the uncritical support of such groups. Indeed, the long-term consequences for human rights and the rule of law are likely to be negative and lasting, as these actors are often difficult to demobilize and control. The Colombian case, where vigilante groups grew into a powerful paramilitary network responsible for large-scale violence, paradigmatically illustrates this risk of violent escalation. The militarization of civil society, whether autonomously pursued or assisted by the state, also potentially inhibits the growth of accountable government institutions.

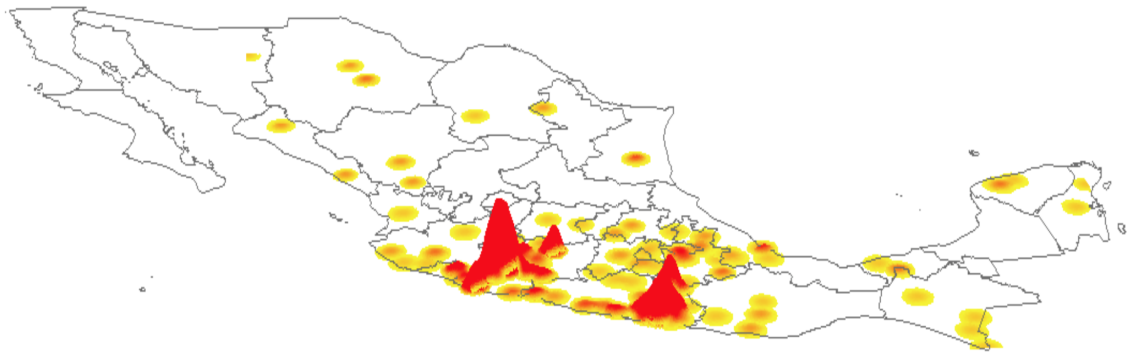
To study the emergence and effectiveness of *autodefensas* and other forms of

communal self-defense is to challenge traditional Weberian approaches towards statebuilding and to acknowledge the role of non-state actors in the transformation of political orders. *Autodefensas* in Mexico emerged where legacies of violence transformed preferences and mobilizational structures, and seem to have an important effect on contemporary levels of violence and crime. Scholars and policymakers would therefore be wise to examine the historical origins and contemporary relevance of such groups, to study the behavior of armed groups and the kinds of order they provide in contexts beyond the confines of civil war, and to seek explanations that bridge the divide between the study of "criminal" violence and "political" violence. Theoretical progress in rigorously explaining the origins and consequences of these groups, as well as progress in designing policy solutions to mitigate their negative consequences, demand such attention.

Figure 1: Concentration of *Autodefensa* in Mexico



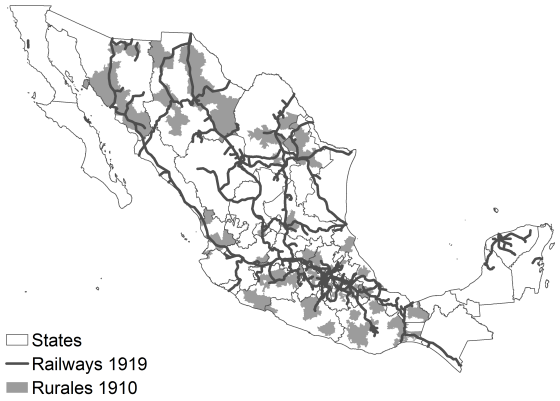
(a) Expansion of *Autodefensas* in Mexico, 2006-2013



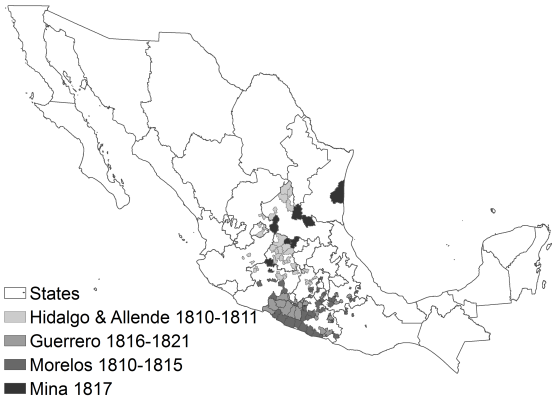
(b) Hot-spots of *Autodefensas* in Mexico, 2006-2013

Figure 2: Instrument and pre-instrument covariates

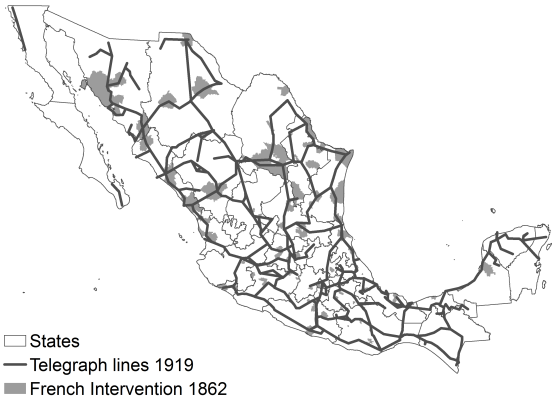
(a) Cristeros



(b) Railways and Rurales



(c) Independence insurgencies



(d) Telegraphs and French intervention

Table 1: The Long-Run Effects of The Cristero Rebellion

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Corruption	Myers score	Poverty	Un-employ-ment	Pop. log	Homicide Rate 2000-2006	Drug Seizures (2000-2006)	Guns Seizures (2000-2006)	All DTOs (2000-2006)	Drug Seizures (2007-2010)	Gun Seizures (2007-2010)	All DTOs (2007-2010)	Homicide Rate (2007-2011)
Cristeros	-2.50***	0.06	-0.12**	-0.14*	-0.29***	-1.33	0.25	0.02	-0.00	-0.21	-0.03	-0.04	-0.31
	(0.46)	(0.06)	(0.04)	(0.07)	(0.06)	(0.90)	(0.26)	(0.03)	(0.01)	(0.56)	(0.21)	(0.02)	(1.46)
Railways	1.89***	-0.77***	-0.73***	0.91***	0.87***	2.16**	1.32**	0.13*	0.02*	3.22***	0.65*	0.10**	4.84*
	(0.53)	(0.05)	(0.04)	(0.07)	(0.07)	(0.79)	(0.42)	(0.05)	(0.01)	(0.95)	(0.33)	(0.03)	(2.01)
Rurales	1.35**	0.07	-0.08+	-0.06	-0.07	0.96	0.47	0.05	0.00	0.59	0.24	0.02	1.82
	(0.49)	(0.06)	(0.04)	(0.07)	(0.07)	(0.71)	(0.34)	(0.04)	(0.01)	(0.72)	(0.25)	(0.03)	(1.60)
Elevation	0.00*	-0.00**	0.00+	0.00	0.00**	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	1.63	0.06	-0.16	-0.47*	0.91***	12.30**	2.00*	0.26	0.04	4.78*	1.84+	0.22**	22.48**
	(1.63)	(0.13)	(0.10)	(0.19)	(0.18)	(4.54)	(0.84)	(0.18)	(0.02)	(1.96)	(0.96)	(0.08)	(8.56)
Mina insurgency	-0.89	-0.49**	-0.19	0.52*	0.98***	0.94	5.73	0.31	0.07	7.09	2.48	0.54	-0.05
	(0.92)	(0.18)	(0.12)	(0.25)	(0.21)	(3.52)	(3.58)	(0.38)	(0.12)	(6.22)	(2.31)	(0.43)	(8.80)
Hidalgo and Allende insurgency	3.95+	-0.56***	-0.36***	0.74***	0.99***	4.45	2.35	0.25	0.03	2.02	1.87	0.30+	0.76
	(2.07)	(0.11)	(0.10)	(0.22)	(0.22)	(4.46)	(1.48)	(0.31)	(0.05)	(2.46)	(1.67)	(0.16)	(4.68)
Guerrero insurgency	-4.10***	0.38*	0.71***	-0.69***	0.17	-1.00	-0.50	-0.08	-0.01	-1.95+	-0.39	-0.11*	0.95
	(1.21)	(0.18)	(0.15)	(0.20)	(0.21)	(2.44)	(0.47)	(0.09)	(0.02)	(1.07)	(0.48)	(0.05)	(4.86)
Telegraphs	-0.08	-0.16**	-0.08*	-0.04	0.47***	2.02**	0.98**	0.14**	0.04***	1.74*	0.88***	0.10***	3.98**
	(0.46)	(0.06)	(0.04)	(0.07)	(0.06)	(0.64)	(0.32)	(0.04)	(0.01)	(0.73)	(0.26)	(0.03)	(1.36)
French Intervention	0.47	-0.24*	-0.25**	0.48*	0.88***	10.39**	8.37***	0.96***	0.23***	14.13***	5.08**	0.66***	49.02+
	(1.27)	(0.12)	(0.09)	(0.19)	(0.18)	(4.02)	(2.06)	(0.26)	(0.06)	(3.97)	(1.55)	(0.17)	(25.08)
Elevation*Distance to Center	-0.00**	0.00***	0.00	0.00***	-0.00***	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00***	-0.00***	-0.00***	0.00**	-0.00	0.00	0.00***	0.00***	0.00***	0.00***	0.00+	0.00***	0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	18.69***	4.16***	0.52***	3.50***	9.05***	-1.06	-2.59**	-0.19*	-0.04*	-3.29+	-1.27	-0.03	-7.86
	(0.80)	(0.08)	(0.06)	(0.10)	(0.10)	(1.87)	(0.83)	(0.08)	(0.02)	(1.71)	(0.90)	(0.04)	(5.52)
N	2456	2456	2456	2456	2456	2339	2456	2456	2456	2456	2456	2456	2339

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Table 2: First Stage Results

Specification:	(1)	(2)	(3)
Cristeros	0.06***	0.05***	0.07***
	(0.01)	(0.01)	(0.01)
Railways		0.00	-0.02+
		(0.01)	(0.01)
Rurales		0.01	0.01
		(0.01)	(0.01)
Elevation		0.00	-0.00
		(0.00)	(0.00)
Morelos insurgency		0.26***	0.20***
		(0.06)	(0.06)
Mina insurgency		-0.01	-0.08
		(0.09)	(0.08)
Hidalgo and Allende insurgency		0.07	0.01
		(0.06)	(0.06)
Guerrero insurgency		0.21*	0.20*
		(0.09)	(0.09)
Telegraphs		0.04**	0.02
		(0.01)	(0.01)
French Intervention		0.05	-0.02
		(0.04)	(0.04)
Elevation*Distance to Center		0.00	0.00*
		(0.00)	(0.00)
Distance to Center		0.00	0.00
		(0.00)	(0.00)
Corruption			0.00**
			(0.00)
Myers Score			-0.00
			(0.00)
Poverty			0.01
			(0.01)
Unemployment			-0.02***
			(0.00)
Population log			0.04***
			(0.01)
Drug Seizures (2007-2010)			-0.00
			(0.00)
Gun Seizures (2007-2010)			0.00
			(0.00)
All DTOs (2007-2010)			0.09***
			(0.02)
Homicide Rate (2007-2011)			-0.00
			(0.00)
Constant	0.06***	0.02	-0.27***
	(0.01)	(0.02)	(0.07)
AP Multivariate F-Stat	26.01	16.16	27.95
N	2456	2456	2339

The dependent variable in all first stage models is *Autodefensas*.

+ p<0.10; * p<0.05; **p<0.01; *** p<0.001. Standard errors in parentheses.

Figure 3: First stage results: Effect of *Cristeros* rebellion on *Autodefensas* (incl. 95% confidence interval):

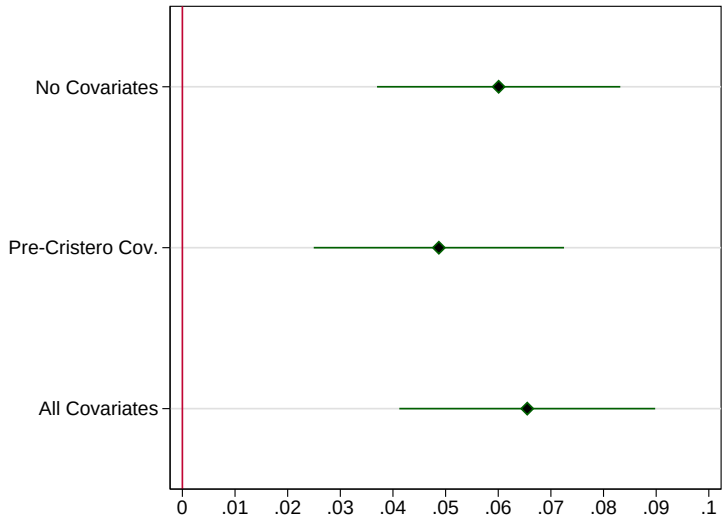


Figure 4: Second Stage Results: Effect of *Autodefensas* on Different Types of Crime (incl. 95% confidence interval):

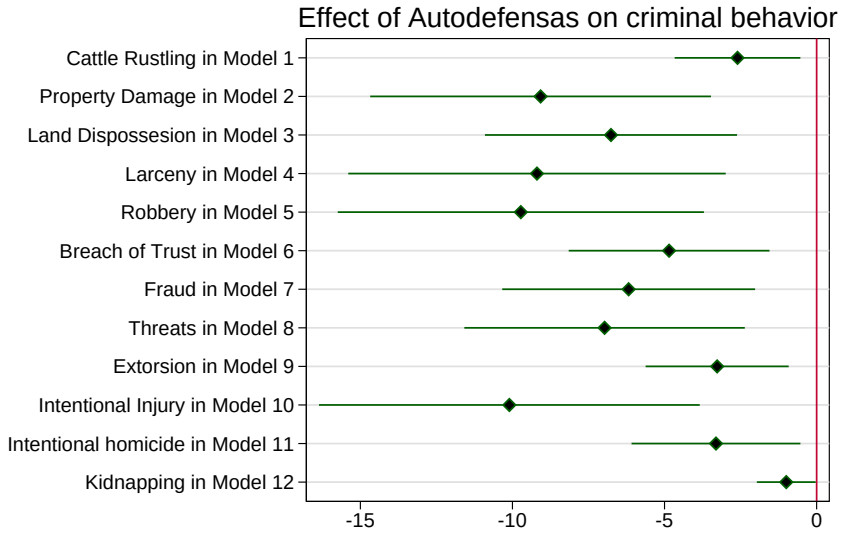


Table 3: Reduced Form Results (from specification 2)

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossession	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extortion	Intentional Injury	Intentional Homicide	Kidnapping
Cristeros	-0.13**	-0.44***	-0.33***	-0.45***	-0.47***	-0.24***	-0.30***	-0.34***	-0.16***	-0.49***	-0.16***	-0.05*
	(0.04)	(0.07)	(0.05)	(0.09)	(0.08)	(0.05)	(0.06)	(0.07)	(0.04)	(0.08)	(0.05)	(0.02)
Railways	0.43***	0.94***	0.63***	1.34***	1.01***	0.63***	0.78***	0.71***	0.27***	1.07***	0.47***	0.14***
	(0.05)	(0.08)	(0.06)	(0.10)	(0.09)	(0.06)	(0.07)	(0.07)	(0.04)	(0.09)	(0.05)	(0.02)
Rurales	-0.14***	0.03	0.01	0.07	0.01	0.02	0.01	-0.12+	0.03	-0.00	0.05	0.03
	(0.04)	(0.07)	(0.05)	(0.09)	(0.08)	(0.05)	(0.07)	(0.07)	(0.04)	(0.08)	(0.05)	(0.02)
Elevation	0.00	0.00***	0.00**	0.00***	0.00**	0.00**	0.00*	0.00	0.00**	0.00***	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.20+	1.17***	0.86***	1.45***	1.34***	0.74***	1.03***	0.82***	0.69***	1.13***	1.10***	0.38***
	(0.11)	(0.22)	(0.18)	(0.27)	(0.25)	(0.19)	(0.22)	(0.22)	(0.16)	(0.22)	(0.17)	(0.10)
Mina insurgency	1.01***	1.16**	0.56+	1.50***	1.04**	0.66+	0.87*	0.86+	0.01	1.30***	0.87**	-0.05
	(0.26)	(0.42)	(0.29)	(0.39)	(0.39)	(0.36)	(0.35)	(0.47)	(0.16)	(0.33)	(0.27)	(0.13)
Hidalgo and Allende insurgency	0.85***	1.42***	0.83***	1.43***	1.01**	0.83**	0.99**	0.81*	0.29	1.55***	0.69**	0.15
	(0.22)	(0.33)	(0.25)	(0.38)	(0.35)	(0.28)	(0.31)	(0.32)	(0.19)	(0.34)	(0.23)	(0.11)
Guerrero insurgency	-0.27*	-0.14	0.05	-0.13	-0.40	-0.13	-0.27	0.14	-0.35*	-0.00	0.52*	-0.08
	(0.11)	(0.24)	(0.18)	(0.31)	(0.25)	(0.19)	(0.25)	(0.22)	(0.14)	(0.31)	(0.23)	(0.10)
Telegraphs	0.28***	0.49***	0.24***	0.66***	0.54***	0.26***	0.40***	0.43***	0.21***	0.44***	0.33***	0.08***
	(0.04)	(0.07)	(0.05)	(0.09)	(0.08)	(0.05)	(0.06)	(0.07)	(0.04)	(0.08)	(0.05)	(0.02)
French Intervention	0.43***	1.04***	0.82***	1.36***	1.18***	0.83***	0.96***	1.14***	0.38**	1.24***	0.85***	0.39***
	(0.12)	(0.22)	(0.18)	(0.28)	(0.26)	(0.19)	(0.22)	(0.23)	(0.14)	(0.23)	(0.17)	(0.09)
Elevation*Distance to Center	0.00	-0.00***	-0.00*	-0.00**	-0.00***	-0.00***	-0.00**	-0.00*	-0.00***	-0.00***	-0.00	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00	-0.00	-0.00	-0.00	0.00	-0.00	-0.00	0.00	-0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.45***	0.86***	0.68***	1.31***	1.09***	0.36***	0.72***	0.85***	0.20**	1.25***	0.39***	0.13***
	(0.06)	(0.12)	(0.09)	(0.15)	(0.13)	(0.09)	(0.11)	(0.11)	(0.07)	(0.12)	(0.08)	(0.04)
N	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses. All DVs measured in 2014 and logged.

Table 4: Second Stage Results (from specification 2)

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossessions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extortion	Intentional Injury	Intentional Homicide	Kidnapping
Autodefensas	-2.60*	-9.08**	-6.76**	-9.19**	-9.72**	-4.85**	-6.18**	-6.97**	-3.27**	-10.10**	-3.31*	-1.00*
	(1.05)	(2.86)	(2.11)	(3.17)	(3.07)	(1.68)	(2.12)	(2.35)	(1.20)	(3.19)	(1.42)	(0.49)
Railways	0.43***	0.95***	0.64***	1.35***	1.02***	0.64***	0.79***	0.72***	0.27***	1.08***	0.47***	0.14***
	(0.06)	(0.16)	(0.11)	(0.17)	(0.17)	(0.09)	(0.12)	(0.13)	(0.07)	(0.17)	(0.08)	(0.03)
Rurales	-0.12*	0.10	0.05	0.14	0.08	0.05	0.05	-0.07	0.06	0.07	0.08	0.03
	(0.06)	(0.15)	(0.11)	(0.17)	(0.16)	(0.09)	(0.11)	(0.12)	(0.06)	(0.17)	(0.08)	(0.03)
Elevation	0.00	0.00*	0.00+	0.00*	0.00	0.00*	0.00	0.00	0.00+	0.00**	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.87*	3.49***	2.59***	3.80***	3.83***	1.98***	2.61***	2.60**	1.53***	3.71***	1.95***	0.63***
	(0.35)	(0.95)	(0.70)	(1.04)	(1.01)	(0.56)	(0.70)	(0.79)	(0.41)	(1.05)	(0.48)	(0.18)
Mina insurgency	0.98***	1.07	0.49	1.41+	0.94	0.61	0.81	0.79	-0.03	1.20	0.84*	-0.06
	(0.29)	(0.81)	(0.60)	(0.83)	(0.90)	(0.53)	(0.61)	(0.72)	(0.35)	(0.86)	(0.33)	(0.15)
Hidalgo and Allende insurgency	1.03***	2.03**	1.29*	2.06**	1.67*	1.16**	1.41**	1.28**	0.51+	2.24**	0.92**	0.22
	(0.28)	(0.68)	(0.51)	(0.71)	(0.74)	(0.43)	(0.51)	(0.49)	(0.30)	(0.76)	(0.33)	(0.14)
Guerrero insurgency	0.28	1.79	1.49+	1.82	1.67	0.90	1.04	1.62+	0.34	2.14	1.22*	0.13
	(0.36)	(1.16)	(0.85)	(1.28)	(1.24)	(0.68)	(0.84)	(0.93)	(0.47)	(1.33)	(0.57)	(0.19)
Telegraphs	0.38***	0.85***	0.51***	1.02***	0.92***	0.45***	0.64***	0.70***	0.34***	0.83***	0.46***	0.12***
	(0.07)	(0.18)	(0.14)	(0.20)	(0.20)	(0.11)	(0.13)	(0.15)	(0.08)	(0.21)	(0.09)	(0.03)
French Intervention	0.57**	1.51**	1.17**	1.84***	1.68**	1.08***	1.28***	1.50***	0.54*	1.76**	1.02***	0.44***
	(0.17)	(0.48)	(0.37)	(0.53)	(0.54)	(0.31)	(0.38)	(0.42)	(0.21)	(0.54)	(0.25)	(0.11)
Elevation*Distance to Center	0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00*	-0.00+	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00	-0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.51***	1.07***	0.83***	1.52***	1.31***	0.47**	0.86***	1.01***	0.27**	1.47***	0.47***	0.15**
	(0.08)	(0.23)	(0.17)	(0.26)	(0.25)	(0.14)	(0.18)	(0.19)	(0.10)	(0.26)	(0.12)	(0.05)
N	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses. All DVs measured in 2014 and logged.

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A. Appendix, Vigilante Mobilization and Local Order: Evidence from Mexico

A.1 Descriptive Statistics

Table A1: Descriptive Statistics

	Mean	Std. Dev.	Min.	Max.	Obs.
Cristeros	.485342	.4998869	0	1	2456
Autodefensas	.093241	.2908291	0	1	2456
Cattle Rustling (logged)	.6611886	.9854494	0	4.510859	2456
Property Damage (logged)	1.410513	1.752821	0	8.423761	2456
Land Dispossesion (logged)	.8980494	1.226375	0	6.274762	2456
Larceny (logged)	1.994312	2.220494	0	9.763881	2456
Robbery (logged)	1.466062	1.874929	0	9.169102	2456
Breach of Trust (logged)	.7129009	1.226313	0	6.827629	2456
Fraud (logged)	1.057166	1.52268	0	8.064636	2456
Threats (logged)	1.02668	1.556341	0	8.024535	2456
Extortion (logged)	.3667611	.8353817	0	5.298317	2456
Intentional Injury (logged)	1.727406	1.908902	0	8.35491	2456
Homicide (logged)	.831525	1.151804	0	6.381816	2456
Kidnapping (logged)	.1637337	.4729366	0	4.077538	2456
Railways	.3387622	.4733853	0	1	2456
Rurales	.2846091	.45132	0	1	2456
Elevation	1265.798	1002.82	0	4600	2456
Morelos insurgency	.0305375	.1720959	0	1	2456
Mina insurgency	.0061075	.0779273	0	1	2456
Hidalgo and Allende insurgency	.017101	.1296741	0	1	2456
Guerrero insurgency	.0114007	.1061851	0	1	2456
Telegraphs	.3973941	.4894585	0	1	2456
French Intervention	.034202	.1817846	0	1	2456
Elevation	4.98e+08	5.86e+08	0	3.88e+09	2456
Distance to Center	454820.3	371681.5	0	2269043	2456
Corruption	15.97857	10.97844	0	51.9	2456
Myers score	3.631212	1.381774	1.464219	13.99535	2456
Poverty	8.14e-11	1	-1.889509	4.437625	2456
Unemployment	4.258083	1.747136	1.999452	7.647398	2456
Population (logged)	9.41745	1.554207	4.532599	14.41203	2456
Murder Rate, 2000-2006	4.277103	15.56569	0	265	2339
Seizures of drugs, 2000-2006	2.168974	8.59864	0	171.7143	2456
Seizures of guns, 2000-2006	.2546533	1.057458	0	17.42857	2456
All DTOs, 2000-2006	.0488018	.237062	0	3.285714	2456
Seizures of drugs, 2007-2010	4.537154	18.14006	0	257.75	2456
Seizures of guns, 2007-2010	1.293261	6.341767	0	158	2456
All DTOs, 2007-2010	.2199715	.6986962	0	7.5	2456
Murder rate 2007-2011	8.094613	52.58913	0	2045.6	2339

A.2 Alternative Model Specifications

The robustness test considers a variety of model specifications. In general, the results provide strong support for our theoretical expectations. Table A2 summarizes the structure of the robustness tests. Since all first-stage results appear in the main text of the paper, in Table 2 and Figure 3, we only present reduced form and second stage results here. The robustness tests begin with specification (1), in which there are no covariates. Table A3 and Figure A1 report the results of the reduced form equation, while Table A4 and Figure A2 present the second stage coefficients for this specification. Specification (3) includes covariates measured during both the pre-Cristero and post-Cristero/pre-*autodefensa* period. Table A5 and Figure A3 show the reduced form results, and Table A6 and Figure A4 report the effect of *autodefensas* on crime behavior in the second stage for this specification.

Note that we should have comparatively less confidence in the instrumental variable estimates in models with covariates measured during both the pre-Cristero and post-Cristero/pre-*autodefensa* period, as these may reintroduce endogeneity in ways that the instrumental variable models purposefully avoid.

Table A2: Robustness tests

Specification:	No covariates (1)	Pre-Cristero covariates (2)	Pre-Cristero and post-Cristero covariates (3)
First stage		Table 2* and Figure 3*	
Reduced form	Table A3** and Figure A1**	Table 3*	Table A5** and Figure A3**
Second stage	Table A4** and Figure A2**	Table 4* and Figure 4*	Table A6** and Figure A4**

* Tables and Figures in the main paper.

** Tables and Figures in the Appendix.

Table A3: Reduced Form, No Covariates (Specification 1)

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Cristeros	-0.13**	-0.37***	-0.18***	-0.31***	-0.34***	-0.19***	-0.22***	-0.33***	-0.11**	-0.27***	-0.16***	-0.02
	(0.04)	(0.07)	(0.05)	(0.09)	(0.08)	(0.05)	(0.06)	(0.06)	(0.03)	(0.08)	(0.05)	(0.02)
Constant	0.72***	1.59***	0.99***	2.14***	1.63***	0.81***	1.17***	1.19***	0.42***	1.86***	0.91***	0.17***
	(0.03)	(0.05)	(0.04)	(0.06)	(0.06)	(0.04)	(0.04)	(0.05)	(0.03)	(0.05)	(0.03)	(0.01)
N	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Figure A1: Coefficient Plot, Reduced Form, No Covariates (Specification 1)

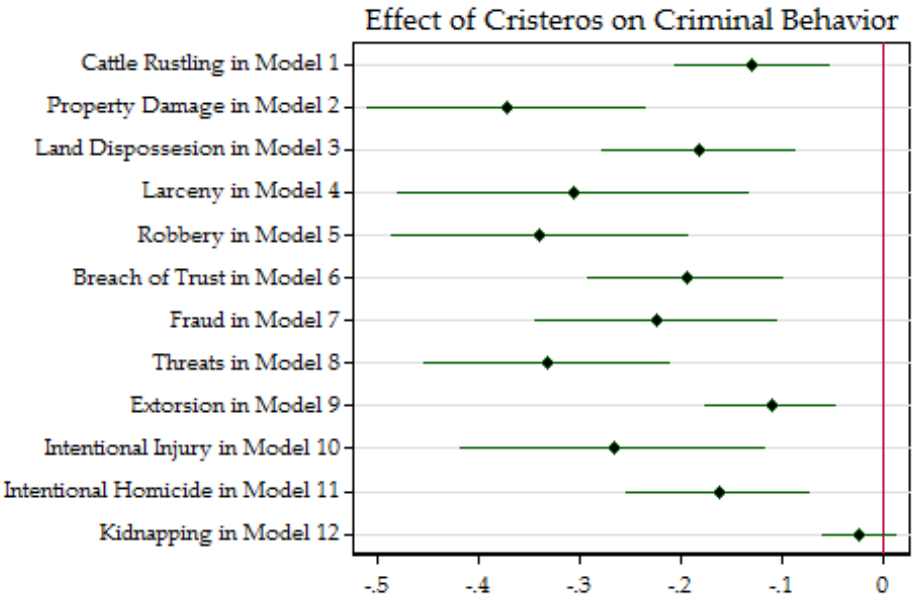


Table A4: Second Stage, No Covariates (Specification 1)

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Autodefensas	-2.14**	-6.19***	-3.03**	-5.09**	-5.64**	-3.24**	-3.73**	-5.53***	-1.83*	-4.43**	-2.70*	-0.37
	(0.82)	(1.85)	(1.10)	(1.97)	(1.83)	(1.12)	(1.35)	(1.63)	(0.73)	(1.70)	(1.05)	(0.34)
Constant	0.86***	1.99***	1.18***	2.47***	1.99***	1.01***	1.41***	1.54***	0.54***	2.14***	1.08***	0.20***
	(0.08)	(0.17)	(0.11)	(0.19)	(0.17)	(0.11)	(0.13)	(0.16)	(0.07)	(0.16)	(0.10)	(0.03)
N	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456	2456

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Figure A2: Coefficient Plot, Second Stage, No Covariates (Specification 1)

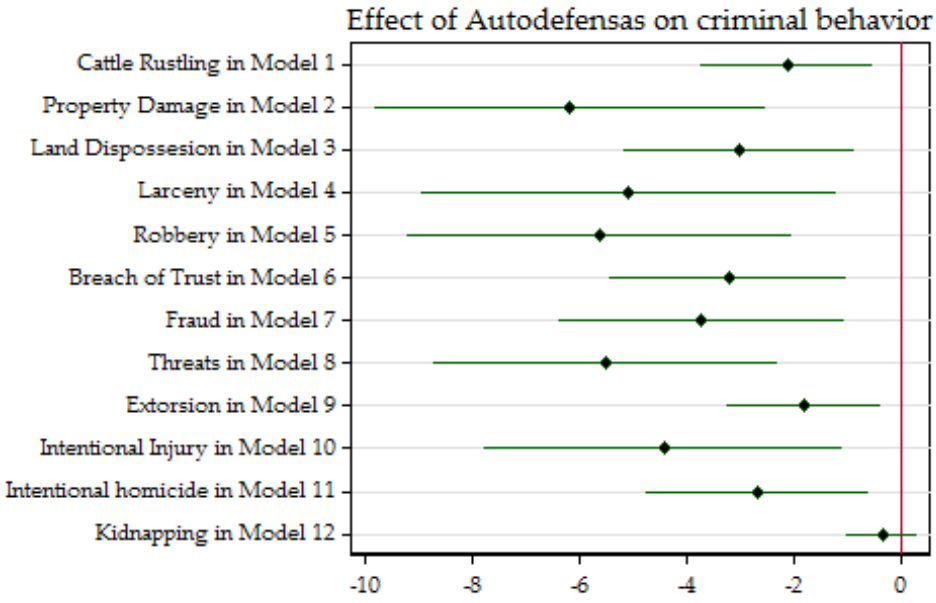


Table A5: Reduced Form, Pre-Cristero and Pre-Autodefensa Covariates (Specification 3)

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Cristeros	-0.05	-0.24***	-0.19***	-0.19***	-0.21***	-0.12***	-0.14***	-0.26***	-0.07**	-0.21***	0.00	-0.02
	(0.04)	(0.04)	(0.03)	(0.05)	(0.04)	(0.03)	(0.04)	(0.05)	(0.03)	(0.04)	(0.03)	(0.02)
Railways	0.10*	0.04	0.07+	0.13*	0.08	0.05	0.03	0.07	-0.06*	0.10*	0.03	0.01
	(0.04)	(0.05)	(0.04)	(0.06)	(0.05)	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.04)	(0.02)
Rurales	-0.13***	0.05	0.02	0.09+	-0.01	0.02	0.02	-0.07	0.02	-0.00	0.05+	0.02
	(0.04)	(0.04)	(0.03)	(0.05)	(0.04)	(0.03)	(0.04)	(0.05)	(0.03)	(0.04)	(0.03)	(0.02)
Elevation	-0.00	0.00***	0.00***	0.00***	0.00*	0.00***	0.00*	0.00	0.00**	0.00***	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.01	0.35**	0.25*	0.50***	0.39**	0.11	0.26*	0.09	0.23*	0.34**	0.51***	0.19*
	(0.10)	(0.11)	(0.10)	(0.12)	(0.13)	(0.11)	(0.13)	(0.16)	(0.10)	(0.11)	(0.11)	(0.08)
Mina insurgency	0.62*	0.28	-0.01	0.39	0.15	0.12	0.14	0.09	-0.37*	0.37*	0.32	-0.20
	(0.25)	(0.29)	(0.20)	(0.25)	(0.27)	(0.27)	(0.23)	(0.37)	(0.15)	(0.19)	(0.19)	(0.13)
Hidalgo and Allende insurgency	0.42*	0.51**	0.20	0.22	-0.03	0.27	0.24	0.22	-0.14	0.49***	0.11	-0.05
	(0.17)	(0.15)	(0.12)	(0.17)	(0.15)	(0.17)	(0.15)	(0.21)	(0.11)	(0.15)	(0.14)	(0.08)
Guerrero insurgency	-0.24*	-0.00	0.12	0.16	-0.19	-0.02	-0.17	0.09	-0.28**	0.19	0.51***	-0.06
	(0.10)	(0.15)	(0.10)	(0.16)	(0.15)	(0.11)	(0.17)	(0.14)	(0.10)	(0.19)	(0.14)	(0.09)
Telegraphs	0.14***	0.11**	-0.01	0.20***	0.14**	0.01	0.06	0.09+	0.04+	0.06	0.08*	0.00
	(0.04)	(0.04)	(0.03)	(0.05)	(0.04)	(0.03)	(0.04)	(0.05)	(0.03)	(0.04)	(0.03)	(0.02)
French Intervention	0.10	0.05	0.13	0.14	0.12	0.13	0.08	0.31*	-0.11	0.21*	0.15	0.16*
	(0.12)	(0.11)	(0.10)	(0.12)	(0.12)	(0.10)	(0.11)	(0.14)	(0.08)	(0.10)	(0.09)	(0.08)
Elevation*Distance to Center	0.00	-0.00***	-0.00	-0.00***	-0.00***	-0.00***	-0.00**	-0.00*	-0.00**	-0.00***	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00+	0.00	-0.00***	-0.00**	-0.00+	-0.00	-0.00**	-0.00***	0.00	-0.00	0.00**	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Corruption	-0.01***	-0.01***	-0.00	-0.00	0.02***	-0.00**	-0.01***	-0.04***	0.00*	0.01***	0.00**	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Myers score	0.02+	0.22***	0.20***	0.25***	0.31***	0.19***	0.24***	0.17***	0.15***	0.22***	0.17***	0.05***
	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)
Poverty	-0.03+	-0.30***	-0.19***	-0.43***	-0.36***	-0.29***	-0.32***	-0.25***	-0.18***	-0.20***	-0.07**	-0.07***
	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.01)
Unemployment	0.12***	0.15***	0.09***	0.26***	0.12***	0.05***	0.09***	0.06***	-0.01	0.25***	0.04***	-0.01
	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)
Population log	0.30***	0.82***	0.56***	0.99***	0.88***	0.53***	0.72***	0.70***	0.34***	0.87***	0.53***	0.13***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Seizures of drugs, 2007-2010	-0.01	0.01***	0.00	0.01***	0.01+	0.01***	0.01***	0.01***	-0.00	0.01*	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Seizures of guns, 2007-2010	0.00	-0.03**	-0.01	-0.02+	-0.02	-0.03*	-0.03*	-0.02+	-0.01	-0.02+	-0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
All DTOs, 2007-2010	0.15*	0.10	0.10+	0.08	0.20**	0.08	0.10	0.07	0.28***	0.06	0.21***	0.11*
	(0.08)	(0.06)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.08)	(0.06)	(0.06)	(0.04)	(0.05)
Murder rate, 2007-2011	-0.00	0.00+	0.00	0.00	0.00	0.00+	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-2.59***	-7.78***	-5.40***	-9.36***	-8.72***	-5.20***	-6.74***	-5.53***	-3.45***	-8.51***	-5.31***	-1.12***
	(0.19)	(0.24)	(0.21)	(0.28)	(0.27)	(0.23)	(0.24)	(0.28)	(0.22)	(0.23)	(0.21)	(0.12)
N	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Figure A3: Coefficient Plot, Reduced form, Pre-Cristero and Pre-Autodefensa Covariates (Specification 3)

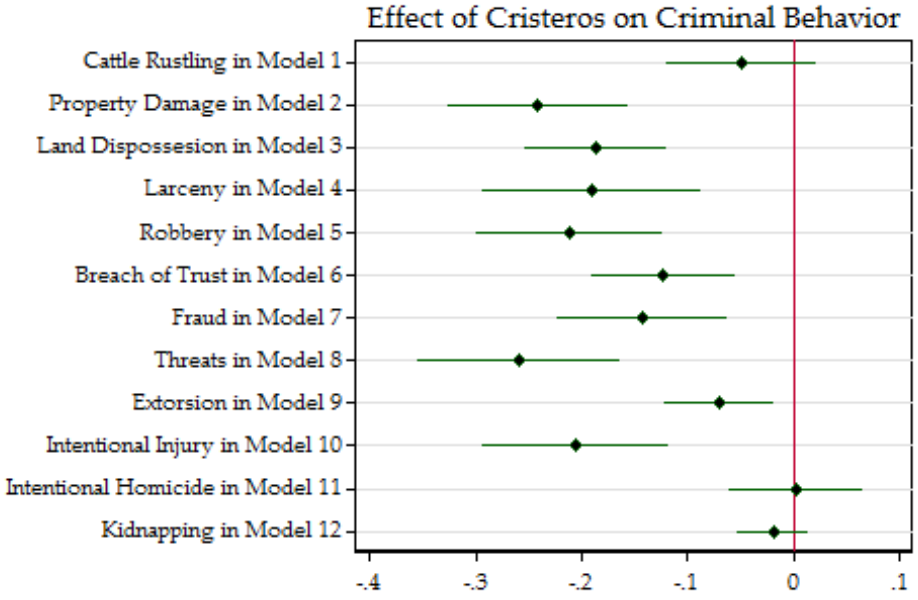
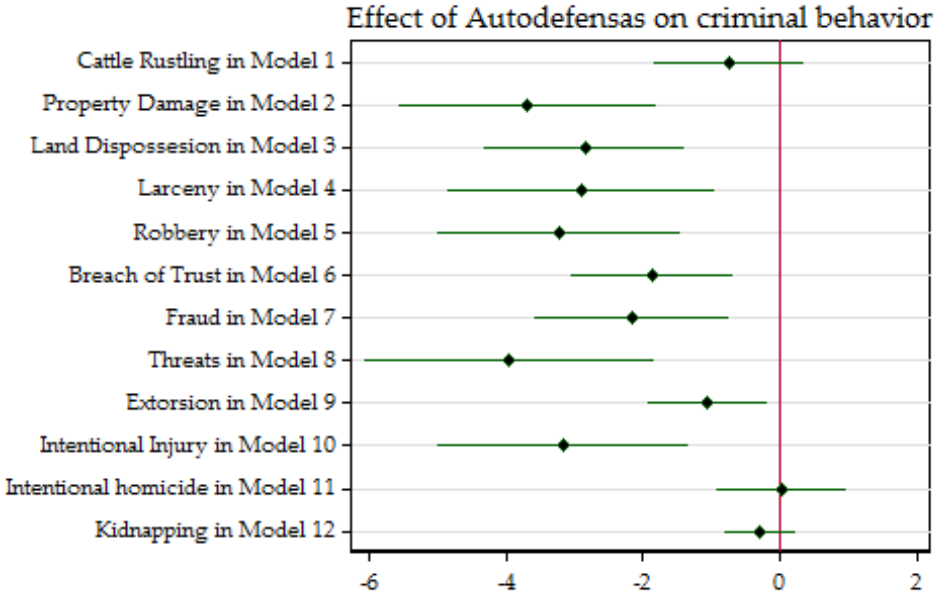


Table A6: Second Stage, Pre-Cristero and Pre-Autodefensa Covariates (Specification 3)

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Autodefensas	-0.74	-3.68***	-2.85***	-2.91**	-3.22***	-1.87**	-2.17**	-3.95***	-1.07*	-3.15***	0.03	-0.29
	(0.56)	(0.96)	(0.74)	(0.99)	(0.90)	(0.61)	(0.72)	(1.07)	(0.45)	(0.93)	(0.49)	(0.26)
Railways	0.08+	-0.04	0.01	0.06	0.01	0.01	-0.02	-0.02	-0.09*	0.03	0.03	0.01
	(0.05)	(0.07)	(0.06)	(0.08)	(0.07)	(0.05)	(0.06)	(0.08)	(0.04)	(0.07)	(0.04)	(0.02)
Rurales	-0.12**	0.07	0.04	0.10	0.01	0.03	0.04	-0.05	0.03	0.02	0.05	0.02
	(0.04)	(0.07)	(0.05)	(0.07)	(0.06)	(0.04)	(0.05)	(0.07)	(0.03)	(0.06)	(0.03)	(0.02)
Elevation	-0.00	0.00*	0.00*	0.00**	0.00	0.00**	0.00	-0.00	0.00*	0.00***	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.16	1.08***	0.81***	1.08***	1.03***	0.49*	0.69**	0.87*	0.44**	0.96**	0.50***	0.25*
	(0.17)	(0.33)	(0.24)	(0.32)	(0.29)	(0.19)	(0.23)	(0.38)	(0.15)	(0.31)	(0.15)	(0.10)
Mina insurgency	0.56*	-0.01	-0.24	0.16	-0.11	-0.03	-0.03	-0.22	-0.46*	0.12	0.32	-0.23+
	(0.25)	(0.35)	(0.26)	(0.32)	(0.37)	(0.28)	(0.27)	(0.44)	(0.19)	(0.28)	(0.20)	(0.13)
Hidalgo and Allende insurgency	0.43**	0.53*	0.22	0.24	-0.01	0.28	0.25	0.25	-0.13	0.52*	0.11	-0.05
	(0.17)	(0.25)	(0.19)	(0.22)	(0.22)	(0.19)	(0.17)	(0.26)	(0.13)	(0.23)	(0.14)	(0.08)
Guerrero insurgency	-0.09	0.75+	0.70*	0.75+	0.47	0.37	0.27	0.90+	-0.06	0.84*	0.50**	0.00
	(0.16)	(0.43)	(0.31)	(0.42)	(0.38)	(0.26)	(0.30)	(0.46)	(0.18)	(0.42)	(0.18)	(0.11)
Telegraphs	0.15***	0.17**	0.03	0.25***	0.19**	0.04	0.10*	0.15*	0.06*	0.11+	0.08*	0.01
	(0.04)	(0.07)	(0.05)	(0.07)	(0.06)	(0.04)	(0.05)	(0.07)	(0.03)	(0.06)	(0.03)	(0.02)
French Intervention	0.08	-0.04	0.07	0.08	0.04	0.08	0.03	0.22	-0.14	0.14	0.15	0.16*
	(0.12)	(0.18)	(0.15)	(0.17)	(0.17)	(0.13)	(0.14)	(0.22)	(0.09)	(0.17)	(0.09)	(0.08)
Elevation*Distance to Center	0.00	-0.00	0.00	-0.00+	-0.00	-0.00	-0.00	0.00	-0.00+	-0.00**	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00+	0.00	-0.00*	-0.00*	-0.00	-0.00	-0.00*	-0.00*	0.00	-0.00	0.00**	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Corruption	-0.01**	0.00	0.00	0.00	0.02***	-0.00	-0.00	-0.03***	0.01**	0.02***	0.00*	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Myers score	0.02	0.21***	0.19***	0.24***	0.30***	0.19***	0.23***	0.16***	0.14***	0.21***	0.17***	0.05***
	(0.01)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.01)	(0.03)	(0.01)	(0.01)
Poverty	-0.03	-0.27***	-0.16***	-0.41***	-0.33***	-0.27***	-0.30***	-0.22***	-0.17***	-0.17***	-0.07**	-0.07***
	(0.02)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)	(0.04)	(0.02)	(0.04)	(0.02)	(0.01)
Unemployment	0.10***	0.09**	0.04	0.21***	0.06*	0.02	0.05*	-0.01	-0.03*	0.19***	0.04**	-0.01+
	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.01)	(0.03)	(0.02)	(0.01)
Population log	0.32***	0.96***	0.66***	1.10***	0.99***	0.60***	0.79***	0.84***	0.38***	0.98***	0.53***	0.14***
	(0.03)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)	(0.05)	(0.02)	(0.04)	(0.02)	(0.01)
Seizures of drugs, 2007-2010	-0.01	0.01+	0.00	0.01*	0.00	0.01**	0.01**	0.01+	-0.00	0.01	-0.00	-0.00
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Seizures of guns, 2007-2010	0.01	-0.03*	-0.01	-0.02+	-0.02	-0.03**	-0.03**	-0.02	-0.01	-0.01	-0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
All DTOs, 2007-2010	0.22*	0.45**	0.37***	0.35**	0.50***	0.26**	0.30**	0.44**	0.38***	0.36**	0.21**	0.13**
	(0.10)	(0.14)	(0.11)	(0.13)	(0.13)	(0.08)	(0.10)	(0.16)	(0.07)	(0.13)	(0.06)	(0.05)
Murder rate, 2007-2011	-0.00	0.00*	0.00+	0.00	0.00	0.00*	0.00+	0.00+	0.00	0.00*	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-2.79***	-8.77***	-6.17***	-10.14***	-9.59***	-5.71***	-7.32***	-6.59***	-3.74***	-9.37***	-5.30***	-1.20***
	(0.24)	(0.38)	(0.30)	(0.38)	(0.36)	(0.28)	(0.30)	(0.46)	(0.24)	(0.35)	(0.23)	(0.14)
N	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339	2339

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Figure A4: Coefficient Plot, Second Stage, Pre-Cristero and Pre-Autodefensa Covariates (Specification 3)



A.3 Subset Analysis

The exclusion restriction requires that the instrument not be correlated with the error term:

$$cov(C_i, \epsilon_{1i}|X_i) = 0. \tag{5}$$

While it is impossible to test this assumption, we can take a number of steps to increase our confidence that the exclusion restriction is not violated. We need the unmeasured determinants of crime to be uncorrelated with the instrument. We have argued that the locally-exogenous crackdown initiated by the Calderón administration provides us with a strong basis for assuming that whatever impact the instrument had on contemporary crime would be washed away. We have also empirically shown in Table 1 that, conditional on pre-Cristero covariates, our instrument is uncorrelated with contemporary, pre-*autodefensa* murder rates. This provides us with increased confidence that the exclusion restriction holds.

In this sub-section we go a step further, showing that when we restrict our analysis to municipalities where the crackdown by the Calderón administration produced the greatest increase in both murder rates and drug trafficking activity, *Cristeros* is not correlated with most contemporary covariates - most critically, it is not a good predictor of pre-*autodefensa* murder rates - and our results estimating the effect of *autodefensas* on crime remain strong. More specifically, we produce three sets of subsets of observations.

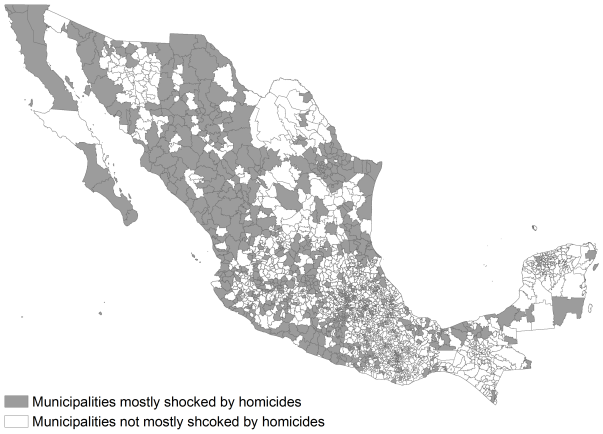
Subset 1: most shocked municipalities, homicides. First, using the murder rate from 2000-2011, we calculate the average murder rate per municipality prior to the Calderón presidency (2000-2006) and once Calderón took office (2007-2011). We take the difference between these two values to calculate a difference in murder rate and then restrict our models to those municipalities in the highest quartile, where the positive change in the murder rate was greatest. To provide some perspective, the average increase in the murder rate within this "most shocked" group is +321%. The geographical distribution of these municipalities is shown in Panel (a) of Figure A5.

Subset 2: most shocked municipalities, homicides, alternative measure. Second, because President Calderón's policies may have taken some time to be implemented, this alternative measure changes the temporal window for establishing what should be considered "before Calderón." It repeats the above-mentioned procedure but alters the pre-Calderón period to include 2007, his first full year in office. The geographical distribution of these municipalities is shown in Panel (b) of Figure A5.

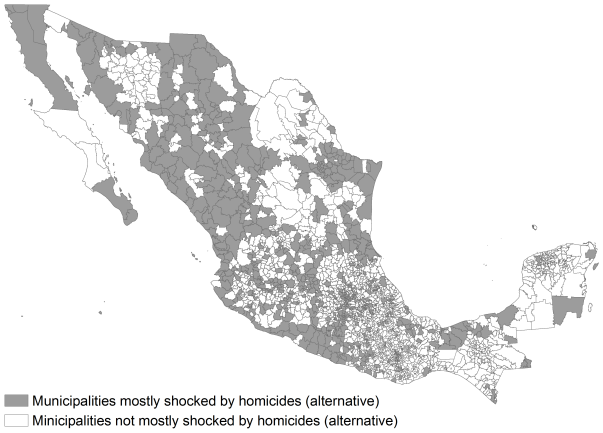
Subset 3: most shocked municipalities, DTO expansion. Third, we look to the change in the number of DTOs present in each municipality prior to the Calderón presidency (2000-2006) and once Calderón took office (2007-2011). We take the difference between these two values to calculate a difference in the number of DTOs and then restrict our models to those municipalities in the highest quartile, where

the positive change in the number of active DTOs was the greatest. The logic for restricting our analysis to this subset is that the crackdown initiated by the Calderón administration forced DTOs to adapt and to geographically disperse to new territories, generating plausibly exogenous shocks to local communities and altering patterns of crime. The geographical distribution of these municipalities is shown in Panel (c) of Figure A5.

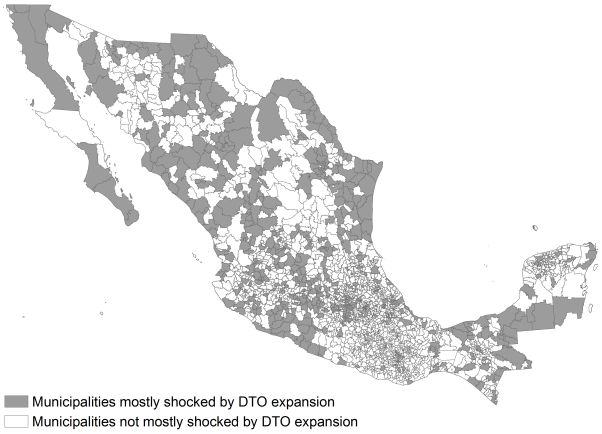
Figure A5: Subsets of most shocked municipalities



(a) Subset 1: Homicides



(b) Subset 2: Homicides, Alternative Measure



(c) Subset 3: DTO expansion

A.3.1 Long-Run Effects of the Cristero Rebellion Within Subsets

We begin assessing the long-run effects of the Cristero rebellion on contemporary outcomes within each of the subsets, parallel to the results found in Table 1 in the manuscript. The results demonstrate that while *Cristeros* is a statistically significant predictor of a few contemporary outcomes across the three subsets, *in none is* Cristeros *a statistically significant predictor of contemporary homicide rates*. This provides increased confidence that the exclusion restriction has not been violated.

Table A7: The Long-Run Effects of The Cristero Rebellion, Subset 1

Model:	(1) Corruption	(2) Myers score	(3) Poverty	(4) Un-employ-ment	(5) Pop. log	(6) Homicide Rate 2000-2006	(7) Drug Seizures (2000-2006)	(8) Guns Seizures (2000-2006)	(9) All DTOs (2000-2006)	(10) Drug Seizures (2007-2010)	(11) Gun Seizures (2007-2010)	(12) All DTOs (2007-2010)	(13) Homicide Rate (2007-2011)
Cristeros	-4.23***	-0.14	0.16+	-1.08***	-0.23+	-2.95	0.65	0.03	-0.02	-0.95	-0.11	-0.13	-1.76
	(1.20)	(0.09)	(0.09)	(0.14)	(0.13)	(3.16)	(1.08)	(0.13)	(0.03)	(2.22)	(0.76)	(0.10)	(5.57)
Railways	3.01**	-0.51***	-0.52***	0.47***	0.61***	2.12	2.24*	0.17	0.03	4.57*	1.11	0.14	7.76
	(1.11)	(0.10)	(0.08)	(0.13)	(0.13)	(1.94)	(1.12)	(0.15)	(0.03)	(2.32)	(0.81)	(0.10)	(5.96)
Rurales	-1.22	-0.04	-0.19*	-0.18	0.10	-0.13	-0.12	-0.02	-0.02	-0.96	-0.38	-0.06	-0.75
	(1.06)	(0.09)	(0.08)	(0.13)	(0.12)	(2.02)	(1.19)	(0.14)	(0.03)	(2.49)	(0.86)	(0.09)	(6.86)
Elevation	0.00*	-0.00+	0.00	0.00	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Morelos insurgency	-0.06	0.29+	0.04	-0.91**	0.39+	18.63*	0.07	-0.07	-0.01	0.90	0.61	0.13	43.19*
	(2.43)	(0.16)	(0.14)	(0.28)	(0.23)	(9.48)	(0.91)	(0.11)	(0.03)	(2.32)	(0.71)	(0.15)	(18.88)
Mina insurgency	-1.22	-0.12	0.03	0.37	0.43	2.81	0.58	-0.07	-0.08	-0.92	-0.47	0.12	-4.19
	(1.34)	(0.22)	(0.12)	(0.38)	(0.36)	(6.07)	(4.51)	(0.48)	(0.09)	(8.10)	(2.84)	(0.54)	(16.89)
Hidalgo and Allende insurgency	0.79	-0.37*	-0.36*	1.32***	0.86**	0.15	1.45	-0.14	-0.00	0.52	0.43	0.34	2.39
	(2.89)	(0.14)	(0.16)	(0.23)	(0.30)	(2.55)	(1.96)	(0.21)	(0.05)	(3.34)	(1.27)	(0.25)	(5.85)
Guerrero insurgency	-0.46	0.78**	1.27***	-1.17***	-0.24	-5.07	-0.04	-0.03	0.01	-1.09	0.08	-0.19+	-6.18
	(1.42)	(0.30)	(0.21)	(0.26)	(0.22)	(5.93)	(0.91)	(0.13)	(0.04)	(2.15)	(0.72)	(0.11)	(14.39)
Telegraphs	-1.44	0.13	-0.03	-0.31*	0.43***	3.46+	2.07+	0.23	0.07*	4.22+	1.90*	0.15+	8.66+
	(1.09)	(0.09)	(0.08)	(0.12)	(0.12)	(1.98)	(1.07)	(0.15)	(0.03)	(2.30)	(0.85)	(0.09)	(4.81)
French Intervention	-1.18	-0.07	-0.09	0.20	0.47*	12.27*	8.86**	1.20**	0.28**	15.65**	5.89*	0.77**	62.95+
	(1.82)	(0.14)	(0.10)	(0.20)	(0.23)	(6.09)	(3.00)	(0.39)	(0.09)	(5.89)	(2.40)	(0.24)	(37.66)
Elevation*Distance to Center	-0.00***	0.00**	0.00**	0.00	-0.00***	-0.00+	-0.00+	-0.00	-0.00*	-0.00+	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	-0.00***	-0.00***	0.00***	0.00	0.00	0.00***	0.00**	0.00**	0.00**	0.00+	0.00**	0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	21.90***	3.62***	-0.21+	4.83***	10.02***	-2.82	-6.08*	-0.38	-0.08	-7.36	-3.58	0.12	-23.62
	(2.11)	(0.13)	(0.12)	(0.24)	(0.21)	(6.37)	(2.73)	(0.28)	(0.07)	(5.87)	(3.20)	(0.16)	(19.96)
N	580	580	580	580	580	580	580	580	580	580	580	580	580

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Table A8: The Long-Run Effects of The Cristero Rebellion, Subset 2

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Corruption	Myers score	Poverty	Un-employ-ment	Pop. log	Homicide Rate 2000-2006	Drug Seizures (2000-2006)	Guns Seizures (2000-2006)	All DTOs (2000-2006)	Drug Seizures (2007-2010)	Gun Seizures (2007-2010)	All DTOs (2007-2010)	Homicide Rate (2007-2011)
Cristeros	-5.66***	-0.12	0.15+	-1.07***	-0.29*	-5.31	0.68	0.06	-0.01	-1.01	-0.07	-0.11	-5.01
	(1.24)	(0.08)	(0.09)	(0.14)	(0.13)	(3.24)	(1.04)	(0.12)	(0.03)	(2.16)	(0.71)	(0.09)	(5.26)
Railways	2.51*	-0.50***	-0.54***	0.54***	0.57***	1.65	2.23*	0.17	0.03	3.94+	1.03	0.11	6.20
	(1.12)	(0.09)	(0.08)	(0.13)	(0.12)	(1.97)	(1.09)	(0.14)	(0.03)	(2.29)	(0.79)	(0.10)	(5.62)
Rurales	-0.07	-0.04	-0.13+	-0.13	0.10	0.35	0.29	0.05	0.00	-0.03	-0.01	-0.02	0.17
	(1.08)	(0.08)	(0.08)	(0.13)	(0.12)	(2.11)	(1.19)	(0.14)	(0.03)	(2.53)	(0.88)	(0.10)	(6.63)
Elevation	0.00*	-0.00*	-0.00	0.00+	0.00**	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Morelos insurgency	-1.16	0.35*	0.07	-0.78**	0.46*	19.85*	0.25	-0.08	-0.01	1.62	0.42	0.06	42.16*
	(2.44)	(0.14)	(0.15)	(0.27)	(0.21)	(8.82)	(1.00)	(0.11)	(0.03)	(2.67)	(0.76)	(0.13)	(17.18)
Mina insurgency	-1.65	-0.15	0.03	0.18	0.15	0.21	3.02	0.35	0.09	5.49	2.18	0.55	-6.72
	(1.35)	(0.18)	(0.12)	(0.34)	(0.33)	(5.16)	(4.49)	(0.57)	(0.18)	(9.53)	(3.44)	(0.65)	(13.97)
Hidalgo and Allende insurgency	1.25	-0.31*	-0.20	1.29***	0.88**	0.42	0.90	-0.26	-0.04	-0.84	-0.17	0.26	2.08
	(3.03)	(0.15)	(0.17)	(0.24)	(0.33)	(2.92)	(2.21)	(0.24)	(0.07)	(3.90)	(1.47)	(0.28)	(6.91)
Guerrero insurgency	0.28	0.78**	1.26***	-1.24***	-0.34	-6.04	-0.47	-0.07	-0.00	-2.58	-0.07	-0.19+	-6.83
	(1.46)	(0.30)	(0.21)	(0.25)	(0.22)	(5.81)	(0.91)	(0.13)	(0.04)	(2.24)	(0.69)	(0.11)	(13.29)
Telegraphs	-0.79	0.06	0.00	-0.34**	0.40***	2.85	1.83+	0.21	0.07*	4.09+	1.82*	0.14	8.87+
	(1.08)	(0.08)	(0.08)	(0.13)	(0.12)	(1.99)	(1.04)	(0.14)	(0.03)	(2.27)	(0.82)	(0.09)	(4.76)
French Intervention	-1.03	-0.10	-0.09	0.11	0.50*	13.97*	9.08**	1.19**	0.27**	16.23*	5.89*	0.76**	70.77+
	(1.97)	(0.11)	(0.10)	(0.20)	(0.24)	(6.60)	(3.17)	(0.41)	(0.09)	(6.29)	(2.55)	(0.25)	(41.04)
Elevation*Distance to Center	-0.00***	0.00***	0.00***	0.00	-0.00***	-0.00+	-0.00+	-0.00	-0.00*	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	-0.00***	-0.00***	0.00***	0.00	0.00	0.00***	0.00**	0.00**	0.00**	0.00	0.00**	0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	22.22***	3.62***	-0.19	4.82***	10.16***	0.13	-5.53*	-0.37	-0.08	-5.90	-3.32	0.14	-18.93
	(2.02)	(0.12)	(0.12)	(0.23)	(0.20)	(6.08)	(2.57)	(0.26)	(0.06)	(5.60)	(2.99)	(0.15)	(18.39)
N	579	579	579	579	579	579	579	579	579	579	579	579	579

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Table A9: The Long-Run Effects of The Cristero Rebellion, Subset 3

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Corruption	Myers score	Poverty	Unemployment	Pop. log	Homicide Rate, 2000-2006	Drug Seizures, 2000-2006	Guns Seizures, 2000-2006	All DTOs, 2000-2006	Drug Seizures, 2007-2010	Gun Seizures, 2007-2010	All DTOs, 2007-2010	Homicide Rate, 2007-2011
Cristeros	-5.38***	-0.28**	-0.02	-0.75***	-0.19	-5.13	1.41	0.04	-0.01	-0.27	-0.00	-0.16	-1.79
	(1.35)	(0.09)	(0.09)	(0.17)	(0.15)	(3.84)	(1.24)	(0.15)	(0.04)	(2.63)	(0.99)	(0.11)	(6.83)
Railways	1.95	-0.45***	-0.57***	0.43**	0.67***	4.39*	2.69*	0.19	0.03	7.17*	0.96	0.04	13.19*
	(1.24)	(0.09)	(0.07)	(0.15)	(0.14)	(2.15)	(1.33)	(0.18)	(0.04)	(3.19)	(0.96)	(0.11)	(5.29)
Rurales	-0.36	-0.17*	-0.16*	-0.00	-0.02	0.46	0.74	0.11	-0.02	-0.31	0.42	-0.00	1.75
	(1.17)	(0.08)	(0.08)	(0.15)	(0.14)	(2.43)	(1.33)	(0.18)	(0.03)	(2.92)	(1.04)	(0.10)	(6.94)
Elevation	0.00*	-0.00**	-0.00	0.00*	0.00*	0.01+	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Morelos insurgency	0.03	0.55***	-0.01	-0.71*	0.76**	26.07*	5.39*	0.66	0.07	12.22*	5.01+	0.37+	45.22*
	(2.71)	(0.14)	(0.16)	(0.34)	(0.28)	(12.68)	(2.36)	(0.54)	(0.07)	(5.54)	(2.84)	(0.21)	(19.03)
Mina insurgency	-3.63	-0.15	-0.01	0.14	-0.16	-11.75	7.94	-0.00	0.04	9.72	1.65	0.72	-28.96
	(2.58)	(0.21)	(0.16)	(0.43)	(0.46)	(9.37)	(7.58)	(1.01)	(0.30)	(14.72)	(5.90)	(0.94)	(27.07)
Hidalgo and Allende insurgency	3.29	-0.14	-0.01	0.74*	0.95**	8.57	1.71	0.28	0.02	-1.13	2.35	0.25	3.23
	(3.51)	(0.14)	(0.15)	(0.33)	(0.31)	(9.90)	(2.72)	(0.69)	(0.12)	(5.19)	(3.61)	(0.31)	(7.80)
Guerrero insurgency	0.03	0.55*	0.81***	-0.98*	-0.56+	-9.91	-3.47	-0.52	-0.06	-12.72*	-3.08	-0.62***	-6.93
	(2.22)	(0.27)	(0.21)	(0.48)	(0.30)	(10.03)	(2.17)	(0.46)	(0.08)	(5.41)	(2.44)	(0.19)	(16.22)
Telegraphs	-0.44	-0.06	-0.10	-0.16	0.63***	4.12+	2.17+	0.36*	0.11**	3.41	2.60**	0.24*	8.28
	(1.17)	(0.08)	(0.07)	(0.15)	(0.13)	(2.33)	(1.19)	(0.17)	(0.04)	(2.87)	(0.96)	(0.10)	(5.05)
French Intervention	-0.11	-0.08	-0.18+	0.36	0.79**	13.79+	11.82**	1.39**	0.33**	17.41*	7.38*	0.85**	76.72
	(2.15)	(0.17)	(0.10)	(0.25)	(0.25)	(7.11)	(3.61)	(0.49)	(0.12)	(7.24)	(2.89)	(0.28)	(48.16)
Elevation*Distance to Center	-0.00***	0.00*	0.00*	0.00	-0.00**	-0.00+	-0.00+	-0.00	-0.00+	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00*	-0.00***	-0.00***	0.00**	0.00	0.00	0.00***	0.00**	0.00**	0.00**	0.00	0.00**	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	21.46***	3.87***	-0.07	4.65***	9.84***	-4.02	-6.18*	-0.28	-0.04	-3.14	-2.77	0.56***	-30.25
	(2.03)	(0.14)	(0.12)	(0.25)	(0.25)	(7.80)	(2.92)	(0.31)	(0.07)	(6.40)	(3.62)	(0.17)	(23.61)
N	541	541	541	541	541	523	541	541	541	541	541	541	523

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

A.3.2 Effect of Autodefensas on Crime Within Subsets

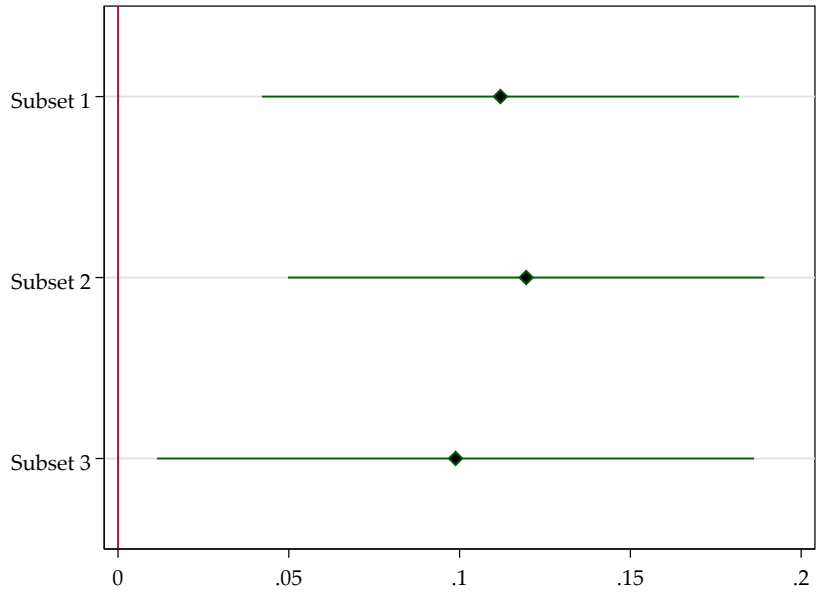
The first-stage results for the IV estimates, using our preferred model specification (2) with only pre-Cristero covariates, can be found in Table A10 and displayed in a coefficient plot in Figure A6. The results indicate that within each of the three subsets, *Cristeros* has a consistent, positive, and statistically significant effect on the formation of *autodefensas*. In Model 1, the AP Multivariate F-statistic falls just short of conventional levels for a strong instrument, in Model 2 it clears the bar, while in Model 3 it falls quite short. As such, we feel most comfortable with Models 1 and 2, which use changes in homicide rates to establish the appropriate subsets, as opposed to Model 3.

Table A10: First Stage Results For Three Subsets

Model:	(1)	(2)	(3)
	Subset 1 (Homicides)	Subset 2 (Homicides alt.)	Subset 3 (Homicides)
Cristeros	0.11**	0.12***	0.10*
	(0.04)	(0.04)	(0.04)
Railways	-0.05	-0.04	-0.04
	(0.03)	(0.03)	(0.04)
Rurales	0.00	0.03	0.06
	(0.03)	(0.03)	(0.04)
Elevation	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.26**	0.22*	0.41***
	(0.09)	(0.09)	(0.10)
Mina insurgency	-0.03	0.04	0.05
	(0.12)	(0.12)	(0.18)
Hidalgo and Allende insurgency	-0.14**	-0.16**	-0.04
	(0.05)	(0.06)	(0.11)
Guerrero insurgency	0.26+	0.28*	0.06
	(0.14)	(0.14)	(0.18)
Telegraphs	0.07*	0.07*	0.05
	(0.03)	(0.03)	(0.04)
French Intervention	0.05	0.07	0.06
	(0.06)	(0.06)	(0.07)
Elevation*Distance to Center	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
Constant	0.10*	0.07	0.12+
	(0.05)	(0.05)	(0.06)
AP Multivariate F-Stat	9.91	11.33	4.93
N	580	579	541

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Figure A6: First Stage Results for Each Subset of Shocked Municipalities



The reduced form results are presented in Tables A11, A12, A13 for each of the three subsets of observations. They show that *Cristeros* has a consistent, negative effect, and statistically significant effect on contemporary crime.

Table A11: Subset 1, Reduced Form with Pre-Cristero Covariates

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Cristeros	-0.26*	-0.87***	-0.63***	-0.99***	-1.05***	-0.60***	-0.64***	-0.64**	-0.47***	-0.95***	-0.44**	-0.17*
	(0.11)	(0.19)	(0.15)	(0.23)	(0.20)	(0.16)	(0.19)	(0.21)	(0.12)	(0.19)	(0.13)	(0.07)
Railways	0.37***	0.89***	0.61***	1.22***	0.97***	0.71***	0.84***	0.57**	0.24*	0.93***	0.40**	0.13+
	(0.11)	(0.18)	(0.13)	(0.21)	(0.19)	(0.14)	(0.17)	(0.18)	(0.11)	(0.18)	(0.12)	(0.07)
Rurales	-0.28**	0.11	0.09	0.09	0.02	0.10	0.18	-0.15	0.11	0.10	0.09	0.01
	(0.10)	(0.18)	(0.13)	(0.21)	(0.18)	(0.15)	(0.17)	(0.18)	(0.11)	(0.18)	(0.12)	(0.07)
Elevation	-0.00	0.00**	0.00*	0.00**	0.00+	0.00*	0.00*	0.00	0.00	0.00***	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	-0.20	0.65+	0.58*	0.74+	0.94*	0.48	0.57	0.13	0.49+	0.48	0.96***	0.43*
	(0.20)	(0.37)	(0.29)	(0.43)	(0.41)	(0.32)	(0.37)	(0.39)	(0.27)	(0.37)	(0.28)	(0.19)
Mina insurgency	0.70*	0.38	0.20	0.68	0.73	0.39	0.47	0.14	-0.27	0.62	0.61	-0.04
	(0.32)	(0.65)	(0.44)	(0.60)	(0.55)	(0.57)	(0.51)	(0.72)	(0.29)	(0.51)	(0.37)	(0.21)
Hidalgo and Allende insurgency	1.18***	2.05***	1.13***	2.02***	1.37**	1.30**	1.51**	1.82***	0.25	1.98***	0.97***	0.03
	(0.27)	(0.40)	(0.32)	(0.46)	(0.46)	(0.43)	(0.47)	(0.51)	(0.30)	(0.37)	(0.28)	(0.14)
Guerrero insurgency	-0.53**	-0.54	-0.21	-0.33	-0.82+	-0.29	-0.64	-0.11	-0.60*	-0.28	0.46	-0.21
	(0.19)	(0.42)	(0.30)	(0.48)	(0.45)	(0.33)	(0.42)	(0.34)	(0.27)	(0.47)	(0.34)	(0.21)
Telegraphs	0.33***	0.59***	0.32*	0.75***	0.63***	0.30*	0.58***	0.72***	0.31**	0.54**	0.40***	0.09
	(0.10)	(0.17)	(0.13)	(0.20)	(0.18)	(0.14)	(0.16)	(0.17)	(0.11)	(0.17)	(0.12)	(0.07)
French Intervention	0.19	0.44	0.53*	0.57	0.53	0.51+	0.49	0.69*	0.20	0.59+	0.55*	0.39**
	(0.16)	(0.30)	(0.24)	(0.36)	(0.35)	(0.27)	(0.31)	(0.32)	(0.20)	(0.31)	(0.22)	(0.14)
Elevation*Distance to Center	0.00	-0.00***	-0.00**	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00**	-0.00***	-0.00*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00*	0.00	0.00*	0.00	0.00	0.00	0.00+	0.00	0.00*	0.00*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	1.12***	1.87***	1.30***	2.63***	2.53***	1.03***	1.32***	1.60***	0.82***	2.35***	1.24***	0.53***
	(0.17)	(0.30)	(0.25)	(0.35)	(0.33)	(0.25)	(0.29)	(0.33)	(0.20)	(0.30)	(0.21)	(0.14)
N	580	580	580	580	580	580	580	580	580	580	580	580

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Table A12: Subset 2, Reduced Form with Pre-Cristero Covariates

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Cristeros	-0.22*	-0.97***	-0.69***	-1.06***	-1.18***	-0.69***	-0.74***	-0.57**	-0.55***	-1.03***	-0.48***	-0.12
	(0.11)	(0.19)	(0.15)	(0.22)	(0.20)	(0.16)	(0.19)	(0.21)	(0.12)	(0.19)	(0.13)	(0.07)
Railways	0.36***	0.91***	0.64***	1.23***	0.95***	0.71***	0.84***	0.63***	0.19+	0.93***	0.42***	0.14*
	(0.10)	(0.17)	(0.13)	(0.20)	(0.19)	(0.14)	(0.16)	(0.18)	(0.11)	(0.17)	(0.12)	(0.07)
Rurales	-0.22*	0.12	0.07	0.13	0.03	0.12	0.19	-0.17	0.10	0.13	0.14	0.04
	(0.10)	(0.17)	(0.13)	(0.20)	(0.18)	(0.15)	(0.17)	(0.18)	(0.11)	(0.18)	(0.12)	(0.07)
Elevation	0.00	0.00***	0.00**	0.00***	0.00**	0.00**	0.00**	0.00	0.00+	0.00***	0.00*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	-0.10	0.80*	0.70*	0.92*	1.03**	0.60+	0.78*	0.49	0.62*	0.64+	1.00***	0.42*
	(0.20)	(0.36)	(0.29)	(0.42)	(0.39)	(0.32)	(0.36)	(0.39)	(0.27)	(0.34)	(0.25)	(0.18)
Mina insurgency	0.42	-0.14	-0.24	0.12	0.05	-0.03	0.04	-0.30	-0.41	0.12	0.16	-0.12
	(0.34)	(0.59)	(0.42)	(0.59)	(0.60)	(0.51)	(0.47)	(0.62)	(0.26)	(0.50)	(0.38)	(0.18)
Hidalgo and Allende insurgency	1.17***	2.07***	1.12**	1.95***	1.42**	1.32**	1.49**	1.83**	0.26	1.95***	1.01**	0.03
	(0.29)	(0.45)	(0.36)	(0.52)	(0.52)	(0.47)	(0.52)	(0.56)	(0.32)	(0.42)	(0.31)	(0.14)
Guerrero insurgency	-0.61**	-0.64	-0.29	-0.46	-0.85+	-0.38	-0.82+	-0.34	-0.71*	-0.40	0.44	-0.22
	(0.19)	(0.42)	(0.30)	(0.48)	(0.44)	(0.34)	(0.43)	(0.38)	(0.28)	(0.47)	(0.33)	(0.21)
Telegraphs	0.35***	0.49**	0.26*	0.64**	0.52**	0.29*	0.50**	0.61***	0.30**	0.45**	0.32**	0.09
	(0.10)	(0.17)	(0.13)	(0.20)	(0.18)	(0.14)	(0.16)	(0.17)	(0.11)	(0.17)	(0.12)	(0.06)
French Intervention	0.20	0.41	0.57*	0.57	0.64+	0.49+	0.46	0.71*	0.25	0.59+	0.63**	0.42**
	(0.16)	(0.32)	(0.26)	(0.38)	(0.38)	(0.28)	(0.33)	(0.34)	(0.22)	(0.33)	(0.23)	(0.15)
Elevation*Distance to Center	0.00	-0.00***	-0.00**	-0.00***	-0.00***	-0.00***	-0.00***	-0.00**	-0.00***	-0.00***	-0.00**	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00*	0.00	0.00*	0.00	0.00	0.00	0.00	0.00	0.00*	0.00**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.98***	1.98***	1.38***	2.70***	2.63***	1.12***	1.51***	1.69***	0.90***	2.44***	1.25***	0.47***
	(0.17)	(0.29)	(0.24)	(0.35)	(0.32)	(0.25)	(0.29)	(0.33)	(0.20)	(0.29)	(0.20)	(0.13)
N	579	579	579	579	579	579	579	579	579	579	579	579

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Table A13: Subset 3, Reduced Form with Pre-Cristero Covariates

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Cristeros	-0.22*	-0.97***	-0.69***	-1.06***	-1.18***	-0.69***	-0.74***	-0.57**	-0.55***	-1.03***	-0.48***	-0.12
	(0.11)	(0.19)	(0.15)	(0.22)	(0.20)	(0.16)	(0.19)	(0.21)	(0.12)	(0.19)	(0.13)	(0.07)
Railways	0.36***	0.91***	0.64***	1.23***	0.95***	0.71***	0.84***	0.63***	0.19+	0.93***	0.42***	0.14*
	(0.10)	(0.17)	(0.13)	(0.20)	(0.19)	(0.14)	(0.16)	(0.18)	(0.11)	(0.17)	(0.12)	(0.07)
Rurales	-0.22*	0.12	0.07	0.13	0.03	0.12	0.19	-0.17	0.10	0.13	0.14	0.04
	(0.10)	(0.17)	(0.13)	(0.20)	(0.18)	(0.15)	(0.17)	(0.18)	(0.11)	(0.18)	(0.12)	(0.07)
Elevation	0.00	0.00***	0.00**	0.00***	0.00**	0.00**	0.00**	0.00	0.00+	0.00***	0.00*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	-0.10	0.80*	0.70*	0.92*	1.03**	0.60+	0.78*	0.49	0.62*	0.64+	1.00***	0.42*
	(0.20)	(0.36)	(0.29)	(0.42)	(0.39)	(0.32)	(0.36)	(0.39)	(0.27)	(0.34)	(0.25)	(0.18)
Mina insurgency	0.42	-0.14	-0.24	0.12	0.05	-0.03	0.04	-0.30	-0.41	0.12	0.16	-0.12
	(0.34)	(0.59)	(0.42)	(0.59)	(0.60)	(0.51)	(0.47)	(0.62)	(0.26)	(0.50)	(0.38)	(0.18)
Hidalgo and Allende insurgency	1.17***	2.07***	1.12**	1.95***	1.42**	1.32**	1.49**	1.83**	0.26	1.95***	1.01**	0.03
	(0.29)	(0.45)	(0.36)	(0.52)	(0.52)	(0.47)	(0.52)	(0.56)	(0.32)	(0.42)	(0.31)	(0.14)
Guerrero insurgency	-0.61**	-0.64	-0.29	-0.46	-0.85+	-0.38	-0.82+	-0.34	-0.71*	-0.40	0.44	-0.22
	(0.19)	(0.42)	(0.30)	(0.48)	(0.44)	(0.34)	(0.43)	(0.38)	(0.28)	(0.47)	(0.33)	(0.21)
Telegraphs	0.35***	0.49**	0.26*	0.64**	0.52**	0.29*	0.50**	0.61***	0.30**	0.45**	0.32**	0.09
	(0.10)	(0.17)	(0.13)	(0.20)	(0.18)	(0.14)	(0.16)	(0.17)	(0.11)	(0.17)	(0.12)	(0.06)
French Intervention	0.20	0.41	0.57*	0.57	0.64+	0.49+	0.46	0.71*	0.25	0.59+	0.63**	0.42**
	(0.16)	(0.32)	(0.26)	(0.38)	(0.38)	(0.28)	(0.33)	(0.34)	(0.22)	(0.33)	(0.23)	(0.15)
Elevation*Distance to Center	0.00	-0.00***	-0.00**	-0.00***	-0.00***	-0.00***	-0.00***	-0.00**	-0.00***	-0.00***	-0.00**	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00*	0.00	0.00*	0.00	0.00	0.00	0.00	0.00	0.00*	0.00**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.98***	1.98***	1.38***	2.70***	2.63***	1.12***	1.51***	1.69***	0.90***	2.44***	1.25***	0.47***
	(0.17)	(0.29)	(0.24)	(0.35)	(0.32)	(0.25)	(0.29)	(0.33)	(0.20)	(0.29)	(0.20)	(0.13)
N	579	579	579	579	579	579	579	579	579	579	579	579

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

The second stage results in each of the three subsets, presented in Tables A14, A15, A16 provide further support for the hypothesized relationship.

Table A14: Subset 1, Second Stage with Pre-Cristero Covariates

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Autodefensas	-2.37+	-7.81*	-5.64*	-8.80*	-9.36**	-5.39*	-5.70*	-5.74*	-4.17*	-8.47*	-3.90*	-1.52+
	(1.22)	(3.16)	(2.34)	(3.60)	(3.63)	(2.29)	(2.57)	(2.79)	(1.88)	(3.32)	(1.88)	(0.81)
Railways	0.27+	0.54	0.35	0.82+	0.55	0.47+	0.58+	0.31	0.05	0.55	0.22	0.06
	(0.16)	(0.38)	(0.28)	(0.43)	(0.43)	(0.27)	(0.31)	(0.33)	(0.22)	(0.40)	(0.22)	(0.10)
Rurales	-0.27*	0.13	0.11	0.12	0.05	0.11	0.20	-0.14	0.12	0.12	0.10	0.01
	(0.13)	(0.33)	(0.24)	(0.37)	(0.37)	(0.24)	(0.26)	(0.27)	(0.19)	(0.35)	(0.20)	(0.09)
Elevation	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00+	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.42	2.69*	2.05*	3.04*	3.39**	1.89*	2.06*	1.63	1.58*	2.70*	1.98**	0.83**
	(0.45)	(1.14)	(0.81)	(1.31)	(1.32)	(0.80)	(0.90)	(1.00)	(0.67)	(1.24)	(0.71)	(0.31)
Mina insurgency	0.63+	0.15	0.04	0.42	0.46	0.23	0.30	-0.03	-0.39	0.38	0.50	-0.08
	(0.33)	(1.20)	(0.89)	(1.28)	(1.38)	(0.96)	(0.96)	(1.11)	(0.60)	(1.20)	(0.62)	(0.28)
Hidalgo and Allende insurgency	0.84**	0.93	0.31	0.75	0.03	0.53	0.70	0.99	-0.35	0.76	0.41	-0.19
	(0.30)	(0.65)	(0.50)	(0.72)	(0.76)	(0.57)	(0.60)	(0.66)	(0.42)	(0.66)	(0.39)	(0.18)
Guerrero insurgency	0.09	1.49	1.25	1.95	1.61	1.11	0.83	1.38	0.48	1.92	1.47	0.19
	(0.54)	(1.61)	(1.13)	(1.84)	(1.85)	(1.13)	(1.28)	(1.26)	(0.91)	(1.71)	(0.92)	(0.39)
Telegraphs	0.49**	1.12**	0.70*	1.35**	1.26**	0.67*	0.97**	1.11**	0.59*	1.11*	0.67**	0.20+
	(0.16)	(0.41)	(0.30)	(0.47)	(0.48)	(0.30)	(0.32)	(0.35)	(0.24)	(0.44)	(0.24)	(0.10)
French Intervention	0.32	0.86	0.83+	1.04	1.03	0.80+	0.80	0.99+	0.42	1.04	0.76*	0.47**
	(0.22)	(0.60)	(0.45)	(0.69)	(0.72)	(0.46)	(0.51)	(0.53)	(0.35)	(0.65)	(0.36)	(0.17)
Elevation*Distance to Center	0.00	-0.00*	-0.00*	-0.00**	-0.00*	-0.00*	-0.00*	-0.00*	-0.00*	-0.00**	-0.00+	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	1.35***	2.62***	1.85***	3.47***	3.43***	1.55**	1.87**	2.16***	1.22**	3.16***	1.61***	0.67***
	(0.28)	(0.68)	(0.51)	(0.78)	(0.79)	(0.51)	(0.57)	(0.62)	(0.41)	(0.71)	(0.40)	(0.20)
N	580	580	580	580	580	580	580	580	580	580	580	580

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Table A15: Subset 2, Second Stage with Pre-Cristero Covariates

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Autodefensas	-1.81+	-8.08**	-5.75**	-8.84**	-9.91**	-5.79**	-6.22*	-4.74*	-4.57*	-8.60**	-4.05*	-0.99
	(1.06)	(3.01)	(2.20)	(3.39)	(3.57)	(2.24)	(2.50)	(2.40)	(1.85)	(3.15)	(1.79)	(0.67)
Railways	0.28+	0.56	0.39	0.85*	0.52	0.46+	0.57+	0.43	-0.00	0.56	0.24	0.09
	(0.14)	(0.38)	(0.27)	(0.43)	(0.44)	(0.28)	(0.31)	(0.29)	(0.23)	(0.40)	(0.22)	(0.09)
Rurales	-0.16	0.36	0.24	0.40	0.33	0.29	0.37	-0.03	0.24	0.38	0.26	0.07
	(0.12)	(0.34)	(0.25)	(0.38)	(0.40)	(0.25)	(0.28)	(0.26)	(0.20)	(0.36)	(0.20)	(0.08)
Elevation	0.00	0.00+	0.00+	0.00*	0.00	0.00+	0.00+	0.00	0.00	0.00*	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.30	2.58*	1.97**	2.87*	3.22**	1.88*	2.16*	1.54+	1.63**	2.54*	1.90**	0.64*
	(0.36)	(1.03)	(0.72)	(1.17)	(1.22)	(0.75)	(0.84)	(0.80)	(0.63)	(1.10)	(0.63)	(0.25)
Mina insurgency	0.49	0.17	-0.01	0.46	0.44	0.20	0.29	-0.12	-0.23	0.45	0.32	-0.08
	(0.35)	(1.14)	(0.82)	(1.25)	(1.39)	(0.90)	(0.92)	(0.89)	(0.66)	(1.15)	(0.55)	(0.21)
Hidalgo and Allende insurgency	0.87**	0.75	0.18	0.50	-0.20	0.37	0.48	1.06	-0.49	0.54	0.35	-0.13
	(0.31)	(0.72)	(0.55)	(0.80)	(0.87)	(0.64)	(0.68)	(0.69)	(0.46)	(0.73)	(0.43)	(0.17)
Guerrero insurgency	-0.10	1.62	1.32	2.02	1.92	1.24	0.92	0.99	0.57	2.02	1.58+	0.05
	(0.48)	(1.64)	(1.14)	(1.84)	(1.94)	(1.19)	(1.35)	(1.13)	(0.96)	(1.73)	(0.93)	(0.33)
Telegraphs	0.48**	1.08*	0.68*	1.28**	1.24*	0.71*	0.95**	0.95**	0.63*	1.08*	0.61*	0.16+
	(0.15)	(0.42)	(0.30)	(0.47)	(0.50)	(0.31)	(0.34)	(0.31)	(0.25)	(0.44)	(0.25)	(0.09)
French Intervention	0.32	0.97	0.97+	1.18	1.32	0.89+	0.89	1.03*	0.56	1.19+	0.91*	0.48**
	(0.21)	(0.67)	(0.50)	(0.75)	(0.81)	(0.53)	(0.58)	(0.52)	(0.40)	(0.72)	(0.40)	(0.17)
Elevation*Distance to Center	0.00	-0.00**	-0.00*	-0.00**	-0.00**	-0.00**	-0.00**	-0.00**	-0.00*	-0.00***	-0.00*	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00+	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	1.11***	2.53***	1.77***	3.31***	3.31***	1.51***	1.93***	2.02***	1.21**	3.03***	1.53***	0.53***
	(0.23)	(0.60)	(0.45)	(0.68)	(0.71)	(0.46)	(0.52)	(0.51)	(0.37)	(0.62)	(0.35)	(0.16)
N	579	579	579	579	579	579	579	579	579	579	579	579

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

Table A16: Subset 3, Second Stage with Pre-Cristero Covariates

Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cattle Rustling	Property Damage	Land Dispossesions	Larceny	Robbery	Breach of Trust	Fraud	Threats	Extorsion	Intentional Injury	Intentional Homicide	Kidnapping
Autodefensas	-1.81+	-8.08**	-5.75**	-8.84**	-9.91**	-5.79**	-6.22*	-4.74*	-4.57*	-8.60**	-4.05*	-0.99
	(1.06)	(3.01)	(2.20)	(3.39)	(3.57)	(2.24)	(2.50)	(2.40)	(1.85)	(3.15)	(1.79)	(0.67)
Railways	0.28+	0.56	0.39	0.85*	0.52	0.46+	0.57+	0.43	-0.00	0.56	0.24	0.09
	(0.14)	(0.38)	(0.27)	(0.43)	(0.44)	(0.28)	(0.31)	(0.29)	(0.23)	(0.40)	(0.22)	(0.09)
Rurales	-0.16	0.36	0.24	0.40	0.33	0.29	0.37	-0.03	0.24	0.38	0.26	0.07
	(0.12)	(0.34)	(0.25)	(0.38)	(0.40)	(0.25)	(0.28)	(0.26)	(0.20)	(0.36)	(0.20)	(0.08)
Elevation	0.00	0.00+	0.00+	0.00*	0.00	0.00+	0.00+	0.00	0.00	0.00*	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Morelos insurgency	0.30	2.58*	1.97**	2.87*	3.22**	1.88*	2.16*	1.54+	1.63**	2.54*	1.90**	0.64*
	(0.36)	(1.03)	(0.72)	(1.17)	(1.22)	(0.75)	(0.84)	(0.80)	(0.63)	(1.10)	(0.63)	(0.25)
Mina insurgency	0.49	0.17	-0.01	0.46	0.44	0.20	0.29	-0.12	-0.23	0.45	0.32	-0.08
	(0.35)	(1.14)	(0.82)	(1.25)	(1.39)	(0.90)	(0.92)	(0.89)	(0.66)	(1.15)	(0.55)	(0.21)
Hidalgo and Allende insurgency	0.87**	0.75	0.18	0.50	-0.20	0.37	0.48	1.06	-0.49	0.54	0.35	-0.13
	(0.31)	(0.72)	(0.55)	(0.80)	(0.87)	(0.64)	(0.68)	(0.69)	(0.46)	(0.73)	(0.43)	(0.17)
Guerrero insurgency	-0.10	1.62	1.32	2.02	1.92	1.24	0.92	0.99	0.57	2.02	1.58+	0.05
	(0.48)	(1.64)	(1.14)	(1.84)	(1.94)	(1.19)	(1.35)	(1.13)	(0.96)	(1.73)	(0.93)	(0.33)
Telegraphs	0.48**	1.08*	0.68*	1.28**	1.24*	0.71*	0.95**	0.95**	0.63*	1.08*	0.61*	0.16+
	(0.15)	(0.42)	(0.30)	(0.47)	(0.50)	(0.31)	(0.34)	(0.31)	(0.25)	(0.44)	(0.25)	(0.09)
French Intervention	0.32	0.97	0.97+	1.18	1.32	0.89+	0.89	1.03*	0.56	1.19+	0.91*	0.48**
	(0.21)	(0.67)	(0.50)	(0.75)	(0.81)	(0.53)	(0.58)	(0.52)	(0.40)	(0.72)	(0.40)	(0.17)
Elevation*Distance to Center	0.00	-0.00**	-0.00*	-0.00**	-0.00**	-0.00**	-0.00**	-0.00**	-0.00*	-0.00***	-0.00*	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Distance to Center	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00+	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	1.11***	2.53***	1.77***	3.31***	3.31***	1.51***	1.93***	2.02***	1.21**	3.03***	1.53***	0.53***
	(0.23)	(0.60)	(0.45)	(0.68)	(0.71)	(0.46)	(0.52)	(0.51)	(0.37)	(0.62)	(0.35)	(0.16)
N	579	579	579	579	579	579	579	579	579	579	579	579

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001. Standard errors in parentheses.

A.4 Stable Unit Treatment Value Assumption (SUTVA)

Informally, the Stable Unit Treatment Value Assumption (SUTVA) holds that the treatment of one unit has no effect on other units (Rubin 1980, 591; Rubin 1986, 961). In our case, this means that a given municipality having formed autodefensas shouldn't change contemporary crime rates for *other* municipalities. This seems problematic, given the spatial dependencies involved in armed mobilizations and given that the variable we argue induces municipalities to form *autodefensas* (exposure to the Cristero rebellion) itself exhibits significant spatial concentration. The latter is easily visible in Figure 2.

While we cannot definitively alleviate this potential issue, these concerns are mitigated in the subset analysis. As the maps in Figures A5a, A5b, and A5c show, the municipalities most shocked by locally-exogenous changes in pre-*autodefensa* crime and government repression are distributed widely throughout Mexican territory. Put differently, as the selection of shocked municipalities also limits comparisons between adjacent units, SUTVA violations are less likely to bias our estimations of this more local treatment effect.