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Living in Fear: The Dynamics Of Extortion in Mexico's Criminal Insurgency

Alberto Díaz-Cayeros | Beatriz Magaloni | Aila M. Matanock | Vidal Romero

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John A. and Cynthia Fry Gunn Building | 366 Galvez Street, Stanford, CA 94305-6015

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Beatriz Magaloni (Stanford University)

Aila M. Matanock (University of California, Berkeley)

Vidal Romero (Instituto Tecnológico Autónomo de México)

Alberto Díaz-Cayeros (Stanford University)

Abstract

This paper provides an account of the strategies of extortion and co-optation used by drug trafficking organizations (DTOs) toward civil society in Mexico. Our theoretical approach focuses on levels of territorial contestation among armed actors, as well as state capture by DTOs, to explain variation in co-opting or coercing civil society. Through the use of list experiments in a nationally representative survey, the paper measures extortion and assistance by DTOs in Mexico. We find that territorial contestation among rival DTOs has two effects: (1) a non-linear effect on extortion—more extortion occurs in moderately contested municipalities—and (2) a negative linear effect on assistance—DTOs provide assistance mostly in uncontested municipalities. Additionally, we find that extortion is higher in municipalities where DTOs have captured the state. These results suggest that territorial contestation and state capture are important in determining the strategy toward civil society during drug wars.

Keywords: Crime, drug-trafficking organizations, extortion, civilian abuse, Mexico, list experiments.

Since 2007, Mexico has witnessed a surge in violence linked to drug trafficking, gang wars, and criminality. The sharp increase in homicides coincided with the start of President Felipe Calderón's administration (2006-2012) and his militarized campaign to eradicate drug trafficking organizations (DTOs). The vast majority of deaths, however, have resulted from confrontations between drug cartels competing for control of trafficking routes. Between 2006 and 2012, the drug war claimed nearly 60,000 lives, while thousands have either disappeared or been displaced as a result of violence, making this one of the deadliest active conflicts around the world. While the focus has been on homicides, the Mexican DTOs¹ reach into all realms of society and have built up a huge capacity for violence. Beyond assassinating competing cartel foes, DTOs execute police and politicians, kill journalists, and have even targeted entire neighborhoods with explosives. The violence is so extreme and embedded in everyday life that it has been described as a "criminal insurgency" (Sullivan and Elus, 2010; Sullivan, 2012; Grillo, 2011).

In this paper, we explore DTO strategies toward civil society. DTOs have not received sufficient attention in the literature on civil conflict—in particular, their strategies regarding the civilian population remain under-theorized.² In their interaction with civil society, DTOs may exhibit patterns of coercion and co-optation. In terms of coercion, we examine extortion, which we define as an armed actor charging fees for protection (e.g. Schelling 1984, 185; Gambetta 1996). In terms of co-optation, we explore when DTOs provide protection, permits, land, or even loans and grants, either to individuals or to select "clubs," or wider segments of civil society (as

¹ Mexican drug trafficking organizations are usually referred to as cartels, which is a misnomer since they operate as decentralized criminal organizations. Since it is common parlance, however, we will use drug trafficking organization (DTO) and cartel interchangeably.

² While there is a literature on the strategies that insurgencies may take toward civilians during civil war (Weinstein, 2006 and Walter, 2009), there has not been much work done applying these frameworks to DTOs. Do see, however, Trejo (2012) on the Zapatista insurgency in Chiapas.

described, for example, in McGuire and Olson 1996; Olson 1993; Iannaccone 1992; Berman 2000; Berman and Laitin 2008; Gambetta 1996, 41; and Kalyvas 2006, 96). Mexican DTOs vary widely in their coercion and co-optation strategies, as we will describe and demonstrate. All of these DTOs focus primarily on drug-trafficking, and at times employ violence among themselves and the police in direct pursuit of that aim — but why do they sometimes employ strategies to coerce and at other times to coopt civil society?

To account for variation in DTO strategies toward civil society, this paper draws on the civil conflict literature to propose a theory that highlights the role of two explanatory variables—the level of territorial control and the capture of the state’s coercive power (Kalyvas, 2006; Humphrey and Weinstein, 2006). Beyond contributing to greater understanding of drug violence in Mexico (Bailey 2012; Castañeda and Aguilar 2010; Guerrero-Gutierrez 2010 and 2011; Ríos and Shirk 2011; Dell, 2011; Ríos 2009; Osorio 2012), the paper also relates to the broader question of strategies toward civil society during civil conflict (Lichbach, 1995; Kalyvas, 2006; Weinstein, 2007; Humphreys and Weinstein, 2006; Wood, 2010).

As with other armed groups in civil conflict, DTOs may solicit community support in their operations. To generate profits from the drug trade, traffickers need to operate, avoid competition, and sidestep state prosecution — which requires community support. Citizens may cooperate with DTOs through silence or outright collaboration. Establishing cooperative arrangements with the population requires self-restraint on the part of DTOs. Drawing on Olson (1993, 571), our theory argues that DTOs will establish cooperative behavior toward civilians when they control a region and expect to control it in the future. Under monopolistic control, DTOs can be more confident of reaping future gains from present restraint and may even provide some share of those gains to the community to ensure its continued cooperation. They may, for

example, offer protection, funds, or credit in order to gain civilian loyalty (Berman, 2000; Berman and Laitin, 2008).

Competition for territorial control should be accompanied by decreases in co-optation and increases in coercion, including extortion. When various DTOs compete for control of territory, sustaining cooperative relationships with the community becomes more difficult (Humphreys and Weinstein, 2006). Competition, relying on violence, will likely decrease DTO expectations to rule in the future, and the subsequently shorter time horizons will increase incentives to grab any available present gains. Moreover, violent conflict with other DTOs will likely reduce profits from the drug business. More deals will likely be broken, more people killed, and more shipments intercepted or seized when DTOs fight one another. DTOs facing contested territorial control may also adjust to declining profits from their “core” business by diversifying into a host of other criminal activities, including extortion, but also kidnapping for ransom, human trafficking, and even theft. In extreme forms of violent contestation, competing DTOs can completely undermine their own capacity to extract resources by committing so much abuse that citizens will refuse to pay extortion fees (or will migrate) because no criminal organization can credibly offer protection anymore. Except for this last extreme scenario, extortion and these other activities can provide greater profit than drug trafficking alone in the short-term.

In addition to levels of contestation, state capture likely affects DTO strategies. DTOs often employ capital to capture the government and infiltrate the police. The incentives to extort and prey on the population increase with decreasing likelihood that DTOs and their criminal cells will be punished. It is extremely difficult to know whether local police forces are infiltrated, unless an actual scandal emerges. When state institutions and law enforcement are infiltrated,

however, DTOs are more likely to engage in extortion and terrorize the population with impunity, especially in regions that they are then contesting with other drug traffickers.

In Mexico, there is significant variation in territorial control, contestation, and state capture. Capture, as mentioned, is hard to measure, but police capture and corruption should be more endemic where the former ruling party, the Institutional Revolutionary Party (PRI), still governs. During the long dominance by the PRI, politicians and police likely negotiated deals with DTOs, tolerating them in exchange for bribes. Members of the party, including a former president's brother, have been identified in drug-related corruption cases (e.g. Keefe 2014). The PRI lost the presidency to the National Action Party (PAN) in 2000, likely disrupting the system of power and the state capture by DTOs (Grillo, 2011; Dell, 2011). We therefore expect that DTOs will engage in more coercion in PRI-dominated places.

To test our theory that DTO control produces incentives to coopt civil society, while competition between DTOs produces incentives to extort them, conditional on state capture, we conducted a series of list experiments embedded in a probabilistic nationwide survey carried out in Mexico in July 2011, collected through the Public Opinion Coordination at the Office of the Mexican Presidency. We focus on experimental questions on extortion by DTOs and on the extent to which individuals use DTO assistance, which are sensitive questions in that individuals may feel social pressure or even fear that influences their reported preferences if they are asked directly.

The sample was stratified by population size and level of violence by municipality to ensure proper representation of high-violence areas, even in rural settings.³ Questionnaires

³ Given the intensity of violence in the state of Tamaulipas, it was excluded from the sample frame in order to protect the enumerators.

containing the sensitive items on the list experiment—the statements asking about DTO behavior, the “treatment”—were randomized by polling point and enumerator.

To test our hypotheses, we use the multivariate regression model of survey data for list experiments proposed by Imai (2011) and Blair and Imai (2012). We specify a linear model with identical covariates to examine the dynamics of civilian extortion and assistance by DTOs. The results match our theoretical expectations. DTOs extort civilians primarily in contested territories, where various DTOs fight for control of drug production, trafficking, and distribution. In contrast, DTOs provide assistance and extort at significantly lower levels in territories controlled by a single DTO. Additionally, consistent with the insights from the civil war literature that we discuss below, we find that extortion is highest at intermediate rather than high levels of territorial contestation (and, thus, violence). We also find that territories governed by the PRI are associated with higher levels of DTO extortion, suggesting a role for state capture in addition to DTO territorial control and contestation.

The paper proceeds as follows. The first section identifies the puzzle in the Mexican context. The second section provides testable hypotheses, based on the literature on civil war and mafia crime. The third section describes our method and presents our empirical results. The conclusion discusses implications of our findings for the study of DTOs and their strategies of interaction with civilian populations.

The Puzzle

Over the past decade, the drug war in Mexico has intensified. As the United States implemented a strategy of blocking and disrupting the illicit drug trade flowing from Colombia through the Caribbean, the supply chain shifted into Mexico. When President Felipe Calderón

came into office in December 2006, he initiated an aggressive campaign against the drug cartels, turning it into the centerpiece of his administration. The federal strategy to combat DTOs involved “joint operations” with thousands of military troops and police sent to combat drug cartels directly. This campaign, together with the schisms that then occurred among the DTOs (Guerrero, 2011; Osorio, 2012), coincided with a sharp increase in violence, which has been the subject of much study (Calderón et al., 2014; Escalante, 2011; Mejía and Posada, 2012; Dell, 2011; Coscia and Rios, 2012). The ways in which DTOs interact with the civilian population have received much less attention.

During this violent conflict, the civilian population has both suffered coercion and enjoyed co-optation. DTOs have intensified their use of extortion and kidnapping for ransom, or “mafia-ridden violence” (Guerrero, 2011), and, at the same time, also their use of assistance for civilians. Many high-profile incidents are against private businesses: the Templar Knights, for instance, attacked Sabritas, a subsidiary of PepsiCo, and threatened other corporations, including Danone and Bimbo, with similar attacks. In all, more than one-third of all businesses in Mexico are thought to be coerced into paying protection money. For incidents against individuals, the evidence so far is mostly anecdotal, but civilians consistently report fearing such pressure in surveys (ENVIPE, 2011). DTOs do not only employ strategies of coercion toward civil society, they also seek to co-opt it. DTOs at times provide protection, permits, land, or even loans and grants, either to individuals or communities. While there is less systematic evidence on this, the anecdotes support it, as well.

For example, early in its existence, the Mexican drug cartel *La Familia Michoacana* provided loans and grants to individuals, businesses, and even churches within the communities where it operated. These activities were widely known and even publicized in local newspapers.

The DTO allegedly targeted criminals from whom the community needed protection for “divine justice” (Gibbs 2009). In December 2010, when La Familia Michoacana lost its leader, hundreds in Michoacán marched in support of the DTO with signs reading, “Long Live La Familia Michoacana” (Ferrer and Martínez 2010). By contrast, the Zetas, which served as enforcers for another DTO before splitting, carved out territory through the use of extensive extortion, kidnapping, homicide, and theft across dozens of communities in several states.⁴ In another instance, when the Cartel de Tijuana split, the two resulting factions adopted distinct strategies: Teodoro “El Teo” García Simental favored coercion in Tijuana, while Luis Fernando “El Ingeniero” Sánchez Arellano, who had strong political and economic connections in the city relied on co-optation. These divergent strategies toward civil society require explanation.

To investigate DTO coercion and co-optation strategies toward the population, we embedded a series of list experiments in a probabilistic nationwide survey that was conducted in July 2011. According to our survey, one out of every four citizens had been extorted over the phone. Eighty percent of Mexican citizens also feared becoming the victims of crime, including extortion, and kidnapping for ransom, and most said they had changed their daily routines to lower their perceived risk, even in regions with low probabilities of such crime. Most surveys in Mexico report fear of extortion but then estimate prevalence rates only based on directly asking respondents whether they had engaged in this (illegal) behavior. To our knowledge, no previous study has attempted to use survey techniques that reduce social pressure or even fear, and thus social desirability bias on these sensitive questions, nor have we seen a theoretical account to explain strategic choices to use coercion and co-optation against civilians during a drug war.

⁴ See Ricardo Ravelo’s (2014) account of the Zetas as a franchise.

Our Theory

To explain the logic of DTO strategies toward civil society, we start with the assumption that drug cartels are primarily business organizations—albeit illegal ones—whose main goal is the production, transport, and sale of a product. The magnitude of the drug market and the profits involved, the dependence of citizens on the industry, as well as DTO capacity to buy off the state, means that these armed groups can mobilize support and extend their influence into society, even beyond what most rebel groups can do.

The main activity of DTOs in Mexico is solving the logistical problem of transporting and selling drugs. Like rebels, DTOs sometimes resort to violence to achieve their goals. Drug cartels fight both with each other and against the state for territorial control (Lessing, 2011). One of their main efforts is fighting for control of strategic territories to advance their ability to trade drugs: ports and points of entry into the U.S., as well as localities that are connected to the flows of any type of international trade. Hence, airstrips, airports, and high-speed highways to major cities along the U.S. border are also valuable territories to control. These strategic territories are where most of the violence among DTOs takes place (Dell, 2011; Calderón et al., 2014).

Control of a drug-trafficking route gives a cartel not only the capacity to smuggle drugs directly into the U.S., but also the power to “tax” the illegal long-distance drug trade of other organizations. It is often for this tax revenue that cartels fight each other for control in Mexico.⁵ DTOs charge local suppliers and producers from other countries to transport their drugs, or allow the transport of their drugs, through these routes. Thus, extortion—or taxes for access—is at the core of DTO activity. In areas that these cartels control, they can have the capacity to operate

⁵ We thank Kristof Gostonyi for this valuable insight.

extortion rackets on other activities, unrelated to drugs. Presumably the profit from this extortion is far less than what can be extorted from drug trafficking.

The critical question in this paper is why some DTOs operate their production, trafficking, and sales while co-opting civilians, as others engage in extortion and other coercion in the local communities. To answer this question, we draw on the civil war and mafia crime literature to generate hypotheses about variation in civilian abuse, as well as coercion and co-optation more broadly. The literature on mafias suggests that extortion diminishes productivity, and the propensity for growth, so avoiding it is beneficial if these criminals want to maintain stable control over their regions (Gambetta 1996, 33). Excessive DTO abuse can destroy the human and capital base of the local economy, which would work against the cartel's goal to continue the drug trade without attracting state action (including through reporting by civilians). In many cases, then, DTO incentives may be to refrain from abusing the civilian population, but several factors might change those incentives. We analyze two possible factors below: the degree of territorial control and state capture.

Territorial Control

As with other armed groups, DTOs need tacit buy-in—or at least silence—from local communities in order to operate their business while keeping their activities hidden. Establishing a cooperative relationship with civilians requires that the DTO expects to benefit from it over the long run through its operations. The time-frame of expected control over a territory is therefore critical for DTO behavior toward civilians. Drawing on Olson (1993, 571), we formulate the hypothesis that if an armed actor is in control of a region and expects to be in control in the future, his interest will be to encourage stability and thus continue to receive his taxes; if, however, control is tenuous, the interest of the armed actor will be to seize as many resources as

quickly as possible. In this case, what is being taxed is the drug trafficking, but the logic holds. (This hypothesis can be extended to any group that has coercive ability over a region.) Under monopolistic control, a DTO can be more confident of reaping both current and future profits from restraint against civil society. DTOs that exercise monopolistic control may even provide some share of the benefits of their trade to the population to maintain its loyalty (Iannaccone, 1992; Berman, 2000; Berman and Laitin, 2008).

In contrast, competition between DTOs sparks both conflict and a turn toward coercion. We expect competition between DTOs for territorial control to be accompanied by increases in civilian extortion for the following reasons: first, as the number of armed groups increases, sustaining cooperative relationships with the community becomes more difficult. Civilians loyal to one DTO may defect to another, in order to reap gains or simply prevent losses as control shifts. In such uncertain contexts, DTO time horizons diminish, and each armed group will have incentives to extort as much as it can in the short term before a rival does (Humphreys and Weinstein, 2006). Second, profits from drug trafficking are likely to shrink when violence against other DTOs escalates. Because of the potential for each side to volunteer information about the other, the government is more likely to intervene against DTOs in contested regions, making cartels more vulnerable to arrests, including capture of their capos and lieutenants, and to the seizure of drugs, money, arms, and vehicles (Calderón et al., 2014). DTOs facing contested control by other DTOs, as well as attacks by the state, may adjust to declining drug profits by diversifying into extortion, kidnapping for ransom, and other forms of coercion designed to turn a profit.

Finally, in contested regions, DTOs may extort civilians to force them to withdraw their cooperation from other DTOs, and to prevent them from supplying information to those rivals or

to the police. Aside from profit, extortion can provide information. Extortion—as opposed to homicide, for example—can reveal how much an actor has control or is able to coerce the population in a contested region; it inherently reveals organizational capacity through the amount of cooperation that is observed. If individuals pay protection money or ransoms, rather than reporting them to the police (or a competing criminal organization, and asking for *their* protection), this reveals public perceptions about the level of control by that DTO compared to a rival or the government. This aspect of the theory builds on the idea that civilian collaboration is a crucial determinant of state capacity, but such collaboration also reveals the capability of the group competing with the government (Kalyvas, 2006, Chapter 5).

We therefore believe that DTO monopolistic control should be associated with lower extortion and higher service provision. Violent competition among rival criminal gangs should be associated with higher extortion and lower service provision. Additionally, following logic similar to Kalyvas (2006), we anticipate a curvilinear relationship between levels of territorial contestation and extortion. In places of extreme violence, no DTO can offer credible protection, nor can it extract more resources, because citizens may refuse to pay or even choose to migrate. Thus, we test the following three hypotheses:

Extortion by DTOs should be lower in places with monopolistic control by a DTO than in places with competition for territorial control (Hypothesis 1).

Service provision by DTOs should be higher in places of monopolistic control by a DTO than in places with competition for territorial control (Hypothesis 2).

Extortion should be curvilinear across levels of control: the most extortion should be in places with somewhat but not completely contested control (Hypothesis 3).

Beyond territorial competition among DTOs, various characteristics of these organizations might make them more prone to abuse the population in the territories where they operate (Humphreys and Weinstein, 2006, 433). In the study of civil war, the existence of common goals, preexisting social networks, or formal codes of discipline are all examples of features that restrain predation. In principle, one could argue that levels of abusive behavior by DTO criminal cells should be more likely in less cohesive criminal organizations. Grillo (2011) has described drug cartels as highly decentralized organizations, in which *plaza* heads run semiautonomous criminal cells. Lieutenants are responsible of supervising the criminal cells in their own territory and respond directly to the capos, who supervise the overall business, form strategic alliances, and appoint lieutenants. But variation in the level of decentralization, of course, exists across cartels. Other characteristics also distinguish different cartels: some are more deeply rooted in their communities—those that integrate drug production, for instance—and so may be less prone to abuse because they require more continued cooperation of the local economy to sustain their business. Beyond some journalistic accounts and classified security intelligence, there is little knowledge of the internal organization of Mexican DTOs.⁶ Thus, while we introduce some controls on these characteristics — including fixed effects for each cartel in our empirical models in order to allow for the possibility that each organization might have a distinctive way of interacting with citizens — we largely leave the question of DTO organizational structure for future research.

⁶ There are serious risks in conducting such research, and it is difficult to assess the potential biases contained in scattered journalistic accounts or leaked intelligence.

Police Capture

In addition to levels of contestation between DTOs and DTO characteristics, state capture may affect DTO strategies. DTOs can become the *de facto* power holders in the territories where they operate by capturing the state. The incentives to extort and prey on the population are ever more present if DTOs and their criminal cells know that there is little chance that they will be arrested because state officials are on their payroll.

Since measuring variation in state capture by DTOs is exceedingly challenging, we evaluate whether DTO extortion exhibits variation depending on the political party in office. During the long period of dominance by the PRI, state officials and politicians negotiated deals with DTOs, tolerating them in return for bribes. PRI governors, other party members, and various state officials in various states have faced such accusations.⁷

Upon assuming office in 2006, PAN member Calderón began an open war against the DTOs by deploying the army and the federal police into some of the most violent localities throughout Mexico. The federal structure, however, complicated Calderón's efforts to combat the drug trade. Each state and municipality has its own police corps, and many of these organizations were weak, corrupt, or captured by DTOs. Local authorities command most of Mexico's police: 90 percent of the approximately 500,000 police officers are under the command of state and municipal authorities (Guerrero, 2011). Municipal police have no jurisdiction over crimes related to the drug trade, but they are valuable allies for organized criminals because they are the first line of investigation (Dell, 2011).

⁷ For example, the former governor of Tamaulipas, Tomas Yárrington, is being investigated by law enforcement in the U.S. for his connections to organized crime and money-laundering. The PRI suspended Yárrington in May 2012, and the Specialized Prosecutor Against Organized Crime (SEIDO) in Mexico revealed that he received \$8.5 million from drug cartels to finance his campaign in 1998. There are similar accusations exist against many other PRI governors and politicians (<http://www.proceso.com.mx/?p=312910>).

The pattern of state capture, especially through police behavior, should affect DTO strategy. In certain territories, denser networks of entrenched interests still date back to the hegemonic PRI regime (Dell, 2011; Grillo, 2011). Although it is difficult to know whether the local police are infiltrated, a reasonable hypothesis is that police capture and corruption should be more endemic where the PRI still rules. Thus, all else held equal, we expect that:

Extortion by DTOs should be higher in places where the former ruling party, the PRI, maintains power (Hypothesis 4).

Analysis of DTO Strategies

We evaluate these hypotheses using an innovative survey list experiment that overcomes prevalent problems in previous surveys. A well-known problem in public opinion surveys is that respondents often misreport their behavior and beliefs. Survey accuracy is often affected by responses based on pressure to conform to socially acceptable norms or on fear of providing certain information (Brooks, 2008; Kalyvas, 2006; Krueger, 2007). There is a significant literature on the problems related to measuring citizens' opinions and attitudes for crime and civil conflict (see, for instance, Matanock and García-Sánchez 2014; Lyall et al. 2013; Bullock et al. 2011; Brück et al. 2010; Mosher et al. 2010; Kalyvas and Kocher 2009; Stylianou 2003; Warr 2000).

The highly sensitive nature of these topics motivates all actors involved to hide information. DTOs do not advertise their membership, activities, or modus operandi. The government does not provide much detail on their strategies to combat DTOs for national security reasons, and it certainly does not give out information about its own collusion with

DTOs or its members' misconduct. For their part, citizens fear providing any information that may trigger punishment from DTOs or even the state.

One solution in the literature to maximize the incidence of truthful responses to sensitive issues is the use of list experiments (Blair and Imai, 2012; González-Ocantos et al., 2012; Imai 2011; Sniderman 2011; Glynn, 2010; Holbrook and Krosnick, 2010; Corstange, 2009; Kuklinski et al., 1997a; Kuklinski et al., 1997b; Sniderman and Grob 1996). A list experiment creates two groups of individuals, a control and a treatment group, assigned randomly from the overall sample, such that the two groups are equivalent. Individuals in the control group are shown a list of n items, they are then asked how many of the items they have/do/know of/agree with. It is important to ask them to not specify which items, only their count. The treatment group receives the same list with the n items plus an additional “sensitive” item that we seek to measure. Interviewees in the treated group are also asked to specify a number of items they have/do/know of/agree with, but, again, to not mention which specific items. The difference of the mean item responses between the control and treatment groups provides an adequate estimate of the aggregate proportion of the population that has/does/knows of/agrees with the sensitive item.⁸

Following this literature, we conducted a series of list experiments in the Survey on Public Safety and Governance in Mexico. We randomly selected three groups of 900 observations from the full sample of 2,700: one control group and two treatment groups. There were three different types of questionnaires. Individuals in the sample were randomly assigned to every group. The lists were directly read by the interviewee from cards given by the interviewer. Each interviewee received a total of three different cards. Figure 1 describes the exact wording, and indicates which of the cards that were given to each experimental group. All groups received

⁸ For more detailed explanations, see Blair and Imai, 2012; Imai, 2011; Glynn, 2010; Corstange 2009.

all the cards listed in its row. In the first experiment there was only one treatment, since both treatment groups received the same card. For the other two cards, there were two different treatments groups, each one exposed to a different experiment.⁹ The focus of this paper is on experiments 3, 4 and 5, but the other experiments also provide some insights into how DTOs permeate many aspects of everyday life in Mexico. Experiment 1 measures the prevalence of gun ownership, which has usually been based more on speculation than hard evidence. Experiment 2 measures an all-too-frequent signal of the failure of state control, sightings of non-state armed convoys. Experiment 3 asks whether citizens resort to criminals for help. And the final two experiments, 4 and 5, measure extortion by DTOs and the police. It is important to note that the extortion questions are framed as issues of protection and avoiding harm. Respondents understand we are not simply asking about transactions involving the purchase of drugs, the payment of private security guards, or the all-too-common practice of bribing traffic policemen.

The team collecting the survey was trained to ask the questions related to list experiments correctly. Questionnaires were randomized by polling point and enumerator. Lists were handed to respondents on cards, so respondents could read them for themselves.¹⁰ The mechanics of the process were pretested before the survey. Both sensitive and control items in the lists were pretested as direct questions in a nationally representative survey two weeks before the collection of the dataset.

The list experiments protect both the interviewers and interviewees since no sensitive data is collected on these incidents directly. The safety of both groups was paramount to us given

⁹ This design was established in order to gain more leverage in testing whether the assumptions of list experiments hold, following the advice of Blair and Imai (2012).

¹⁰ Enumerators did not report any problem with respondents' ability to read the cards. The literacy rate in Mexico is high (93.1 percent in 2010), and oversampling in violent urban localities meant that practically every respondent could read.

Figure 1. Description of List Experiments

	Card 1	Card 2	Card 3
Introduction to all groups	Please tell me how many of these things you have in your home. We just want to know how many you have, do not tell me which ones.	Please tell me how many of these things you have done in the past six months. We just want to know how many you have done, do not tell me which ones.	Please tell me how many of these things you have done in the past six months. We just want to know how many you have done, do not tell me which ones.
Control Group	1. Refrigerator. 2. TV. 3. Computer. 4. Votive candles.	1. I got drunk at a party I went to. 2. I did some exercise outdoors. 3. I attended church almost every Sunday.	1. I have received benefits from the Oportunidades program. 2. I have participated in a tanda.* 3. I gave charity (<i>limosna</i>) in church or the street.
Treatment Group 1	EXPERIMENT 1 5. Gun.	EXPERIMENT 2 4. I have seen cars or trucks with armed men who are not policemen in broad daylight.	EXPERIMENT 4 4. I have given money to drug or criminal organizations so that they do not harm me.
Treatment Group 2		EXPERIMENT 3 4. I asked for help from someone working for organized crime.	EXPERIMENT 5 4. I have given money to the police so that they protect me.

* Rotating Savings and Credit Association (ROSCA)

the difficult context. Members of the drug cartels sometimes harass enumerators. In some of the locations where this particular survey was collected, enumerators were escorted either by police,

or even DTO operatives, while doing their work. Our interviewers noted that in the north of the country, DTOs often guard the town, doing rounds every couple of hours, just as the police would patrol a “regular” town. It was also common to observe men known as “*halcones*,” falcons, posted at certain strategic points in both rural and urban localities. These individuals inform the DTO of the presence of government authorities or strangers. The fieldwork team told us that these are not uncommon circumstances in their work. We worked closely with our institutional review board (IRB) to generate an approved plan for safety, which included using these list experiments, rather than direct questions about these sensitive topics, on the survey.

The survey was well-randomized across rural and urban regions and across localities with different levels of violence, which are two of the factors that we believe should have the most effect on the responses. The complete balance of the sample can be consulted in the Appendix. Except for gender, all individual level variables (education, age structure, and income) are well-balanced.

Assumptions are inherent in and necessary to any experiment. List experiments rely on two sets of assumptions: no liars and no design effects. Floor and ceiling effects can generate “liars”: if an individual has performed none or all of the actions listed, he or she may lie so as to not reveal that he or she has performed (or not performed) the sensitive item. Thus, all of the lists are designed to include items rarely expected from the same individual, so that most individuals will have performed at least one of the control items but not all of them.

The other assumption inherent in the list experiment is that there is no “design effect.” That is, adding an item to the list will not have an effect upon the responses for the other items on the list. A “design effect” would mean the items are not independent from each other. Thus, we need to test whether the responses to the control items in the list with the sensitive item are

significantly different from the responses to the control items in the list without it. New techniques developed for testing this assumption allow us to compare these responses and, ideally, accept the null hypothesis of no design effect.¹¹ More specifically, we can identify joint probabilities by comparing the treatment group to the control group, and we expect each probability to be equal to or greater than zero because otherwise there is likely downshifting in the control group. Using a test of two stochastic dominance relationships based on expectations about the joint probability, we can compare the relationships within each number of list items given and emerge with a minimum probability. Using a Bonferroni correction, we reject the joint null if the minimum probability is less than a set alpha.¹²

The results of the list experiments show a significant presence of DTOs in society—much higher than we had anticipated. Table 1 shows the difference in means between the treated and the control groups in the survey for the five list experiments included. On average, one out of every three Mexicans had seen a non-state armed convoy during daylight in the six months prior to the survey. One in ten Mexicans had been extorted by criminal organizations in the past six months. The security situation certainly does not represent stable state control.

Explanatory Variables and Results

List experiments cannot provide information regarding the specific response of each individual, but it is possible to know the responses of groups of individuals. For example, they could identify if wealthier men are more likely to own guns or if poorer women may be subject to greater police abuse. It is also possible to detect whether there are significant differences in the territorial prevalence of the behaviors measured by the lists, which may be highly correlated with

¹¹ For further explanation of the test, as well as the R code, see Blair and Imai (2012).

¹² The list experiments we conducted, regarding armed convoys, DTO lending, and extortion by DTOs all pass the test of no design effect (with, respectively, $p=0.66$, $p=0.37$, $p=0.20$, $p=0.55$).

the areas of operation of DTOs that behave differently toward the civilian population, as discussed in the theory.

Table 1. Average Effect of List Treatment

Treatment	Average Effect
Convoy	0.38*** (0.04)
Help from criminals	0.12*** (0.04)
Criminal extortion	0.10*** (0.04)
Gun ownership	0.15*** (0.04)

Note: Entries are differences in means between the treatment and the control groups. The standard errors are in parentheses. * $p < .10$; ** $p < .05$; *** $p < .01$.

In order to test the specific hypotheses derived from our theory, and to learn more about other correlates of extortion, we use a multivariate regression model of survey data for list experiments as proposed by Imai (2011) and Blair and Imai (2012).¹³ We specified a linear model with identical covariates for the three treatments analyzed in the paper, inquiring into the dynamics of extortion by DTOs and the assistance also provided by these drug cartels.

Our theory highlights two main explanatory variables: DTO territorial contestation and state capture. To measure DTO contestation, we use a dataset compiled by the Mexican federal government on “Deaths by Presumed Criminal Rivalry” (*Fallecimientos por Presunta Rivalidad Delincuencial*)¹⁴ that classifies violent deaths at the municipal level between December 2006 and

¹³ We use the *List* 6.1 package for R (Blair and Imai, 2012).

¹⁴ This database was compiled by Calderón’s government, and it is only available from December 2006 to September 2011. After 2012, the new administration decided not to compile and publish this data. Although the

September 2011 into three categories: 1. “Executions,” defined as homicides resulting from battles between DTOs; 2. “Confrontations,” defined as killings from clashes between the Mexican authorities and DTOs; and 3. “General Homicides,” which are not related to confrontations between cartels or DTO-state violence. To measure territorial contestation among DTOs, we use executions in order to classify municipalities into three categories: monopoly, contested, and contested with extreme violence. We use the accumulated number of executions in a municipality from December 2006 until June 2011, which considers the period of Calderón’s war against organized crime, up until one month before our survey was conducted. As we discuss in more detail below, all results are robust to various thresholds used for categorizing levels of contestation.

We categorize municipalities as “monopoly” when they fall in the first three quartiles of the executions distribution—four or fewer accumulated deaths resulting from confrontations among DTOs between December 2006 and June 2011. Most experts agree that virtually every municipality in Mexico has at least some drug cartel presence. Hence, the category approximates the notion of a single dominant cartel operating in the municipality. Based on the existing accounts on violence in Mexico (e.g. Grillo, 2011; Guerrero, 2010), it is reasonable to assume that zero or very few DTO deaths signal no escalation from cartel competition. When executions occur, they usually spiral into localized spikes of violence reflecting contestation among rival

classification of homicides could be questioned, the dataset is the best estimate reached by a group of experts reconciling the data from state public attorneys’ offices and federal information. An analysis of this data against mortality data coming from death certificates from shows that executions closely match violent deaths by firearms for the age group 15 to 40 years (Calderón et al., 2014).

DTOs for control of the territory.¹⁵ The total number of monopoly municipalities, according to our definition, is 1,819, which represents 74 percent of the total.

The upper quartile is all contested municipalities. However, we further divide contested municipalities into two categories: one with violent deaths in the upper quartile and up to the 99 percentile of cases, comprising 631 municipalities. And a second of the most extreme violence, corresponding to the four most violent cities in that period: Ciudad Juárez, Culiacán, Tijuana and Chihuahua. These cities account for over 30 percent of the executions taking place in the study period, and are different from the rest of the contested municipalities.

Ciudad Juárez was the most dangerous city in the world until 2011, and alone accounted for more than 20 percent of the total executions among members of DTOs. Culiacán, Tijuana, and Chihuahua followed in number of executions, accounting for 6, 5, and 4 percent of the total number of executions in that period, respectively.¹⁶ All results are robust to including these cities, or even a larger set in the extremely violent category.

We expect to observe less extortion by DTOs in places with monopolistic control than in contested places where DTOs fight each other for territorial control (Hypothesis 1). Moreover, service provision by DTOs should be higher in places of monopolistic control than in contested municipalities (Hypothesis 2). Additionally, extortion should be curvilinear across levels of control: the most extortion should be in contested but not in extremely violent territories (Hypothesis 3).

¹⁵ We do not set the cut at zero because monopolistic cartels likely carry out occasional preemptive killings to maintain their reputations in the territory they control. See Bates (2001) on the use of violence as a reputation mechanism.

¹⁶ The next most violent cities—Acapulco, Gómez Palacios, Torreón, and Mazatlán—also have a high number of executions, but less than half the number observed in Chihuahua. The Appendix shows the robustness of our categories of violence. There is no statistical difference in our estimators and estimators that include variables created at different cuts.

Our second explanatory variable relates to state and police capture. We have argued that police capture and corruption of the police should be more endemic where the PRI still governs. We thus include a dummy variable indicating whether the municipality was governed by the PRI when the survey was conducted; where the PRI governs, there should be more extortion by DTOs (Hypothesis 4).

We include variables that allow us to highlight groups of respondents with distinctive patterns, as well as correcting for any imbalance. We add a dummy variable indicating whether the polling point (electoral section) is considered urban or not according to Mexico's Federal Electoral Institute. We include the municipal level of development by using the marginalization index constructed with 2010 census data (CONAPO 2010). We also include a full set of demographic variables at the individual level—sex, age, occupation (unemployed and peasant), education, and receiving Oportunidades social transfers as a proxy for poverty—that control for individual characteristics that may affect citizens' likelihood of being victimized.¹⁷ We describe our findings in the following sections.

Extortion by DTOs

The first column in Table 2 shows average predictions from a linear multivariate regression model using the Methods for the Item Count Technique and List Experiment designed by Blair and Imai (2012) for our list experiments. For ease of interpretation we present simulated predicted values and their significance level, which can be interpreted as the estimated treatment effects.¹⁸ Our explanatory variables are grouped into three categories: 1) those related to our theory regarding levels of contestation and state capture (proxied by PRI-governance); 2) locality

¹⁷ We did not include self-reported income, although we had collected this information, because this variable tends to be very unreliable as a proxy for poverty. Results do not vary if such variables are included, and they fail to be statistically significant.

¹⁸ Complete output of the regressions is shown in the Appendix.

or municipal-level variables related to urbanization and population size; and, 3) individual-level variables that can illuminate patterns of victimization across societal groups.

The first four rows show evidence supporting our hypotheses regarding the impact of territorial and partisan control on DTO extortion strategies. The model predicts a statistically significant increase of extortion in contested municipalities. The coefficients for municipalities of one-cartel control and of extreme violence are not statistically different from zero. The model also shows a positive effect on DTO extortion in municipalities governed by the PRI. *Ceteris paribus*, in contested municipalities the model predicts a 14 percent incidence of extortion by DTOs, on average. The magnitude of the predicted effect of a PRI-governed municipality is slightly lower, at a 12 percent incidence of extortion, on average. Hence, as predicted, citizens appear to be “safer” where one cartel controls the territory and in non-PRI municipalities, at least in terms of levels of DTO extortion.

In terms of individual socio-demographic characteristics, almost 20 percent of men claim to have been extorted by DTOs, which is much higher than the near zero rate for women. DTOs seem to disproportionately target men with secondary and high school education for extortion. Beneficiaries of the Oportunidades federal social program, which is a relatively good proxy for poverty since the transfers are targeted by income level, also report much higher DTO extortion rates than those not receiving the transfers.

In terms of municipal-level characteristics, the estimates suggest that urban localities are where most of the extortion takes place. Moreover, extortion also takes place more often in more marginalized neighborhoods, where respondents reported almost a 60 percent higher DTO extortion rate.

Table 2. Model Predictions

	Criminal extortion	Help from criminals
Violence		
<i>Monopoly</i>	-0.11	0.28***
<i>Contested</i>	0.14***	0.12***
<i>Extreme</i>	0.07	0.00
Individual level		
<i>Woman</i>	0.00	0.10
<i>Man</i>	0.20***	0.11
<i>Age 18-29</i>	0.10	0.08
<i>Age 30-45</i>	0.11	0.07
<i>Age 46-64</i>	0.20	0.07
<i>Age 65 or more</i>	0.01	0.12
<i>Education-None</i>	0.02	-0.09
<i>Education-Primary</i>	-0.01	0.09
<i>Education-Secondary</i>	0.32***	0.17
<i>Education-High School</i>	0.27***	0.14
<i>Education-College or more</i>	0.08	0.15
<i>Oportunidades</i>	0.23***	0.21***
<i>No-Oportunidades</i>	0.06	0.08
<i>Peasant</i>	-0.11	0.18
<i>Self-employed</i>	0.00	0.11
Municipal level		
<i>Marginalization Index-High</i>	0.60***	-0.02
<i>Marginalization Index-Low</i>	-0.06	0.15**
<i>PRI locality</i>	0.12***	0.13***
<i>Non-PRI locality</i>	0.04	0.05
<i>Urban locality</i>	0.12**	0.20***
<i>Non-urban locality</i>	0.07	0.00

Note: Entries are model predictions using the *List 6.1* package for R (Blair and Imai, 2012).
 *p < .10; **p < .05; ***p < .01.

Thus the overall picture of extortion is clear from a compound hypothetical scenario: DTOs disproportionately extort poor men with secondary school education, who live in highly– DTO-contested, PRI-governed municipalities that are urban and marginalized. An individual

with such a profile is predicted by our list experiment to have a 74 percent probability of facing DTO extortion.

Co-optation by DTOs

Regarding co-optation, our hypothesis was that citizens seek help from criminals more frequently where DTOs have firmer control over the territory. In these places, criminals seem to behave as “stationary” rather than “roving” bandits (Olson 1993), seeking to win the hearts and minds of citizens not for benevolent reasons (Fearon and Laitin, 2003; Weinstein, 2007; Berman, 2009; Walter, 2009; Lyall et al., 2013; Berman et al., 2011), but to prevent other cartels from entering their territories. It should be noted that DTOs also help citizens in contested territories, but in a much smaller proportion than in monopolistic areas (Column 3 of Table 2). The significance of DTO co-optation disappears in extremely violent places.

A significant finding is that citizens living in municipalities where the PRI governs receive more help from criminals. It should be noted that there seems to be more DTO activity—both coercive and “benign”—where the PRI governs. We find more DTO help in the urban areas than in the rural areas, and more in relatively rich communities than in poorer ones. However, at the level of the individual, DTOs offer more help to the poor—those who receive Oportunidades transfers report a treatment effect of 21 percent. A poor person living in a relatively rich, urban, PRI-governed locality, where only one cartel is present, has a 56 percent chance of seeking help from DTOs in the prior six months.

Robustness

We performed three types of robustness tests, both related to the core argument of contestation and state capture being critical to the strategy that is followed by DTOs. One potential objection to our operationalization of territorial control is that the results hinge on the

particular decisions on where to put a cut-off point for the categories of monopoly, contestation, and extreme violence. In the Appendix we provide sixteen alternative models with different cutoffs, providing clear evidence that the results do not hinge on this decision (Tables A6 and A7 in the Appendix). In a few models there are changes on the coefficients' significance with respect to our core model (m1), nevertheless, it can be observed that all confidence intervals overlap in some degree. Thus, we are confident on the robustness of our results.

We also made estimations excluding the extreme outlier of Ciudad Juárez, which did not change the results. In all cases, contested territories are the ones where DTO extortion was observed; and in monopoly regions there is evidence of a large increase in the response of receiving help from DTOs (Table A8 in the Appendix).

An additional concern might be that particular DTOs, rather than our main explanatory variables, drive the results. The Appendix shows that when the multivariate models are run including the areas of influence of each cartel, the basic results hold. If anything, the overall treatment effects become slightly larger for co-optation and extortion by DTOs.

The areas of influence of each cartel are often in flux and difficult to ascertain. Determining a specific region controlled by, or areas of influence in the operation of, DTOs, therefore, is not an easy task. We have used available sources of information to code for the territorial reach of Mexican DTOs. We geo-coded images of maps that have been created by the consulting firm Stratfor Global Intelligence, which used intelligence experts to map the territorial reach and extent of drug cartels throughout Mexico.¹⁹ The Stratfor maps shade areas of firm control and weak influence, as well as territories of competing territorial reach for each DTO over time. The Zetas were a particularly difficult organization to code in a reliable way. We used

¹⁹ Stratfor publishes updated maps describing the territorial reach of Mexican DTOs frequently. We used the geo-referenced map from the closest month to the collection of our survey, July 2011.

alternative codings for the Zetas,²⁰ but we soon realized there is a great degree of disagreement among experts of where the Zetas operate.

As alternatives, within our sample, we verified the correspondence of the territorial coding between Stratfor and other sources. First, we geo-coded maps from Coscia and Rios (2012), who use a Google search algorithm to match DTOs mentioned in particular municipalities, and we examined maps from a report generated by the federal government.²¹ We also checked whether the areas of influence corresponded with a state-level classification by Guerrero (2012). The Stratfor data correlates highly with these alternative codings for our sample. We re-ran all of the results using the federal government coding, and the results hold.²² Conditioning on cartel presence, the most important finding is the effect of DTO violent contestation and PRI-governance on coercion and cooptation (Tables A9 and A10 in the Appendix). Through each of these specifications, we found that our results were robust, even considering different coding and analysis strategies.

Conclusions

The presence of criminal organizations is not a new phenomenon in Mexico. What is unprecedented is the way in which criminal organizations have shifted their activities from focusing primarily on the shipment of illegal drugs to international markets, toward diversifying into local criminal activities that prey on citizens, such as extortion, kidnapping, human trafficking, and in general the collection of protection money. Much of the focus of recent

²⁰ In addition, the Institute for the Study of Violent Groups attempted to map the territorial control of the Zetas in Tamaulipas. This information was not relevant for our survey given that this state was excluded from the sampling frame due to security considerations.

²¹ “Información sobre el Fenómeno Delictivo en México” from August 2010. This report classified municipal-level homicides presumably related to drug-trafficking activities according to the specific cartel that dominated the municipality, or the competing cartels vying for control of a given municipality.

²² We provide these results of our alternative analysis in the Appendix.

scholarly work on this problem in Mexico has been in understanding the dynamics of violence. This paper aims to provide an understanding of why drug trafficking organizations adopt particular strategies of extortion, and also co-optation, in their interactions with the civilian population. Drawing from the literature on civil war and organized crime, we provide a theoretical framework in which the degree of violence and territorial contestation between DTOs explains the ways these organizations interact with citizens. Through the use of list experiments, we provide evidence of the pervasiveness of extortion by DTOs in contested regions, as well as estimations of the degree of co-optation and assistance provided by DTOs in uncontested places.

In Mexico's "criminal insurgency," citizens are living in fear. Lethal violence is not the only or most pervasive danger. Citizens are trapped in networks of extortion and coercion where DTOs prey with impunity. When they are in firm control of their territories, DTOs can also behave as more benign stationary bandits and offer citizens help. But as these criminal organizations violently compete with each other—and with the state—for control of territory and trafficking routes, they turn against citizens to extract resources through extortion.

References

- Bailey, John J. 2012. *The Politics of Crime in Mexico: Democratic Governance in a Security Trap*.
- Berman, Eli. 2000. "Sect, Subsidy, and Sacrifice: An Economist's View of Ultra-Orthodox Jews." *Quarterly Journal of Economics* 3(115): 905-953.
- Berman, Eli. 2009. *Radical, Religious and Violent: The New Economics of Terrorism*. Cambridge: MIT Press.
- Berman, Eli, and David D. Laitin. 2008. "Religion, Terrorism and Public Goods: Testing the Club Model." *Journal of Public Economics* 10-11(92): 1942-1967.
- Berman, Eli, Jacob N. Shapiro, and Joseph H. Felter. 2011. "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq." *Journal of Political Economy* 119(4): 766-81.
- Blair, Graeme, and Kosuke Imai. 2012. "Statistical Analysis of List Experiments." *Political Analysis* 20(1): 47-77.
- Brooks, Risa A. 2008. "Society and the Terrorist: How Does Social Support Affect Militant Group Strategy?" Marquette University.
- Bullock, Will, Kosuke Imai, and Jacob N. Shapiro. 2011. "Statistical Analysis of Endorsement Experiments: Measuring Support for Militant Groups in Pakistan." *Political Analysis* 19(4): 363-384.
- Calderón, Gabriela, et al. 2014. "Organizations and the Dynamics of Violence in Mexico's Drug War." Stanford University.
- Castañeda, Jorge, and Rubén Aguilar. 2010. *El Narco: La Guerra Fallida*. Mexico: Punto de Lectura.
- CONAPO, Consejo Nacional de Poblacion. 2010. Índice de Marginación Municipal. http://www.conapo.gob.mx/index.php?option=com_content&view=article&id=487&Itemid=194.
- Corstange, Daniel. 2009. "Sensitive Questions, Truthful Answers? Modeling the List Experiment with LISTIT," *Political Analysis* 17(1): 45–63.
- Coscia, Michele, and Viridiana Rios. 2012. "Knowing Where and How Criminal Organizations Operate Using Web Content." Harvard University. Available at: http://www.gov.harvard.edu/files/CosciaRios2012_WhereHowCriminalsOperate.pdf.

- Dell, Melissa, 2011. "Trafficking Networks and the Mexican Drug War." Harvard University.
- ENVIPE, Encuesta Nacional de Victimizacimización. Survey Measurement: A Revina. 2011. Mexico: INEGI.
- Escalante, Fernando. (2011). "Homicidios 2008-2009: La Muerte Tiene Permiso," *Nexos*, 3 enero 2011. <http://www.nexos.com.mx/?P=leerarticulo&Article=1943189>.
- Fearon, James D., and David D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97(1): 75-90.
- Ferrer, E., and Martínez, E. 2010. "Marcha por la paz en Apatzingán deviene en muestras de "apoyo" a líderes de La Familia." *La Jornada*. December 13. Retrieved from <http://www.jornada.unam.mx/2010/12/13/index.php?section=politica&article=009n1pol>.
- Gambetta, Diego. 1996. *The Sicilian Mafia: The Business of Private Protection*. Cambridge: Harvard University Press.
- Glynn, Adam N. 2010. "What Can We Learn with Statistical Truth Serum? Design and Analysis of the List Experiment." Washington University.
- González-Ocantos, Ezequiel, Chad Kiewiet de Jonge, Carlos Meléndez, Javier Osorio, and David W. Nickerson. 2012. "Vote Buying and Social Desirability: Experimental Evidence in Nicaragua." *American Journal of Political Science* 56(1): 202-217.
- Grillo, Ioan. 2011. *El Narco: Inside Mexico's Criminal Insurgency*. New York, NY: Bloomsbury Publishing.
- Guerrero-Gutierrez, Eduardo. 2010. "Security, Drugs and Violence in Mexico: A Survey." Presented at the Sixth North American Forum, San Miguel de Allende, Mexico.
- Holbrook, Allyson L., and Jon. A. Krosnick. 2009. "Social Desirability in Voter Turnout Reports: Tests Using the Item Count Technique." Stanford Institute for the Quantitative Study of Society.
- Iannaccone, Laurence R. 1992. "Sacrifice and Stigma: Reducing Free-Riding in Cults, Communes, and Other Collectives." *Journal of Political Economy* 2(100): 271-291.
- Imai, Kosuke. 2011. "Multivariate Regression Analysis for the Item Count Technique." *Journal of the American Statistical Association*, 106(494): 407-416.
- Kalyvas, Stathis. 2006. *The Logic of Violence in Civil War*. Cambridge: Cambridge University Press.

- Kalyvas, Stathis N., and Matthew A. Kocher. 2009. "The Dynamics of Violence in Vietnam: An Analysis of the Hamlet Evaluation System (HES)." *Journal of Peace Research* 46(3): 335-355.
- Keefe, Patrick R. 2014. "The Hunt for el Chapo." *The New Yorker*. May 5. pp.38-49.
- Krueger, Alan B. 2007. *What Makes a Terrorist? Economics and the Roots of Terrorism*. Princeton, N.J.: Princeton University Press.
- Lessing, Benjamin. 2011. "Tres Mitos Sobre la Guerra del Narco." *Perspectivas Sobre Desarrollo* (9)1.
- Lyall, Jason, Graeme Blair, and Kosuke Imai. 2013. "Explaining Support for Combatants during Wartime: A Survey Experiment in Afghanistan" *American Political Science Review* 107(4): 679-705.
- Olson, Mancur L. 1993. "Democracy, Dictatorship, and Development." *American Political Science Review* 87: 567-76.
- Matanock, Aila M., and García-Sánchez, Miguel. 2014. "Controlling Civilians? Examining Popular Support for the Military in Colombia." University of California, Berkeley.
- McGuire, Martin C., and Mancur Olson. 1996. "The Economics of Autocracy and Majority Rule: The Invisible Hand and the Use of Force." *Journal of Economic Literature* 34: 72-96.
- Mejía, Daniel, and Carlos Esteban Posada. 2012. "Capital Destruction, Optimal Defense and Economic Growth." Universidad de los Andes.
- Presidencia de la República. 2011. "Base de datos sobre homicidios presuntamente relacionados con el narcotráfico." <http://www.presidencia.gob.mx/base-de-datos-de-fallecimientos/> (December 12, 2011).
- Ravelo, Ricardo. 2014. *Zetas, la franquicia criminal*. Mexico: Ediciones B.
- Ríos, Viridiana. 2009. "To Be or Not to Be a Drug Trafficker: Modeling Criminal Occupational Choices." Presented at the Annual Meeting of the Midwest Political Science Association, Chicago, I.L.
- Ríos, Viridiana, and David Shirk. 2011. "Drug Violence in Mexico. Data and Analysis through 2010." Trans-Border Institute Report, University of San Diego.
- Sniderman, Paul. 2011. "The Logic and Design of the Survey Experiment: An Autobiography of a Methodological Innovation." In *Cambridge Handbook of Experimental Political*

- Science*, eds. Jamie N. Druckman, Donald P. Green, James H. Kuklinski, and Arthur Lupia. Cambridge: Cambridge University Press, 102-114.
- Sniderman, Paul M., and Douglas B. Grob. 1996. "Innovations in Experimental Design in Attitude Surveys." *Annual Reviews in Sociology* 1(22): 377-399.
- Sullivan, John P. 2012. "From Drug Wars to Criminal Insurgency: Mexican Cartels, Criminal Enclaves and Criminal Insurgency in Mexico and Central America, and their Implications for Global Security." VORTEX Working Papers No. 6.
- Sullivan, John, and Elkus, Adam. 2010. "Cartel v. Cartel: Mexico's Criminal Insurgency." *Small Wars Journal* (January 26).
- Trejo, Guillermo. 2012. *Popular Movements in Autocracies: Religion, Repression, and Indigenous Collective Action in Mexico*. Cambridge: Cambridge University Press.
- Walter, Barbara. 2009. *Reputation and Civil War: Why Separatist Conflicts Are So Violent*. New York: Cambridge University Press.
- Warr, Mark. 2000. "Fear of Crime in the United States: Avenues for Research and Policy." *Criminal Justice* 4: 451-89.
- Weinstein, Jeremy. 2006. *Inside Rebellion: The Politics of Insurgent Violence*. New York: Cambridge University Press.

Appendix

Table A1 - Treatment and Control Groups Balance

	Criminal Extortion		Help from criminals	
	Control n %	Treatment n %	Control n %	Treatment n %
Sex: Male	427 47.44	442 49.11	427 47.44	484 53.78
Sex: Female	473 52.56	458 50.89	473 52.56	416 46.22
Age: 18-24	144 16.00	171 19.00	144 16.00	166 18.44
Age: 25-32	171 19.00	195 21.67	171 19.00	165 18.33
Age: 33-40	173 19.22	176 19.56	173 19.22	181 20.11
Age: 41-53	213 23.67	194 21.56	213 23.67	190 21.11
Age: 54+	199 22.11	164 18.22	199 22.11	198 22.00
Education: Primary at most	353 39.22	311 34.59	353 39.22	335 37.22
Education: Secondary+	410 45.56	448 49.83	410 45.56	401 44.56
Education: University+	137 15.22	140 15.57	137 15.22	164 18.22
Income: \$1-\$1,500	195 26.46	191 25.43	195 26.46	189 25.82
Income: \$1,501-\$3,000	238 32.29	268 35.69	238 32.29	222 30.33
Income: \$3,001-\$6,000	204 27.68	191 25.43	204 27.68	212 28.96
Income: \$6,001-\$1mil	67 9.09	74 9.85	67 9.09	77 10.52
Income: >\$1million	33 4.48	27 3.60	33 4.48	32 4.37

Table A2- Regression output**(a) Dependent variable: Criminal Extortion**

	Sensitive Item		Control Items	
	Est.	S.E.	Est.	S.E.
Intercept	0.5055	0.2660	0.6357	0.1870
Violence: Extreme	-0.0606	0.1060	0.0254	0.0743
Violence: Monopoly	-0.1845	0.1393	0.0733	0.0931
Urban	-0.0745	0.0841	0.0731	0.0571
Sex	-0.1190	0.0761	0.1527	0.0506
Age	-0.0004	0.0295	0.0210	0.0203
Education	0.0028	0.0132	0.0117	0.0093
Marginalization	0.1444	0.0582	-0.0293	0.0401
Latitude (More than 25)	-0.0520	0.0916	0.0051	0.0637
PRI locality	0.1201	0.0948	-0.1040	0.0628

Residual standard error: 0.796583 with 1769 degrees of freedom.

(c) Dependent variable: Cooptation by DTOs

	Sensitive Item		Control Items	
	Est.	S.E.	Est.	S.E.
Intercept	0.2168	0.2680	1.3822	0.1951
Violence: Extreme	-0.1591	0.1198	0.0707	0.0831
Violence: Monopoly	0.1814	0.1318	-0.0579	0.0881
Urban	-0.1474	0.0843	0.0127	0.0581
Sex	-0.0176	0.0788	-0.1410	0.0542
Age	-0.0064	0.0297	-0.0374	0.0213
Education	0.0079	0.0138	0.0365	0.0098
Marginalization	-0.0345	0.0607	0.0119	0.0395
Latitude (More than 25)	0.0168	0.1025	0.0787	0.0715
PRI locality	0.0943	0.0949	-0.0452	0.0659

Residual standard error: 0.810012 with 1768 degrees of freedom.

Robustness check – Violence variable

We included in our analysis 3 categorical variables approximating the level of criminal violence in the locality in which the interviewee inhabits based on the cumulative number of deaths at the municipal level from 2007 to 2010; these are the dates for which data on crime-related homicides is available.

The first variable, *monopoly*, considers the low-violence municipalities in which there have been up to 5 homicides, which considers up to the 75 percentile of Mexican municipalities. The second variable, *contested*, considers localities in which criminal organizations fought to control the municipality, and, thus, casualties are present. It considers from the 75 percentile up to the 99.9 percentile of municipalities. We included an additional variable, *extreme*, to consider those localities at the very end of the distribution, the 0.01% of municipalities, in which the dynamics of contention among criminal organizations has significantly escalated, and, thus, it is qualitatively different from the contested municipalities.

Tables A3, A4, and A5 present the summary statistics and the frequency distribution of the homicides variable for all Mexican municipalities and for our survey sample.

Table A3 – Summary Statistics: Cumulative deaths by municipality 2007-2010 (Population)

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	2454
25%	0	0	Sum of Wgt.	2454
50%	1		Mean	17.54279
		Largest	Std. Dev.	167.9111
75%	6	1676		
90%	27	1797	Variance	28194.14
95%	54	2129	Skewness	34.71929
99%	216	7261	Kurtosis	1432.997

Table A4 – Frequencies: Cumulative deaths by municipality 2007-2010 (Population)

(sum) dwrh	Freq.	Percent	Cum.
0	1,224	49.88	49.88
1	232	9.45	59.33
2	146	5.95	65.28
3	88	3.59	68.87
4	81	3.30	72.17
5	48	1.96	74.12
6	52	2.12	76.24
7	47	1.92	78.16
8	29	1.18	79.34
9	27	1.10	80.44
10	30	1.22	81.66
11	28	1.14	82.80
12	16	0.65	83.46
13	17	0.69	84.15
14	18	0.73	84.88
15	16	0.65	85.53
16	18	0.73	86.27
17	8	0.33	86.59
18	11	0.45	87.04
19	12	0.49	87.53
20	8	0.33	87.86
21	12	0.49	88.35
22	11	0.45	88.79
23	4	0.16	88.96
24	5	0.20	89.16
25	7	0.29	89.45
26	12	0.49	89.93
27	5	0.20	90.14
28	8	0.33	90.46
29	7	0.29	90.75
30	7	0.29	91.04
31	8	0.33	91.36
32	6	0.24	91.61
33	7	0.29	91.89
34	6	0.24	92.14
35	4	0.16	92.30
36	6	0.24	92.54
37	6	0.24	92.79

38		8	0.33	93.11
39		9	0.37	93.48
40		4	0.16	93.64
41		5	0.20	93.85
42		3	0.12	93.97
43		4	0.16	94.13
44		2	0.08	94.21
45		1	0.04	94.25
46		1	0.04	94.30
47		4	0.16	94.46
48		1	0.04	94.50
50		1	0.04	94.54
51		4	0.16	94.70
52		4	0.16	94.87
53		2	0.08	94.95
54		2	0.08	95.03
55		2	0.08	95.11
56		1	0.04	95.15
57		2	0.08	95.23
58		1	0.04	95.27
59		4	0.16	95.44
60		3	0.12	95.56
61		3	0.12	95.68
62		2	0.08	95.76
63		2	0.08	95.84
64		1	0.04	95.88
65		1	0.04	95.93
66		2	0.08	96.01
67		1	0.04	96.05
68		1	0.04	96.09
69		1	0.04	96.13
70		2	0.08	96.21
71		1	0.04	96.25
72		2	0.08	96.33
74		1	0.04	96.37
76		3	0.12	96.50
78		2	0.08	96.58
79		1	0.04	96.62
82		1	0.04	96.66
86		2	0.08	96.74
87		1	0.04	96.78
88		1	0.04	96.82
92		1	0.04	96.86
94		2	0.08	96.94
95		1	0.04	96.98
97		2	0.08	97.07
99		1	0.04	97.11
101		1	0.04	97.15
106		1	0.04	97.19
110		1	0.04	97.23
112		1	0.04	97.27
114		1	0.04	97.31
115		2	0.08	97.39
116		2	0.08	97.47
118		1	0.04	97.51
121		1	0.04	97.56
124		1	0.04	97.60
125		1	0.04	97.64
126		1	0.04	97.68
132		1	0.04	97.72
134		1	0.04	97.76
136		3	0.12	97.88
137		2	0.08	97.96

138		1	0.04	98.00
140		1	0.04	98.04
141		1	0.04	98.08
142		1	0.04	98.13
143		1	0.04	98.17
146		2	0.08	98.25
151		4	0.16	98.41
153		1	0.04	98.45
154		1	0.04	98.49
156		3	0.12	98.61
157		1	0.04	98.66
160		1	0.04	98.70
181		1	0.04	98.74
185		1	0.04	98.78
190		1	0.04	98.82
202		1	0.04	98.86
204		1	0.04	98.90
212		1	0.04	98.94
214		1	0.04	98.98
216		1	0.04	99.02
217		1	0.04	99.06
219		1	0.04	99.10
223		1	0.04	99.14
248		1	0.04	99.19
250		1	0.04	99.23
264		1	0.04	99.27
265		1	0.04	99.31
283		1	0.04	99.35
325		1	0.04	99.39
330		1	0.04	99.43
397		1	0.04	99.47
439		1	0.04	99.51
449		1	0.04	99.55
477		1	0.04	99.59
501		1	0.04	99.63
634		1	0.04	99.67
658		1	0.04	99.71
764		1	0.04	99.76
793		1	0.04	99.80
1129		1	0.04	99.84
1676		1	0.04	99.88
1797		1	0.04	99.92
2129		1	0.04	99.96
7261		1	0.04	100.00

Total		2,454	100.00	

Table A5 – Frequencies: Cumulative deaths by municipality 2007-2010 (Sample)

Deaths	Freq.	Percent	Cum.
0	77	4.31	4.31
1	42	2.35	6.66
2	42	2.35	9.00
3	36	2.01	11.02
4	18	1.01	12.02
6	12	0.67	12.70
8	6	0.34	13.03
9	6	0.34	13.37
10	6	0.34	13.70
12	24	1.34	15.04
13	24	1.34	16.39
14	12	0.67	17.06
15	6	0.34	17.39
16	6	0.34	17.73
17	6	0.34	18.06
18	6	0.34	18.40
19	12	0.67	19.07
20	6	0.34	19.41
21	12	0.67	20.08
22	6	0.34	20.41
23	12	0.67	21.09
24	6	0.34	21.42
25	6	0.34	21.76
28	24	1.34	23.10
29	12	0.67	23.77
32	18	1.01	24.78
34	18	1.01	25.78
35	6	0.34	26.12
52	6	0.34	26.45
58	12	0.67	27.13
67	6	0.34	27.46
68	6	0.34	27.80
79	12	0.67	28.47
81	6	0.34	28.80
92	29	1.62	30.43
98	12	0.67	31.10
111	6	0.34	31.43
112	12	0.67	32.10
125	6	0.34	32.44
129	6	0.34	32.77
130	6	0.34	33.11
145	41	2.29	35.40
147	6	0.34	35.74
164	6	0.34	36.07
175	6	0.34	36.41
206	6	0.34	36.74
212	58	3.24	39.99
258	54	3.02	43.01
260	66	3.69	46.70
297	27	1.51	48.21
383	6	0.34	48.55
390	162	9.06	57.61
518	54	3.02	60.63
524	42	2.35	62.98
553	54	3.02	66.00
661	185	10.35	76.34
1415	71	3.97	80.31
1667	77	4.31	84.62

1890	95	5.31	89.93
6437	180	10.07	100.00

To check for potential biases in the regression estimates induced by our selection criteria on the number of cumulative homicides at the municipal level, we ran 16 regression models identically specified to the model presented in Table 2 in our paper, except for the cuts at which we specified the *monopoly*, *contested*, and *extreme* variables.

Tables A4 and A5 show the model we included in the paper (m1) and sixteen additional models (m2-m17) that are identical except for the cuts at which we created the violence variables. The first three columns show the range of values that we assigned to each dummy variable. The last three columns show the predicted value of the experiment with its confidence interval in parentheses at each of the three types of localities. All models contain identical controls.

It can be observed from tables A6 and A7 that there are no statistical differences on the models predictions by varying the cut on the variables approximating violence at the municipal level. In a few specific combinations there are changes on the coefficients' significance with respect to our core model (m1), yet, all confidence intervals overlap in some degree. Thus, we are confident on the robustness of our results as a function of variations on our violence variables.

Table A6 – Model predictions – Criminal extortion

Violence variable range			Model	Criminal extortion		
Monopoly	Contested	Extreme		Monopoly	Contested	Extreme
(0-4)	(6-661)	(1415-6437)	m1*	-0.1078 (-0.3395, 0.124)	0.1359 (0.0443, 0.2275)	0.0727 (-0.0936, 0.239)
(0-4)	(6-524)	(553-6437)	m2	-0.1022 (-0.3355, 0.131)	0.1131 (0.0108, 0.2154)	0.128 (-0.0091, 0.2651)
(0-4)	(6-553)	(661-6437)	m3	-0.099 (-0.3316, 0.1342)	0.100 (0.0014, 0.1986)	0.153 (0.0106, 0.296)
(0-4)	(6-1415)	(1667-6437)	m4	-0.109 (-0.3409, 0.1231)	0.139 (0.0503, 0.2283)	0.042 (-0.133, 0.2173)
(0-4)	(6-1667)	(1890-6437)	m5	-0.1104 (-0.3425, 0.1216)	0.1269 (0.0408, 0.2131)	0.08 (-0.114, .274)
(0-2)	(3-524)	(553-6437)	m6	-0.0855 (-0.3497, 0.1788)	0.1013 (0.0013, 0.2014)	0.1324 (-0.0047, 0.2694)
(0-2)	(3-661)	(1415-6437)	m7	-0.0909 (-0.354, 0.1722)	0.1264 (0.0367, 0.2162)	0.0731 (-0.0932, 0.2394)
(0-2)	(3-1667)	(1890-6437)	m8	-0.0939 (-0.3573, 0.1695)	0.1182 (0.0339, 0.2024)	0.0823 (-0.1116, 0.2763)
(0-3)	(4-553)	(661-6437)	m9	-0.083 (-0.3287, 0.1623)	0.094 (-0.0042, 0.1914)	0.156 (0.0138, 0.2991)
(0-3)	(4-661)	(1415-6437)	m10	-0.091 (-0.335, 0.1541)	0.130 (0.0395, 0.2212)	0.074 (-0.0921, 0.2407)
(0-3)	(4-1415)	(1667-6437)	m11	-0.091 (-0.3357, 0.1538)	0.134 (0.0456, 0.2223)	0.044 (-0.1311, 0.2192)
(0-6)	(8-553)	(661-6437)	m12	-0.065 (-0.2966, 0.1666)	0.095 (-0.0045, 0.1938)	0.154 (0.0111, 0.2968)
(0-6)	(8-661)	(1415-6437)	m13	-0.076 (-0.3058, 0.1547)	0.132 (0.0401, 0.2242)	0.072 (-0.0941, 0.2385)
(0-6)	(8-1415)	(1667-6437)	m14	-0.077 (-0.3074, 0.1536)	0.136 (0.0465, 0.2255)	0.042 (-0.1331, 0.2171)
(0-8)	(9-524)	(553-6437)	m15	-0.0646 (-0.2918, 0.1626)	0.1074 (0.0041, 0.2107)	0.1289 (-0.0082, 0.266)
(0-8)	(9-661)	(1415-6437)	m16	-0.0707 (-0.2964, 0.1549)	0.132 (0.0396, 0.2244)	0.0723 (-0.094, 0.2386)
(0-8)	(9-1667)	(1890-6437)	m17	-0.0734 (-0.2994, 0.1526)	0.1237 (0.0366, 0.2108)	0.0805 (-0.1135, 0.2745)

Table A7 – Model predictions – Help from criminals

Violence variable range			Model	Help from criminals		
Monopoly	Contested	Extreme		Monopoly	Contested	Extreme
(0-4)	(6-661)	(1415-6437)	m1*	0.279 (0.0472, 0.5116)	0.117 (0.0198, 0.2143)	-0.001 (-0.1786, 0.1767)
(0-4)	(6-524)	(553-6437)	m2	0.1559 (-0.0718, 0.3837)	0.1312 (0.0242, 0.2382)	0.075 (-0.0583, 0.2082)
(0-4)	(6-553)	(661-6437)	m3	0.251 (0.0179, 0.4833)	0.141 (0.0331, 0.2494)	0.003 (-0.1416, 0.1482)
(0-4)	(6-1415)	(1667-6437)	m4	0.273 (0.0416, 0.5048)	0.113 (0.0189, 0.2062)	0.009 (-0.183, 0.2005)
(0-4)	(6-1667)	(1890-6437)	m5	0.1629 (-0.0625, 0.3884)	0.1335 (0.046, 0.2209)	-0.0079 (-0.1989, 0.1831)
(0-2)	(3-524)	(553-6437)	m6	0.0186 (-0.2358, 0.2729)	0.1526 (0.0488, 0.2564)	0.0696 (-0.0634, 0.2026)
(0-2)	(3-661)	(1415-6437)	m7	0.0303 (-0.2227, 0.2833)	0.1332 (0.0433, 0.2231)	0.0867 (-0.0836, 0.257)
(0-2)	(3-1667)	(1890-6437)	m8	0.0277 (-0.2249, 0.2803)	0.1466 (0.0614, 0.2318)	-0.0085 (-0.1994, 0.1824)
(0-3)	(4-553)	(661-6437)	m9	0.265 (0.0163, 0.513)	0.142 (0.035, 0.2485)	0.002 (-0.1426, 0.1469)
(0-3)	(4-661)	(1415-6437)	m10	0.294 (0.0452, 0.543)	0.118 (0.0216, 0.2141)	-0.003 (-0.181, 0.1749)
(0-3)	(4-1415)	(1667-6437)	m11	0.286 (0.0384, 0.5342)	0.113 (0.0206, 0.2061)	0.007 (-0.1845, 0.1991)
(0-6)	(8-553)	(661-6437)	m12	0.281 (0.046, 0.5157)	0.136 (0.0269, 0.2443)	0.006 (-0.139, 0.1509)
(0-6)	(8-661)	(1415-6437)	m13	0.312 (0.0774, 0.5459)	0.112 (0.0146, 0.2097)	-0.002 (-0.1798, 0.1755)
(0-6)	(8-1415)	(1667-6437)	m14	0.305 (0.0716, 0.5389)	0.108 (0.0139, 0.2018)	0.009 (-0.1832, 0.2002)
(0-8)	(9-524)	(553-6437)	m15	0.1446 (-0.0787, 0.368)	0.1335 (0.0255, 0.2414)	0.0745 (-0.0589, 0.2079)
(0-8)	(9-661)	(1415-6437)	m16	0.1572 (-0.0637, 0.3782)	0.1184 (0.0256, 0.2112)	0.0826 (-0.0875, 0.2528)
(0-8)	(9-1667)	(1890-6437)	m17	0.1528 (-0.0681, 0.3737)	0.1351 (0.047, 0.2232)	-0.0081 (-0.1991, 0.1829)

Models without Ciudad Juárez

Table A8- Models with and without Ciudad Juárez

<i>Ind. variable</i>	Help from criminals		Criminal extortion	
	m1	m1 without Ciudad Juárez	m1	m1 without Ciudad Juárez
<i>Monopoly</i>	0.258 (0.0221, 0.4928)	0.287 (0.0478, 0.5266)	-0.062 (-0.3149, 0.1908)	-0.0438 (-0.2989, 0.2113)
<i>Contested</i>	0.105 (0.006, 0.2041)	0.104 (0.0044, 0.2038)	0.1402 (0.0453, 0.2351)	0.1438 (0.0501, 0.2376)
<i>Extreme</i>	-0.024 (-0.2169, 0.1697)	-0.136 (-0.3758, 0.103)	0.054 (-0.1186, 0.2268)	-0.0052 (-0.2152, 0.2048)

Models including DTOs

Table A9- Criminal extortion

	Baseline	DTOs
Monopoly	-0.062	-0.048
Contested	0.140***	0.149***
Extreme	0.054	0.058
Tijuana		-0.024
Sinaloa		0.032
Zetas		0.147
La Familia		0.456**
Juarez		0.264*
No cartel		0.139*
Controls	Yes	Yes

Note: Data entries are average predictions from linear multivariate regression models for list experiments (Blair and Imai 2012). * $p < .10$; ** $p < .05$; *** $p < .01$.

Table A10 – Help from criminals

	Baseline	DTOs
Monopoly	0.258**	0.268**
Contested	0.105**	0.125**
Extreme	-0.024	-0.113
Tijuana		0.150
Sinaloa		0.067
Zetas		0.159
La Familia		-0.113
Juarez		0.332**
No cartel		0.035
Controls	Yes	Yes

Note: Data entries are average predictions from linear multivariate regression models for list experiments (Blair and Imai 2012). * $p < .10$; ** $p < .05$; *** $p < .01$.