

UC Berkeley

CEGA Working Papers

Title

Torture as a method of criminal prosecution: Police Brutality, the Militarization of Security and the Reform of Inquisitorial Criminal Justice in Mexico

Permalink

<https://escholarship.org/uc/item/6425928z>

Authors

Magaloni, Beatriz
Rodriguez, Luis

Publication Date

2020-05-01

DOI

10.26085/C3X30P

Series Name: WPS
Paper No.: 119
Issue Date: 1 May 2020

Torture as a method of criminal prosecution: Police Brutality, the Militarization of Security and the Reform of Inquisitorial Criminal Justice in Mexico

Beatriz Magaloni and Luis Rodriguez-Smith



CEGA

Center for Effective Global Action

Working Paper Series

Center for Effective Global Action
University of California



This paper is posted at the eScholarship Repository, University of California. http://escholarship.org/uc/cega_wps Copyright © 2020 by the author(s).

The CEGA Working Paper Series showcases ongoing and completed research by faculty affiliates of the Center. CEGA Working Papers employ rigorous evaluation techniques to measure the impact of large-scale social and economic development programs, and are intended to encourage discussion and feedback from the global development community.

Recommended Citation:

Magaloni, Beatriz, Rodriguez, Luis (2020): Torture as a method of criminal prosecution: Police Brutality, the Militarization of Security and the Reform of Inquisitorial Criminal Justice in Mexico. CEGA Working Paper Series No. WPS-119. Center for Effective Global Action. University of California, Berkeley. Text. <https://doi.org/10.26085/C3X30P>

Torture as a method of criminal prosecution: Democratization, Criminal Justice Reform, and the Drug War in Mexico

Beatriz Magaloni^{1,2} and Luis Rodriguez-Smith^{1,2}

¹Department of Political Science, Stanford University

²Poverty, Governance, and Violence Lab, Stanford University

Abstract

A criminal trial is likely the most significant interaction a citizen will ever have with the state; its conduct and adherence to norms of fairness bear directly on the quality of government, extent of democratic consolidation, and human rights. We trace the emergence and evolution of a judicially sanctioned regime of torture in the investigation of criminal matters and we show that this system survived Mexico's democratic transition. We exploit a survey of the Mexican prison population and the implementation of reforms of the Mexican judicial system to assess how reforms to criminal procedure reduce abuse. We find that changes to procedures around arrest and the conduct of criminal trials can induce quick changes in police behavior. We also explore the role of democratization in constraining state abuse. We find evidence that alternation of political power at the local level produces a temporary decline in torture but that this disappears with the onset of the Drug War and militarization of security, which produced marked increases in torture.

1 Introduction

What restrains police brutality – illegal arrests, coercion of witnesses, fabrication of evidence, and the use of torture to extract confessions? This question is closely related to a classic puzzle in political science: the origin and maintenance of constraints on the state's exercise of coercive power. Our formulation of the question adds a layer of complexity. Theoretical explanations for the emergence and consolidation of a range of phenomena from rights to democracy to constraints on the state tend to focus on the actions of entrenched elite groups with voice in the political system. The classic formulation in

Weingast (1997) posits that a minimal societal consensus is necessary for citizens to coordinate against state transgressions and elite bargains serve as a critical focal point for this coordination. Such bargains are driven by a desire among elites to protect themselves against state transgressions. Here we examine a case of constraints on state transgressions against accused criminals, a group that typically lacks the political clout to force changes to a social contract. Indeed, though most modern criminal justice systems prohibit inhumane punishments and coercion to obtain confessions, a gap between the laws and actual practices is common even in democracies. We use the Mexican case to explore how torture becomes established as a generalized practice in a criminal justice system, the conditions under which democracy can fail to restrain it, and how a change in the criminal justice system stemming from unrelated political concerns has consolidated procedural protections.

Our paper speaks to a large body of work on state repression. Empirically, the evidence shows that democracy decreases state repression (Abouharb and Cingranelli, 2006; Conrad and Moore, 2010; Cingranelli and Richards, 1999; Davenport, 1995, 1999; Davenport and Armstrong, 2004; De Mesquita et al., 2005; Fein, 1995; Hibbs, 1973; Krain, 1997; Mitchell and McCormick, 1998; Poe and Tate, 1994; Regan and Henderson, 2002; Zanger, 2000). Students of authoritarian regimes have focused on torture as a tool of political repression states use against individuals perceived as potentially dangerous. Torture is used to extract information about potential conspiracies (Wantchekon and Healy, 1999). It is also used as a strategy to punish opponents and dissuade would-be dissidents (Svolik, 2012). Autocracies also use torture as a punitive measure against individuals for the commission of certain acts that are indicative of dissent (Blaydes, 2018).

Our work builds and expands the “violent dissent” approach that explains why democracies resort to torture when states face violent threats (Davenport et al., 2007). This line of work aims to make sense of why democracies use torture against rebels or terrorists, but the approach can be extended to criminals and the threat of organized crime. A

considerable body of work has found that a system of legal safeguards has helped make any form of torture – against criminals or political opponents – “very rare in present day liberal democratic states” (Evans and Morgan, 1998). The pacifying effect of democracy on state repression also appears after regime transitions (Davenport, 1999). The existing literature further suggests that certain institutional characteristics of democratic societies are associated with less repression (Cross, 1999; Davenport, 1995; Keith, 2002).

The literature highlights three mechanisms: voice (i.e., participation and electoral contestation), the presence of veto players with real power, and freedom of expression (see Davenport, 1996; Davenport 1999; Davenport and Armstrong 2004; Conrad and Moore, 2010). Other scholars examine the importance of non-governmental organizations and a global civil society on restraining human rights violations (Epp, 1998; Finnemore and Sikkink, 1998; Simmons, 2009b; Franklin, 2008; Hafner-Burton, 2008; Hafner-Burton and Tsutsui, 2005; Murdie and Davis, 2012). In the Latin American context, a range of scholars also examine the role of NGOs and civil society in human rights movements. (Brinks, 2007; Gallagher, 2017; González Ocantos, 2014; Dancy and Michel, 2016; Michel and Sikkink, 2013).¹

Although democracies restrain torture, the moderating impact of democratic institutions disappears when the state faces “violent dissent” (Davenport et al., 2007). This line of work aims to make sense of why democratic states engage in torture against rebels or terrorists – as in the case of the torture of prisoners by U.S. soldiers at Abu Ghraib in Iraq and Guantanamo Bay (Davenport et al., 2007; Greenberg, 2005; Danner and Fay, 2004; Luban, 2007). Other prominent cases include France during the 1960s in Algeria and Chad, or the use of torture to extract information about new potential terrorist threats by the Israeli government against Arabs who have been arrested (Greenberg, 1999). When there is a violent threat, electoral incentives restraining elected officials from resorting to torture might be absent. Following Walzer (2004), the people are unlikely to hold the

¹There is also a large literature we do not consider on the effect of international legal agreements on human rights practices (Hill, 2010; Keith, 1999; Lupu, 2013; Neumayer, 2005; Powell and Staton, 2009a; Simmons, 2009a).

executive accountable for “dirtying his hands” with torture to keep them safe.

Finally, the literature has explored the association between particular institutional provisions and state repression. [North and Weingast \(1989\)](#) argue for an important theoretical connection between constitutions and violations of basic rights (see also [Elkins et al., 2009](#)). An extensive body of work has explored the association between legal and constitutional provisions and state repression, including torture ([Cross, 1999](#); [Davenport, 1996](#); [Poe et al., 2009](#)). According to one line of work, constitutions set the limits for the state and serve as focal point to coordinate society against state transgressions ([Elkins et al., 2009](#); [North and Weingast, 1989](#); [Weingast, 1997](#)). Others scholars argue that judicial independence is a determining factor to restrain human rights abuses ([Powell and Staton, 2009b](#); [Mitchell et al., 2013](#)). Others highlight certain features of domestic legal systems, such as constitutional provisions for basic rights ([Cross, 1999](#); [Keith, 2002](#)) and common law heritage ([Mitchell et al., 2013](#)). Empirically, the scholarly literature has found that constitutional provisions for basic rights ([Cross, 1999](#); [Keith, 2002](#)) and common law heritage ([Mitchell et al., 2013](#)) are associated with less torture. An important line of investigation has also established that de facto judicial independence is negatively correlated with state violence ([Powell and Staton, 2009b](#); [Mitchell et al., 2013](#)). In [Hill and Jones \(2014\)](#), common law, constitutional provisions for fair trials, and judicial independence are among the best predictors of state repression. Their results justify “a stronger focus on legal institutions in future studies of repression, and lend further support to theoretical insights from the comparative institutions literature” ([Hill and Jones, 2014: 673](#)).

This paper builds on and expands this line of research in three important ways. First, unlike most of the existing political science literature that focuses on torture as a tool of political repression or to extract security information, our focus is torture in common criminal trials. We explain when and why judicial torture can become a generalized practice. Second, we elaborate on the reasons why democracies might fail to restrain this form of torture. We expand the “violent dissent” argument ([Davenport et al., 2007](#))

to include threats to the state by criminal groups. Third, to our knowledge this is the first paper of its kind to provide a valid causal identification to the effect of change in criminal justice procedures on torture. In our view, four elements of the inquisitorial criminal justice system expand opportunities for the police to torture: i) the absence of an independent judge to control the phase of investigation and counteract potential biases; ii) a presumption that the actions of the prosecutor and the police are legitimate; iii) weak enforcement of constitutional guarantees for defendants, and iv) strong reliance on confessions. Moreover, we argue that criminal procedures alone can't explain why torture can become established as a generalized practice in a society. As the Mexican case illustrates, torture becomes an equilibrium behavior when courts decide to give confessions full probatory value regardless of how they are obtained.

Our work also speaks to the growing literature on violent crime and drug wars in Latin America. In recent years, levels of fear and insecurity have risen throughout the region. These challenges have fueled public pressure to enlist the armed forces to assist the police in combating crime and drug trafficking organizations (DTOs) (Bailey and Dammert, 2005). *Mano dura* security strategies, bringing about a denial of due process and basic civil rights, have introduced elements of authoritarianism into democracies, leading to “hyperpunitive” criminal justice practices (Godoy, 2006). Mexico started a war against DTOs at the end of 2006, deploying approximately 45,000 military personnel in operations against criminal organizations across the country. There is considerable consensus in the literature that the drug war provoked a dramatic increase in drug-related violence and public insecurity (Trejo and Ley, 2018; Osorio, 2015; Dube et al., 2013; Ríos, 2013; Dell, 2015; Lessing, 2015; Calderón et al., 2015; Phillips, 2015). Although scholars have argued that the Drug War increased human rights abuses (Escalante, 2011; Anaya, 2014; Magaloni et al., 2018; Gallagher, 2017), because of data limitations none provide solid causal evidence. This paper is the first of its kind to provide compelling causal evidence that federal security interventions in Mexico to combat DTOs produced substantial increases in torture. Moreover, the paper also demonstrates that prisoners

convicted for organized crime were systematically subject to more torture.

Lastly, our paper contributes to an emerging body of work on policing and police violence. Drawing on [Mummolo \(2018\)](#), we distinguish broadly between two lines of investigation, one emphasizing potentially immutable officer traits as the culprits of police misconduct – issues like authoritarian personalities, machismo, cynicism, aggression, conservative ideology, and substance abuse ([Balch, 1972](#); [Twersky-Glasner, 2005](#); [Laguna et al., 2009](#); [Niederhoffer, 1967](#); [Hargrave et al., 1988](#); [Fielding and Fielding, 1991](#)).² According to this line of investigation, torture could be explained as an inhumane act of treacherous individuals a democratic state would have a hard time restraining with institutional reforms alone.

A second line of investigation emphasizes the impact of institutions on police violence. [González \(2019\)](#) explains that in Latin America, undemocratic coercive institutions have persisted well after dictatorships ended. She shows that institutional reforms of the police happen sporadically, only when societal preferences converge and robust political opposition forms. Other scholars have also emphasized how the legacy of authoritarian and military control over the criminal justice systems represent critical obstacles for police reform. ([Shirk and Cázares, 2007](#)). Nonetheless, throughout the region there have been many attempts to modernize police forces and criminal justice procedures ([Bailey and Dammert, 2005](#); [Dammert and Bailey, 2006](#); [Davis, 2006](#); [Uildriks, 2009](#); [González, 2019](#)). Beginning in the 1990s, many Latin American countries reformed their criminal justice system, from an inquisitorial to an adversarial one. These reforms have aimed to strengthen due process and fair trials and to better protect the rights of defendants ([Rodrigo de la Barra Cousino, 1998](#); [Biebesheimer and Payne, 2001](#); [Ungar, 2002](#)). The goal was to reform serious deficiencies with the inquisitorial approach inherited from the older European Civil Law codes, including the absence of an independent judge to counteract potential bias during the investigation; lack of legal control of the police;

²A related and important strand of research explores the influence of racial bias on police behavior ([Gelman et al., 2007](#); [Glaser et al., 2014](#); [Goel et al., 2016](#); [Correll et al., 2007](#); [Eberhardt et al., 2004](#); [Legewie, 2016](#)).

lack of investigative capacity of judges; and weak defense of constitutional guarantees for defendants (Rodrigo de la Barra Cousino, 1998). The fundamental issue of whether these reforms have worked to protect human rights and enhance due process remains.

This paper provides valid causal identification of the role of criminal justice procedures on one of the most insidious forms of police brutality: torture. In this respect, our work parallels Mummolo (2018), which in the US context is one of the first pieces of research to provide valid causal identification to the institutionalist path to restraining police violence. In his paper, the problem in need of correction is racially biased and abusive police stops.³ The question this paper seeks to answer is if institutional reforms can restrain police brutality aimed at extracting confessions.

Our discussion and findings are consistent with Milgram's (1974) classic experiment that demonstrates the psychology underlying torture. The experiment reveals why torture can become established under the influence of institutional procedures and pressure from authorities. Superiors within Mexican police and the state Attorneys General offices rewarded police officers who would arrest more suspects *and* could successfully obtain an indictment issued by a judge. According to the constitution, an indictment could only be granted when there was enough evidence in the Preliminary Investigation (*averiguación previa*) to charge the accused with a crime. Criminal judges would give evidentiary weight to confessions extracted by the police and agents of the Public Prosecutor's Office⁴ regardless of evidence that they were obtained through coercion or that the suspect had been detained for a long period of time without access to an attorney.

Empirically, the paper makes use of a novel measure of torture in criminal trials as well as interviews with police conducted in the three largest cities of Mexico, Mexico City, Guadalajara, and Monterrey. Our data comes from the National Survey of the Population Deprived of Liberty (ENPOL), conducted by the Mexican National Statistics

³He leverages a change in the New York Police Department's directives of how offices should stop suspects as well as access to millions of records of police-citizen interactions to demonstrate that procedural changes can quickly and dramatically alter officer behavior.

⁴In Spanish the corresponding name is the Ministerio Público, we refer to it as MP throughout the paper.

Agency in 2016. The survey draws on the responses of a representative sample of 58,127 prisoners to ten questionnaires covering the backgrounds of incarcerated individuals, their experience of the criminal justice system, and their lives in prison. The ENPOL includes an extensive battery of questions about how the police and agents of the MP treated the prisoner at the time of his or her arrest, including questions about physical abuse. In this analysis, we focus primarily on individuals held in state, not federal, custody. As we will discuss later, both levels of the justice system were subject to this reform, though there was an exemption for certain kinds of crimes often prosecuted by the federal government.

To causally identify how the change of an inquisitorial to an adversarial criminal justice system impacts torture, our statistical analyses leverage the staggered implementation of the criminal justice reform in Mexico's states. We define whether a prisoner was a subject to the reform by leveraging the date of his or her arrest. Any individual arrested in a municipality after the new code of criminal procedure took effect is treated. In the states we are studying, the reform was implemented on 65 different dates spanning the period from 2014 to June 2016, making it unlikely that our findings reflect changes in conditions beyond the criminal justice reform.

We use a difference-in-difference methodology to measure the incidence of torture before and after the reform. By using state or municipal-level fixed effects, fixed effects for the time of the arrest and individual controls, our empirical strategy will control for (i) observed and unobserved characteristics in all treated municipalities that are constant over time, (ii) observed individual characteristics, and (iii) major events, such as the onset or escalation of the Drug War. Because the precise timing of the implementation of the reform is not random,⁵ we also subset the data to a six month buffer before and after the implementation of the reform. We do this to exploit the time immediately before and

⁵However, the reform itself was largely out of the control of states, as was the overall timeline. The federal government published a new code of criminal procedure in 2014 in accordance with the reform and ordered all states to overhaul their justice systems to conform to that standard by June 2016. As the details of the new system, the (short) timeline for implementation, and ultimate motivation are driven by federal actions and concerns, many of the details of the implementation were out of the control of state governments, which are the focus of the paper.

after the implementation of the reforms to limit the possibility of confounding factors driving our findings and exploit the impact of the immediate change in procedures and evidentiary standards.

We subject the data to a range of checks. First, we test for anticipation effects by testing for an effect of the official publication of the reform's implementation. Second, we artificially move the timing of the reform in each municipality earlier than that – by two, three, and four years and examine patterns of reported abuse around the faked reform. Third, we use coarsened exact matching on a range of individual level covariates and reestimate the effects. This allows us to balance the sample and reestimate the impact of the reform (Blackwell et al., 2009). Overall, our statistical results demonstrate that the implementation of the criminal justice reform has impacted police behavior, reducing the incidence of torture.

The paper further explores the effect of local democratization, which we measure as alternation of political power in office at the gubernatorial level, on torture. The states with the highest levels of torture are those where the PRI has never lost power. Although democratization reduced torture immediately after the PRI lost power by around 10 percentage points, many states quickly reverted to levels of torture comparable to autocratic levels. To understand this reversion, we focus on the the Drug War that began in 2007, which was associated with a sharp increase in violence and crime in general, as well as a massive deployment of the armed forces to combat DTOs. Our results reveal that torture is significantly higher when prisoners are convicted for organized crime. Moreover, in states where the armed forces and the federal police were deployed to assist local governments with local security through a security intervention known as “joint operations” we find substantial increases of arrests for organized crime as well as torture.

The paper proceeds as follows. In the next section, we discuss the Mexican case, followed by our qualitative fieldwork. The fourth section describes our data. The fifth section presents our empirical analysis about the impact of the criminal justice reform on torture. The sixth section presents our empirical analyses estimating the impact of

democratization on torture. The seventh section presents evidence about how the drug war shaped torture. We end with a conclusion.

2 The Case of Mexico

Authoritarianism in Mexico differed from other autocracies in the region in that a ruling party, not the military, maintained control of the political system. Repression against political opponents was utilized less systematically than in military regimes, where torture became a *state practice*, carried out by various entities or agencies, including specialized groups within the military such as “death squads,” or the dreaded intelligence agencies – for example, the National Intelligence Board (Dirección de Inteligencia Nacional) in the Chilean case ([Esberg, 2018](#)). Mexican power holders did resort to the military to suppress dissents. During the Dirty War in the 1970s (1965-1982) torture was used as a way of pursuing political enemies ([Barba-Sánchez, 2015](#); [Aviña, 2012](#); [González Villarreal, 2014](#); [Doyle, 2003, 2006](#); [Castellanos, 2007](#)). However, the most common form of torture took place in common criminal trials.

Most crimes are investigated and prosecuted at the state level. Governors appoint the State Attorney, the most-high level official in the criminal justice system in each state, who in turn appoints the agents of the MP and the Judicial Police, who are in charge of investigating and prosecuting crimes. There are also a state and municipal preventive police appointed by governors and mayors, respectively. Only the state and federal police have investigative capacity, although municipal police normally serve as first respondent in most crimes. The criminal investigation is in the hands of the MP, which directs the investigative police. Ideally, the MP develops the investigative line and legal strategy and directs the investigative police, which works in the street collecting information and interviews with witnesses. In reality, the investigative police acts without much control from the MP. The MP conducts both the investigation of a crime and the prosecution of the suspected offender.

Judges have traditionally based their decisions almost entirely on evidence presented by the MP in the so-called Preliminary Investigation (*averiguación previa*). The evidence is based on what the police and the MP said took place. In practice, most of the evidence came from confessions and witness statements that could normally be obtained without the defense attorney being present. Judges would exert no oversight over the investigative phase. Critics charge that this meant both that defendants had a limited right to challenge witnesses (Ely Yamin and Noriega Garcia, 1999) and that this system “biases the burden of proof against the defendant, since it falls to the defense team to rebut assertions of the MP compiled during the Preliminary Investigation.”⁶

Excerpts from four jurisprudential theses⁷ on criminal procedure and due process during the PRI period are reproduced below. These Supreme court rulings make explicit that although the 1917 constitution established a series of procedural protections, in practice state officials and the police found due process rights easy to violate because courts gave full evidentiary value to confessions.

- “The verification of traces of physical maltreatment by the defendant during detention does not invalidate a confession if it is corroborated by other evidence on file” (Thesis 139-144, November, 1980, p. 36)
- ‘A confession by a defendant before the Public Ministry should be valid even if it confirms that he or she was subject to a prolonged detention, since it should be assumed that the detainee, in the absence of proof to the contrary, was “in complete freedom to demonstrate each and every one of the circumstances related to the development of the criminal act”’ (Thesis 41, May 1972, p. 15)
- ‘In regard to the lack of defense counsel during detention, the Court emphasized that “the Public Ministry could not be accused of denying a defendant representation,

⁶Javier Dondé Maute quoted in Kingman-Brundage (2016).

⁷A jurisprudential thesis is a feature of Mexican law whereby the Supreme Court dictates how lower courts must interpret the law. Before the 1994 constitutional reform, it was necessary that the Supreme Court issued five separate decisions following similar logic to establish this kind of precedent (Magaloni, 2008; Sánchez et al., 2011a)

since it could not be proven that a detainee had not exercised that right”’ (Thesis 63, March 1974, p. 23)

- ‘If the defendant modified his statement before the judge, the evidence rendered to the Public Ministry should have greater probative value because it was the “most spontaneous”’ (Thesis XLIII, January 1961, p. 37).

The system operated in such a way that police, prosecutors and judges worked as if they were part of the same team. Most suspects would remain incarcerated during the entire trial and the overwhelming majority were unable to rebut charges by the prosecutor and police. [Magaloni and Zepeda \(2004\)](#) reveal that although only 4 out of 100 crimes get prosecuted, after an indictment more than 94 percent of the accused would be convicted after the trial. It did not matter whether there were indications that the detainee had been beaten, suffocated or electrocuted, if he was subjected to prolonged detention, or if he had not been given access to a lawyer. The criminal justice system in Mexico proved itself profoundly incapable of uncovering the truth through investigative methods ([Piccato, 2017](#)). [Heisler et al. \(2003\)](#) survey state employed forensic physicians and find widespread reports of suspected torture backed by physical traces of prisoner abuse.

In short, a democratic Mexico inherited a criminal justice system in which torture was common, confessions were seen as evidentiary gold mines, where incarceration throughout the entire trial was the norm, and which demanded proof of innocence rather than proof of guilt.

2.1 Transition to democracy

The PRI lost power in 2000. With alternation of political power in office and the onset of divided government, a system of checks and balances was consolidated. Moreover, a constitutional reform in 1994 granted the Supreme Court enhanced powers of judicial review. Writing in 2007, a constitutional lawyer in Mexico explained that “since the constitutional reform of 1994, the Supreme Court of Justice has been able to pacify

political conflicts. Nevertheless, the second great task of constitutional jurisdiction, and maybe the most important –the protection of the rights and constitutional liberties of the citizen– has been practically forgotten in the last thirteen years” (Magaloni, 2007). The Supreme Court, as argued in Sánchez et al. (2011a), has traditionally followed a “legalist” approach to judicial interpretation, with the Court making strict interpretations that generally follow lawmakers’ lead. The Supreme Court became a real veto player, mostly serving as arbiter of political conflicts among the states and the federation, but increasingly interpreting laws (Domingo, 2000; Sánchez et al., 2011b). According to the literature, increased electoral competition, veto players, and freedom of expression should have led to a decline in judicial torture. Our approach stresses two reasons why the transition to democracy had limited effects on protecting human rights.

Unlike other democratization processes in the region, Mexico did not implement major security-sector reforms that constrained military and police behavior through mechanisms of civilian oversight and social accountability (Davis, 2006; Shirk and Cázares, 2007; Uildriks, 2010; Trejo and Ley, 2018). The main institutional reforms negotiated during the transition aimed to restrain electoral fraud and to equalize the electoral playing field, while the criminal justice system was left mostly intact after the transition to democracy (Eisenstadt, 2003; Magaloni, 2006; Trejo, 2012; Schatz et al., 2007). Moreover, the 1994 constitutional reform left unchanged the institutions for the adjudication and interpretation of fundamental rights that had prevailed during the authoritarian era – most notably the *Amparo trial*, a form of habeas corpus through which individuals can challenge laws or acts by state authorities that violate the constitution (Domingo, 2000).

A second reason why democracy in Mexico has failed to restrain torture is the sharp increase in criminal violence. There is considerable consensus in the literature on Mexico that alternation of political power in office provoked an increase in drug-related violence and public insecurity (Trejo and Ley, 2018; Osorio, 2015; Dube et al., 2013; Ríos, 2013). Moreover, in 2006 president Felipe Calderón from the National Action Party (PAN) started a war against drug trafficking organizations (DTOS), which further increased

violence ([Dell, 2015](#); [Lessing, 2015](#); [Calderón et al., 2015](#); [Phillips, 2015](#)). The drug war produced a dramatic increase in violence.

President Calderón strategy to combat DTOs involved “joint operations” with thousands of military troops and federal police sent to assist local governments to combat criminal groups and with local security functions. The president deployed approximately 45,000 military personnel in operations against criminal organizations in various parts of the country. During his presidency more than 6,000 people accused of being involved in drug trafficking activities were arrested, as well as a large number of cartel leaders and lieutenants ([Calderón et al., 2015](#); [Phillips, 2015](#)). The armed forces implemented many of these arrests. [Magaloni et al. \(2018\)](#) present empirical evidence that the drug war sharply increased the practice of torture in two scenarios: a) when the armed forces conducted the detention of a suspect, and b) when suspects were accused of drug trafficking. Methods used included electroshocks, waterboarding, suffocation, and stabbing. Other scholars have also argued that the Drug War increased human rights abuses ([Escalante, 2011](#); [Anaya, 2014](#)).

2.2 Reform

The Calderón government faced accusations of human rights violations from international organizations such as Amnesty International, Human Rights Watch, and the UN Human Rights Council. From October 2007 to October 2016, the National Registry of Missing People registered 28,937 forced disappeared cases, leading to local NGOs organizing around families of the disappeared. The families were not only clamoring for an end to the recent upsurge in violence, but demanded the state respond with adequate investigations. As [Gallagher \(2017\)](#) explains, the involvement of activists and advocates of the families of the disappeared brought local authorities to investigate and prosecute some disappearances and homicides in a case by case basis. Other local NGOs began to organize around the problems of extra-judicial killings and executions.

In 2008, the Calderón government negotiated a major criminal justice reform with Congress. The reform set the framework for the transformation of the inquisitorial criminal justice as well as the principles that would transform criminal prosecution and trials related to criminal offenses not linked to organized crime. These criminal offenses are mostly under the jurisdiction of states and municipalities. The reform granted a grace period to the states for implementation, which required establishing the necessary infrastructure, including hiring and training new judges. This meant that the implementation of the reform would be postponed until after the Calderón presidency was over. It is important to emphasize that the reform would exempt the prosecution and indictment of organized crime offenses, defined by law as federal crimes committed by “three or more persons.” In this sense, the reform granted virtual legal immunity to state actions in the drug war. The political rationale behind the 2008 justice reform thus seem clear: the federal government sought to retain its leeway to combat organized crime, but it was costly to completely ignore mounting international pressure and complaints by local NGOs of human rights abuses committed during the Drug War. The 2008 criminal justice reform aimed to relieve these pressures while retaining the federal government’s ability to combat drug trafficking groups without much legal restraint.

During the period leading up to June 2016, all states in Mexico were obligated to overhaul their criminal justice systems and codes of criminal procedure to bring them into compliance with changes made to the Constitution in 2008. Although the pace at which states established the necessary infrastructure and retraining of police and public prosecutors vary considerably, all states would eventually be obliged to introduce the new criminal justice procedures. Our statistical analyses leverage the date of implementation of the criminal justice reform beyond which states had no choice but to prosecute criminals under the new procedures. Timelines for the implementation of the reform were left up to individual states. Because the impetus for the reform was largely a matter of national politics and initially it was not a priority for the Calderón administration, we think it is likely that the reform was not designed with the interests of individual state governments

in mind. Moreover, the reform followed a strict implementation guideline – each state-level announcement chose days on which, for a given region, the extant code of criminal procedures would be abolished and the new code would enter into effect. That is, even if the improvements to infrastructure or training to make the reform effective had not been completed, new procedural protections would apply to all that jurisdiction’s arrests.

The reform was complex but we will cover some of the more salient features here. It includes provisions specifically designed to limit the use of torture and ensure the protection of due process. The prosecution of a crime is now handled by a panel of three judges. The first controls the conduct of the investigation of a crime, the second oversees the trial phase, and the third oversees the execution of the sentence. Moreover, the reform introduces oral trials for criminal cases, allowing far greater opportunity for the defendant to challenge the prosecution’s presentation of evidence. The reform additionally limits pretrial detention to cases of organized crime. Crucially, it inserts a section in Article 20 of the Constitution which reads “A confession offered without the assistance of a defense counsel shall lack all probative value.” To state the obvious, this limits the incentive to extract forced confessions by making them inadmissible. The goal of the reform was to limit abuses by police, judges, magistrates and public prosecutors. The reforms created more judicial controls over the period of criminal investigation and prosecution by police and the MP. The reforms also empowered the defense and introduced oral and adversarial elements in criminal trials that used to be written. While it is generally believed that these reforms improved the protection of human rights, to our knowledge there are no prior studies documenting the causal effects of the change in type of criminal justice system on torture.

3 Interviews with police officers

This section reports on fieldwork conducted with police officers in the largest cities of Mexico: Mexico City, Monterrey and Guadalajara ⁸ Interviews were collected with the commander in chief, supervisors, and street officers. Because of the sensitivity of the topic, all officers will remain anonymous and we will not report the name of the municipality or the place where the interview was conducted to protect our informants. Interviews were collected between the fall of 2017 and first six months of 2018. We spoke with 115 police officers individually or in a focus group format. Interviews were collected in a structured, semi-structured, and narrative approach. We never asked directly whether an officer had tortured someone. The interviews were geared toward understanding how the criminal justice reforms have changed incentives for police officers.

Police officers revealed that the reform has produced an important transformation in the way police handle arrests. A police chief explained as he was showing us the detention cells in the municipal police headquarters:

We have installed cameras in this area. Everything that happens here is now recorded. We instruct street police officers that they should not bring criminals here anymore to interrogate them. Today judges easily deny the legality of an arrest for things such as taking a long time to bring a detainee to the MP because there is too much traffic. This can throw out the case. Part of the problem for us is that criminals have learned to work the new system in their favor. The new system is too “garantista” [translates as too protective of human rights.] We advise police officers not talk to them at all, not to interrogate them anymore because we risk losing the cases when they do.

⁸Monterey and Guadalajara are organized along municipal lines, which means that each city has as many preventive police units as its number of municipalities. In Monterrey we conducted interviews in 8 of the 13 municipalities that compose the metropolitan area. In Guadalajara we collected interviews in the two largest municipalities - Zapopan and Guadalajara. In Mexico City a single police force covers the entire jurisdiction.

Police were used to taking suspects to the police headquarters rather than directly to the MP. Without a defense attorney, police would interrogate suspects using a variety of coercive measures to intimidate them and extract confessions. For many police corporations, it has taken time to change these coercive routines. A police chief in a different municipality explained:

We are making big efforts to train our police officers to work within the new criminal justice system. We also have hired a team of lawyers to assist street police officers fill in the *Informe Policial Homologado (IPH)*. We have learned not to use words such as “subjugate”, “handcuff”, “subdue”, because these words are enough to throw out a case. But there are many cases when detainees walk free because police fail to follow the new rules.

A concern police officers reported is that with the new procedures judges easily deny indictments and “suspects walk free” when police arrest without following the new protocols. Our interviews revealed that older police officers have a harder time adjusting their routines to the new system. A police chief in a different municipality told us:

Older police officers complain more about the new criminal justice system, they make more mistakes, and they resist more. They complain that the new system is paternalist, that it protects criminals, and that it excessively weakens the police as the strong link in the chain of crime. The problem is that many police officers don’t know how to act in line with the new standards and they ruin the cases from the very beginning by doing things such as threatening or hitting suspects.

We observed wide variation in how the police are adapting to the new system. In some places the municipality has invested a great deal of resources in ongoing training of the protocols - how to arrest, secure a crime scene, fill in the *Informe Policial Homologado (IPH)*, and participate in court hearings. But in other municipalities the police were

caught utterly unprepared. Many police officers barely know what to do with a crime scene or how to secure evidence, let alone how to arrest someone without violating due process.

A particularly important challenge for supervisors is how to properly motivate street police officers to invest the extra time it takes to arrest following due process. Police officers explained that the temptation is simply to stop arresting because it takes “too much time to do it properly”. A police officer told us that “arresting someone with the new procedures takes between 8 to 36 hours, a colleague recently took 48 hours.” In our view, the best municipal police units have instituted salary bonuses and other incentives to compensate the police when they work beyond their normal hours. A police chief told us that he “actually gives police officers a day off when they take long hours to arrest or secure a crime scene.” Another police chief told us that they are now starting to “pay police officers bonuses for lowering crime indicators and citizens’ complaints in their corresponding city blocks” rather than paying them for the “number of arrests.”

One of the most significant limitations police face is lack of capacity to conduct serious investigations. Our field work revealed that development of investigative policing is in its infancy. It also revealed that the coordination between the preventive police, investigative police, and the MP is deficient. A police officer explained that there is “no coordination with the State’s Attorney’s office and the MP, who never do their fieldwork. So when it comes to who can offer real criminal investigation, nobody is capable”.

Our interviews revealed that part of the reason police officers perform their work resorting to torture is that they get monetary bonuses for arresting and indicting people. A police officer explained to us:

Here we get monetary bonuses for arresting. But it is necessary to get an *auto de formal prisión* (indictment) after the arrest. If you have a confession the judge would for sure give you one.

Analogous set of incentives are present for investigative police officers. In an exten-

sive report by *Animal Politico* on homicide investigations,⁹ police officers interviewed explained that superiors would demand one solved murder a month. They also agreed that confessions or witness testimony are the only forms of evidence that can clear a case. In the article, a police officers explains the strategy he normally uses with the following example: “One day there was a murder at an auto repair shop in the west side of the city. They killed one guy, there were two others who were there and some witnesses told us about them. We went and we grabbed them. I took one aside and told him ‘the other guy confessed and said it was you’ and I did the same with the other. Then after a quick beating they both confessed”.

That superiors rewarded police officers for “solving” homicides in this manner was confirmed in other interviews, including with the Secretary of Security of Mexico City. The secretary explained that with the new criminal justice system they needed to design a different bonus system to reward police officers because “the current one is not compatible with the new realities established by the criminal justice reform.”

The reliance on confessions and oral testimony as the currency of the judicial system has been so absolute that it leads to incompetence or unwillingness to pursue physical evidence. Police barely understand basic investigative concepts and that often means the evidence recovered at a crime scene is declared illicit and later is inadmissible. Not only are police officers inadequately trained, often agencies of the MP lack the requisite number of officers to respond to crimes in their jurisdictions. The resulting backlog proves quite hard to solve, exacerbated by a lack of equipment and personnel for processing evidence from crime scenes or even identifying corpses. A police officer sums up the resulting chaos: “my agency doesn’t have a medical examiner, it doesn’t have a forensic expert, we lack absolutely everything”.¹⁰

⁹<https://www.animalpolitico.com/kill-murder-mexico/>

¹⁰This complaint also comes from the *Animal Politico* investigation.

4 Data

We distinguish between two different kinds of torture derived from the ENPOL. We examine what we call “brute force.” To construct our measure of brute force, we use two questions – whether the individual was beaten or kicked and whether the individual was beaten with objects. Responding affirmatively to one of the questions constitutes brute force torture.¹¹ We contrast this with what we term “institutional torture.” Following [Magaloni et al. \(2018\)](#) we take this as torture which requires a dedicated space, equipment, or training to carry out effectively, contrasted with beatings, which can happen anywhere. Because this kind of torture requires physical and human resources in the form of space, specialized equipment, and some degree of training to avoid killing the victim,¹² we believe that it requires some kind of institutional endorsement to take place, either in the cells of police station, the prosecutor’s headquarters, or a clandestine detention center. We operationalize this concept by using questions about whether a respondent was crushed with a heavy object, electrocuted, suffocated or drowned, burned, or stabbed while in custody. If the prisoner responds that he was subject to one of these five abuses, he is coded as having been subject to institutional torture. Given these constraints, it seems implausible that this activity could be occurring without the knowledge and support of superiors. Finally, we include reports of threats by authorities either to press false charges or to harm a detainee’s family.

The survey asks about these experiences both before the police brings the suspect to the MP and at the MP. We thus have the following measures of violence and intimidation:

1. Brute force
2. Institutionalized torture
3. Threats

¹¹The wording for these questions is provided in the Electronic Appendix.

¹²It is for this reason that governments often employ medical professionals in clandestine torture centers – see, for instance, the use of doctors by the Argentine military during the Dirty War or by the CIA in its post-9/11 torture program.

We merged the survey data with a dataset compiled from announcements of the incorporation of the accusatory penal system and the national code of criminal procedure into state legal systems.¹³ There were three ways states updated their systems. States (a) created a timetable whereby the reform would enter into effect in specific geographic units (judicial districts or the entire state) on a certain date,¹⁴ (b) created a timetable whereby the reform would begin covering certain classes of crimes on a given date, or (c) chose some combination of the two. Our analysis only focuses on states that followed the geographic-units mode of reform. Any individual arrested on or after the implementation date in a given municipality is considered to have been arrested under the new system.¹⁵ We report all of the dates compiled from the Supreme Court in Table 1 in the Electronic Appendix.

4.1 Abuse in the Mexican criminal justice system

We present a range of descriptive statistics of the scale of the problem.¹⁶ Table 1 reports different forms of abuse prisoners experienced. The table distinguishes between reported abuses before the prisoner arrived at the MP and abuses at the MP.

¹³These announcements are available on the Mexican Supreme Court's website as well as state official records.

¹⁴This is the majority of states.

¹⁵We do not have fine-grained enough information about the crimes respondents were accused of to match them against the specificity of the statutes covered by the implementation decrees for categories (b) and (c).

¹⁶The Appendix also presents a range of descriptive statistics, including demographics of the prison population.

Table 1: **Rates of different categories of torture reported by state detainees**

Type of abuse	Before public ministry	At public ministry	At both
Brute force			
Beatings	56.62	39.00	33.69
Beatings with objects	36.82	23.48	18.74
Institutionalized torture			
Crushed with heavy objects	35.01	23.21	18.36
Suffocated or drowned	34.29	25.32	20.29
Electric shocks	18.92	14.44	10.71
Burned	6.07	4.52	2.89
Stabbed	3.68	2.37	1.19
Threats			
False charges	50.29	41.01	32.85
Harming family	26.01	5.35	14.16
Other abuses			
Held incommunicado	55.24	47.47	38.34
Stripped	43.88	37.89	29.09
Tied	38.51	28.93	22.99
Blindfolded	37.29	26.78	21.94

Note: Data are only for prisoners at state detention centers and exclude federal prisoners.

In terms of physical violence, close to 58% report beatings before arriving to the MP and 40% at the public ministry. Notably, violent forms of institutionalized torture like electrocution and suffocation or drowning are alarmingly common. These forms of institutionalized torture are slightly more commonly executed before the suspect arrives to the MP, and probably take place either in a clandestine detention center or at the police headquarters. However, at the MP these forms of institutionalized torture are also common. Many prisoners report other kinds of abuses, including being held incommunicado, stripped, restrained or tied, or blindfolded. The table also suggests that there is a sizable number of cases where the suspect is subject to abuses both before and once arriving to the MP. Since it might be that prisoners have poor recollection of where exactly torture and threats took place, we will not distinguish in our models whether abuse took place before or after the MP.

Table 2: **Outcomes comparing democracy and criminal justice reform**

	Average, all pre-reform	Average, all post-reform	Difference	p-value
Brute Force	67.04%	42.26%	-21.79	0.00
Institutional Torture	55.55%	34.66%	-20.89	0.00
Threats	64.62%	45.60%	-19.02	0.00
Total No.	30,548	2,778		
	Average, pre-local democracy	Average, post-local democracy	Difference	p-value
Brute Force	66.55%	62.71%	-3.84	0.00
Institutional Torture	54.58%	50.53%	-4.04	0.00
Threats	63.77%	62.07%	-1.7	0.01
Total No.	20,330	30,963		

Table 2 classifies abuses into the three categories that will be used for the empirical analyses, Brute Force, Institutional Torture, and Threats. The data corresponds to arrests in those states where we are examining the reform across the entire period before the implementation of the reform and the entire period afterwards. The comparison of the entire pre- and post- reform periods shows a dramatic decline in the occurrence of these abuses. The table also reports a comparison of the arrests performed in states before the PRI lost the gubernatorial election for the first time, which we define as the onset of local democratization, and arrests after that date. The statistical analyses in subsequent sections aim at demonstrating the causal effects of the criminal justice reform on torture. We will also explore the effects of local democratization.

In terms of how truthful prisoners' responses might be, we note that although prisoners could have incentives to exaggerate, their answers are inconsequential for their convictions (e.g., judges can't legally take these into account). However, it is important to mention that although the majority of respondents had been convicted, those who were in prison waiting for a sentence could have interpreted differently and might have more incentives to lie. Table 3 shows the conviction status of the prison population: around 70% had been convicted at the time of the survey, 29% were waiting for a sentence, and 2% were "partially" sentenced. The table also shows reported abuses by each of these groups. Importantly, propensities to report abuse are almost the same among convicted and not convicted prisoners, which suggest that responses are not strategically given in

anticipation of how they might influence a conviction. However, those who are “partially sentenced” show a significantly higher propensity to report abuses. In all of our statistical models include the partially sentenced prisoners although excluding them doesn’t change the results. ¹⁷

Table 3: **Conviction status and reported abuses**

	Brute Force	Int. Torture	Threats	(Num)
Not Sentenced	65.37	54.97	65.55	9,746
Sentenced	64.72	52.78	61.46	22,785
Partly Sentenced	81.93	73.63	81.87	701
(Num)	20,906	17,231	20,179	

Note: Data are only for prisoners at state detention centers and exclude federal prisoners.

Lastly, we present descriptive statistics for the authority performing the arrests, detention centers and crime of conviction. Around 33% of the entire prison population are in jail because for property crimes, 23% for homicide, 21% for organized crime and 11% for rape. Organized crime is operationalized as extortion, possession of illegal weapons, drug possession, or drug commerce. 88% of the prisoners are detained in state and 12% in federal prisons. Municipal and state police forces performed the overwhelming majority of the arrests 42 and 47%, respectively. Local police have jurisdiction over most crimes but drug trafficking and organized crime are in the hands of federal authorities. However, even in these cases local police normally serve as first respondents and their collaboration is essential for federal authorities to combat DTOs, as we further elaborate below.

¹⁷If we restrict the sample to six months before and after the criminal justice reform, approximately 63% of those arrested immediately before the reform and 61% of those arrested just after the reform had not been sentenced at the moment when they were arrested. Although this is a high number, we note that it doesn’t change before and after the reform, suggesting that this is unlikely to be driving our results.

Table 4: **Detaining authority and crime**

Crime	
Homicide	23.65
Theft	33.14
Organized crime	21.26
Rape	10.54
Detention center	
Federal	11.76
State	88.24
Detaining authority	
Municipal police	42.34
State police	46.71
Federal police	2.57
Judicial police	7.34
Army or Navy	0.45

4.2 The correlates of torture

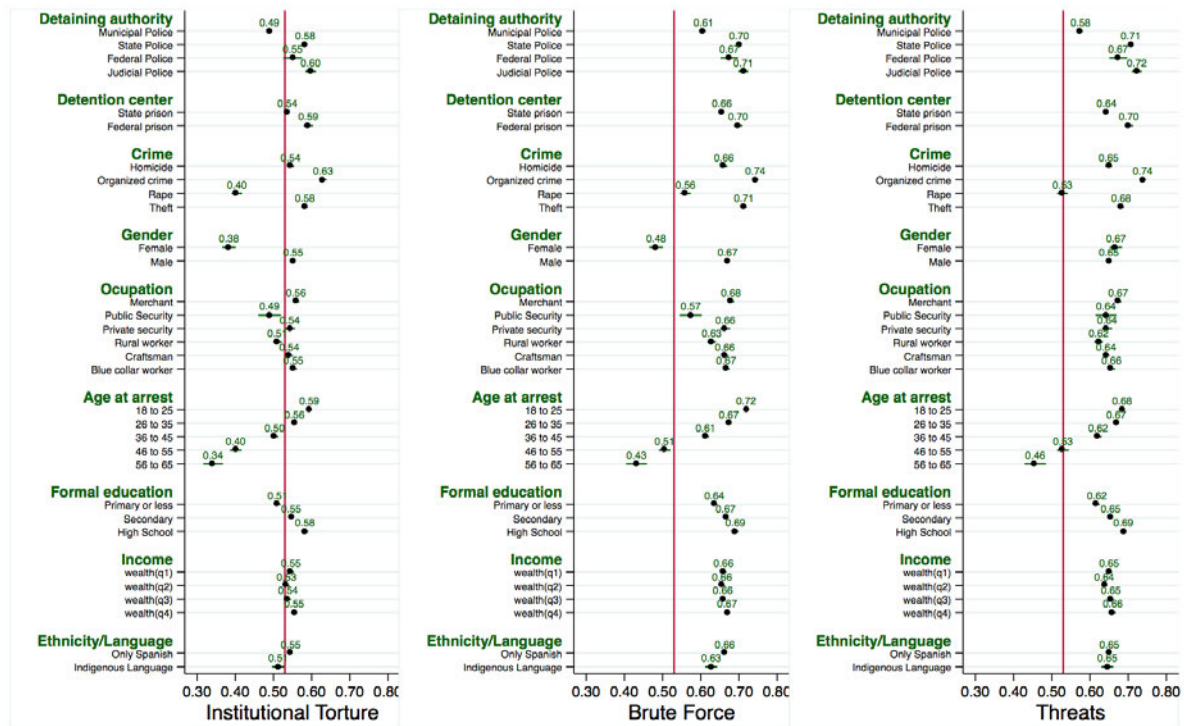
In this section we explore the correlates of torture with the use of OLS.¹⁸ Our dependent variable corresponds to three forms of abuse, Brute Force, Institutional Torture, and Threats, as defined above. Each is binary, where 1 corresponds to a case where abuse took place and 0 where it didn't. The model specification is as follows:

$$y_{ij} = \alpha + \sum_a \beta_a A_{ia} + \sum_k \delta_k X_{ik} + \gamma_i + \lambda_i + \alpha_t + \epsilon_{ij} \quad (1)$$

where y_i is the level of abuse reported by the prisoner i in municipality j . A is the authority that detained the individual. The model also includes k individual covariates, the crime for which the prisoner was convicted, γ_i , and state-level and time fixed effects (λ_i and α_t , respectively). Descriptive statistics for all the variables are provided in the Electronic Appendix, Tables 9 and 10. Results are shown in Figure 1.

¹⁸We use OLS given that we will present state or municipal fixed effects for each of our models, which have generated criticism when used in logistic regressions. The Electronic Appendix presents all our models using logits and the results are identical.

Figure 1: Correlates of torture



Notes: The figure shows predicted rates of different forms of abuse, and their 90% and 95% confidence intervals from OLS models, one for each form of abuse. Full table of coefficients is shown in the Appendix. All models include state fixed effects and also fixed effects for the year of the arrest and are calculated with heteroskedasticity robust standard errors.

The models suggest that if the prisoner was arrested by the municipal police her or she is significantly less likely to be tortured than if arrested by the state, judicial or federal police.¹⁹ Prisoners in federal prisons are subject to more abuse than state prisoners, although the differences are not that substantial.

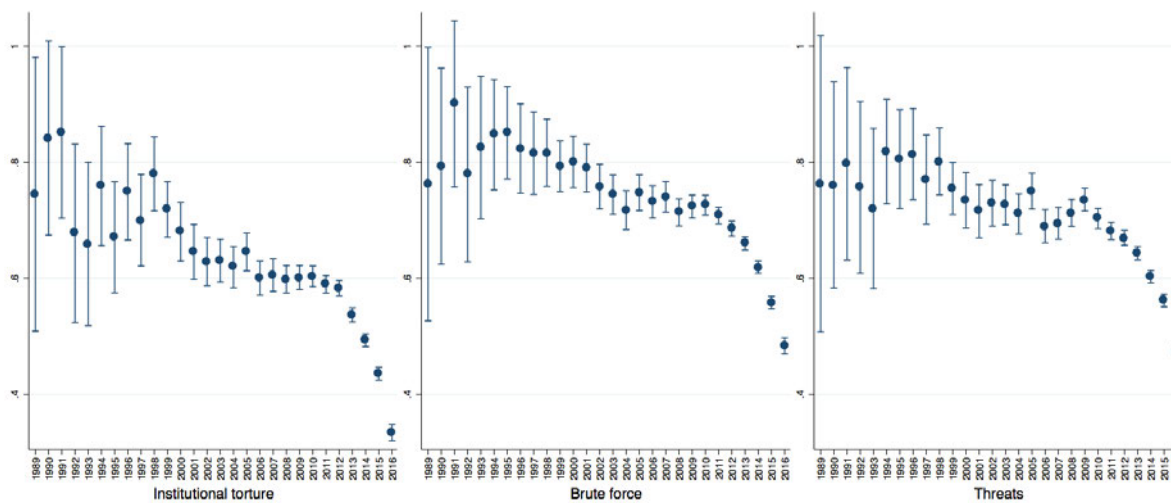
In terms of crime, those accused of organized crime are significantly more likely to be tortured. Moreover, prisoners accused of theft are almost as likely to be tortured as those accused of organized crime, revealing in our view a perverse practice by the police that sanctions property crimes and poverty more than other crimes such as homicide or rape.

In terms of individual-level controls we use sex, occupation, age at arrest, education, ethnicity, and an index of wealth. The index is constructed from a series of seven questions

¹⁹The figures don't display the prediction for the arrests performed by the armed forces because, given their small number, the standard errors are too large.

that ask whether an individual had sufficient money for food, clothes, and medical care as well as whether they had debts, needed to work seven days a week, and had the ability to spend extra money on themselves.²⁰ The results show that men are significantly more exposed to institutional torture and brute force. Women are significantly more subject to threats. In terms of occupation, prisoners who worked for public security (police officers and members of the armed forces) are significantly less exposed to torture and brute force. Also, rural workers report less torture and brute force than the rest the occupations. Age is the most powerful socioeconomic correlate of police abuse, with younger arrestees significantly more likely to be subjected to abuse. Those with high school education report more abuse than those with less education. The wealth index does not seem to impact abuse. Those who speak an indigenous language report less physical abuse but the same level of threats.

Figure 2: **Year of arrest and types of abuse**



Notes: The figure shows predicted rates of different forms of abuse by the year of the arrest, and their 90% and 95% confidence intervals from three OLS regressions, one for each form of abuse. Full table of coefficients is shown in the Appendix. All models include state fixed effects and sociodemographic controls.

From the statistical models presented in Figure 1 we plot the predicted rates of abuse by the year of arrest. As shown in Figure 2, the average predicted rates of institutional torture, brute force and threats are above 70%, 80% and 74%, respectively, from the late

²⁰For the analysis we subdivide the index into four quartiles.

1980s until about 2013, after which these abuses begin to drop to 32%, 48% and 45% in 2016. These declines coincide with the implementation of criminal justice reform. The sections below offer a series of statistical test to show the causal effects of the criminal justice reform on the drop of torture and rampant police abuse.

5 Empirical strategy to test for causal effects

Estimating the causal effect of the criminal justice reform on torture is complicated by the fact that unobserved factors may simultaneously lead to the implementation of the reform and affect torture. Our strategy for overcoming this identification challenge relies on two approaches. First, we rely purely on within-unit variation. We use state or municipal-level fixed effects to hold constant time-invariant characteristics about the local police organizations. Second, we use fixed effects for the year of the arrest. These are essential to capture national policy effects (e.g., electoral competition, important events in the Drug War, etc.). While the fixed-effects models draw on within state or municipality variation to identify the effect of the criminal justice procedures, we still have to account for time-varying confounding variables. We try to account for these factors by restricting the analysis to arrests implemented six months before the reform and six months after the reform. We do this to limit the possibility of time-varying confounding factors driving our findings, seeking to identify the direct impact of the immediate change in criminal procedure.

We then subject our models to a range of robustness checks. One possible objection to our identification strategy is that police might be arresting different types of people in the two periods. We employ coarsened exact matching as it may be argued police and agents of the MP might treat suspects differently based on crimes committed or on their own background characteristics. We further employ a series of placebo checks looking for effects prior to the actual implementation of the reform and find no effects.

5.1 Model Specification

We use a difference-in-difference empirical strategy to identify how the change of an inquisitorial to an adversarial criminal justice system impacts torture. We define as subject to the reform any individual arrested in a municipality after the new code of criminal procedure took effect. Because we are focusing on the implementation of the criminal justice reform at the local level, this section excludes federal prisoners from the analysis. The model specification is as follows:

$$y_{ij} = \alpha + \beta_1 T_i + \sum_k \delta_k X_{ik} + \lambda_i + \alpha_t + \epsilon_{ij} \quad (2)$$

where y_i is the level of abuse reported by the prisoner i in municipality j and T_i is an indicator variable for treatment. The model also includes k individual covariates and municipal-level and time fixed effects (λ_i and α_t , respectively). The main text presents the results using OLS and in the Electronic Appendix we provide logit models.

Any individual arrested in a municipality after the new code of criminal procedure took effect is treated. In the states we are studying, the reform was implemented on 65 different dates spanning the period from 2014 to June 2016. In terms of individual-level controls we use the same socio-demographic variables as in Figure 1. The models don't include crimes, authorities performing the arrest, or if arrests were performed with or without warrant because these are likely to be affected by the reform itself and hence adding them would confound its effects. In subsequent sections we perform matching for these variables.

5.2 Results

Results of the regression models are provided in Table 5. The upper rows present models using data from the entire period and models in the lower rows restrict the sample to six months before and six months after the reform. In both cases, we observe statistically significant declines of the incidence of torture with the implementation of the reform. Of

Table 5: **Effects of Criminal Justice Reform: OLS Regressions**

	Torture M1	Brute M2	Threats M3	Torture M4	Brute M5	Threats M6	Torture M7	Brute M8	Threats M9
All pre-reform/post-reform									
Reform	-0.0916*** (0.0115)	-0.128*** (0.0116)	-0.108*** (0.0118)	-0.0575*** (0.0124)	-0.0731*** (0.0123)	-0.0586*** (0.0126)	-0.0845*** (0.0121)	-0.106*** (0.0121)	-0.0951*** (0.0123)
Constant	0.595*** (0.2255)	0.608*** (0.2334)	0.506** (0.2437)	0.395* (0.2123)	0.409* (0.2206)	0.353 (0.2363)	0.564** (0.2225)	0.565** (0.2287)	0.456* (0.2358)
N	31931	31961	31926	31931	31961	31926	31931	31961	31926
Six months pre-reform/post-reform									
Reform	-0.0604*** (0.0154)	-0.0784*** (0.0156)	-0.0668*** (0.0158)	-0.0510*** (0.0167)	-0.0412** (0.0167)	-0.0521*** (0.0170)	-0.0622*** (0.0170)	-0.0667*** (0.0170)	-0.0617*** (0.0172)
Constant	0.215 (0.1349)	0.434*** (0.1358)	0.644*** (0.1417)	0.201 (0.1298)	0.393*** (0.1294)	0.696*** (0.1354)	0.117 (0.1474)	0.403*** (0.1474)	0.549*** (0.1520)
N	4481	4488	4479	4481	4488	4479	4481	4488	4479
Testing for anticipation effects									
Reform announced	0.0399** (0.0129)	0.00861 (0.0126)	0.0251* (0.0127)	0.00179 (0.0134)	-0.00972 (0.0130)	0.00919 (0.0133)	0.00373 (0.0138)	-0.00903 (0.0134)	0.0121 (0.0137)
Reform	-0.0557*** (0.0163)	-0.120*** (0.0163)	-0.0852*** (0.0165)	-0.0559** (0.0172)	-0.0820*** (0.0171)	-0.0502** (0.0175)	-0.0434* (0.0180)	-0.0705*** (0.0178)	-0.0466* (0.0182)
Constant	0.594** (0.225)	0.608** (0.233)	0.505* (0.244)	0.396 (0.212)	0.408 (0.221)	0.355 (0.236)	0.461 (0.235)	0.496* (0.253)	0.398 (0.227)
N	31931	31961	31926	31931	31961	31926	31931	31961	31926
State FE				Y	Y	Y			
Municipal FE							Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes: The rows show estimated coefficients for the criminal justice reform. Models in the upper rows use data for all prisoners. Models in the lower rows restrict the universe to prisoners arrested six months prior and six months after the criminal justice reform. All models include socio-economic characteristics and year fixed effects. Heteroskedasticity robust standard errors in parenthesis. *** : $p < 0.01$, ** : $p < 0.05$, * : $p < 0.1$.

these, all the regressions show negative and significant associations of our indicators of abuse with the post-reform period.

In the six months immediately after the reform, the probability of a prisoner experiencing institutional torture falls by approximately 6 percentage points, the incidence of brute force falls approximately 5 percentage points, and the incidence of threats falls by 6 percentage points. These declines are meaningful, especially considering the short period of time we are examining. With an unrestricted timeframe, these declines are substantively larger. In Table 5, we present a last set of models that test whether there is a detectable effect of jurisdictions anticipating the reform’s implementation and adjusting their behavior accordingly.²¹ Each state legislature published one (if not more) official declarations announcing the timetable for the reform’s implementation, mostly in 2014.

²¹The full table and an analogous set of logits are in Appendix Tables 16 and 17.

We constructed a variable to indicate the period after the reform’s timetable was first announced but before the reform was actually implemented. This means we then have a sample divided into the pre-reform and pre-announcement era, the post-announcement and pre-reform era, and the reform era. When we ran these models, we found there were such no anticipation effects.

In a last set of models, we explore the effects of the reform on the intensity of abuse (brute force, institutional torture, and threats) by constructing a new variable $Intensity_i = \sum_k report_{k,i}$ where we measure the intensity of a category k of abuse any individual i suffered as the sum of that individual’s reports of abuse within that category. We take this as a measure of the intensity of abuse suffered by any given detainee and repeat the earlier specifications with this new dependent variable. The results of the OLS models are presented in the Electronic Appendix, but follow the patterns in the regressions presented above.

6 Robustness checks

In addition to the anticipation effects, we implemented a series of placebo tests that examine the period before the announcement of reform timetables. We artificially move the date of the implementation of the reform beyond that announcement period to two, three, and four years prior to the actual implementation and subset the data to six month buffers around these faked reforms. We repeat the specifications from the main model. We report the coefficients on the artificial reform variable in Table 6, where we find no significance across all 27 models.

We recognize that there may be objections that individual prisoners are treated differently based on crimes committed or on their own background characteristics and that it may be that police are simply arresting different types of people in the two periods. Indeed, we note that there is a significant imbalance in those arrested for theft in particular across the periods we examine, with a substantial decrease in the number of arrests

Table 6: **Placebo tests for the criminal justice reform**

	Torture M1	Brute M2	Threats M3	Torture M4	Brute M5	Threats M6	Torture M7	Brute M8	Threats M9
Two years									
Reform	0.0047 (0.0147)	0.0124 (0.0137)	0.00665 (0.0142)	0.0026 (0.0147)	0.0107 (0.0137)	0.00454 (0.0142)	0.00881 (0.0153)	0.0139 (0.0144)	0.00855 (0.0149)
Constant	0.685*** (0.2082)	0.881*** (0.0645)	0.795*** (0.2264)	0.420* (0.2279)	0.609*** (0.0990)	0.654*** (0.2427)	0.812*** (0.2348)	0.966*** (0.0897)	0.883*** (0.2418)
N	4736	4735	4735	4736	4735	4735	4736	4735	4735
Three years									
Reform	-0.00797 (0.0172)	-0.00067 (0.0159)	-0.0155 (0.0163)	-0.00801 (0.0174)	-0.000969 (0.0163)	-0.0154 (0.0166)	-0.0047 (0.0181)	0.0000231 (0.0168)	-0.0201 (0.0174)
Constant	0.574** (0.2320)	0.565** (0.2284)	0.851*** (0.2546)	0.297 (0.2529)	0.377 (0.2488)	0.641** (0.2781)	0.682*** (0.2501)	0.647*** (0.2461)	0.912*** (0.2733)
N	3479	3489	3478	3479	3489	3478	3479	3489	3478
Four years									
Reform	0.00882 -0.019	0.00431 -0.0179	0.0222 -0.0186	0.00321 -0.0193	0.00624 -0.0182	0.0192 -0.019	0.0106 -0.0205	0.00038 -0.0192	0.008 -0.0199
Constant	0.256*** -0.0872	0.139* -0.0842	1.168*** -0.086	0.0599 -0.1401	0.117 -0.1327	1.042*** -0.1404	0.333*** -0.1247	0.159 -0.1222	1.246*** -0.1229
N	2796	2791	2795	2796	2791	2795	2796	2791	2795
State FE				Y	Y	Y			
Mun. FE							Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes: The rows show estimated coefficients for placebo tests of the criminal justice reform. The tests move the start dates 2, 3 and 4 years before the actual dates. All models include socio-economic characteristics and year fixed effects. Robust standard errors in parenthesis. *** : $p < 0.01$, ** : $p < 0.05$, * : $p < 0.1$.

for theft in the post-reform period. Part of the reason for this imbalance is that the reform prohibited incarceration for property crimes when these are not accompanied by violence. We run coarsened exact matching within the sample to test these claims.

These results are reported in Table 7. Attempting to include too many covariates at once induces a severe dimensionality problem and causes a large portion of the sample to go unmatched. For transparency, we run the matching routine three times. First, we match exactly on the respondent's level of education and whether or not the respondent speaks an indigenous language and run coarsened matching on the respondent's value in the wealth index. Second, we match exactly on crimes committed. These two attempts preserve most of the sample. Third, we match on both sets of variables and add a variable that captures whether the individual had already been sentenced at the moment he was

Table 7: **Matching and criminal justice reform**

	Brute M1	Torture M2	Threats M3	Brute M4	Torture M5	Threats M6	Brute M7	Torture M8	Threats M9
Reform	-0.0786*** (0.0169)	-0.0651*** (0.0170)	-0.0754*** (0.0170)	-0.0689*** (0.0159)	-0.0534*** (0.0157)	-0.0605*** (0.0159)	-0.0611** (0.0205)	-0.0552** (0.0206)	-0.0690*** (0.0207)
Constant	0.595*** (0.00981)	0.456*** (0.00984)	0.578*** (0.00987)	0.569*** (0.00902)	0.430*** (0.00894)	0.554*** (0.00905)	0.603*** (0.0123)	0.459*** (0.0124)	0.581*** (0.0124)
N	3817	3810	3806	4479	4472	4470	2499	2498	2497
Matching on:	Background	Background	Background	Crimes	Crimes	Crimes	Both	Both	Both

Note: Data are only for prisoners at state detention centers and exclude federal prisoners. Models 1-3 match on wealth index, education level, indigenous language fluency, and sex. Models 4-6 match on whether the individual was arrested for homicide, theft, or crimes likely related to organized crime. Models 7-9 match on all the variables as well as whether or not the individual had already been sentenced for all crimes at the time the survey was taken. Robust standard errors in parenthesis. *** : $p < 0.01$, ** : $p < 0.05$, * : $p < 0.1$.

interviewed. Across all matching routines we find negative and significant coefficients on the reform across the different dependent variables.

7 Democratization

Theoretical work suggests that democracy can play a role in limiting the prevalence of torture. While the PRI lost power nationally in 2000, it had already lost control of many governorships to opposition parties and it also held onto some governorships past national democratization. An important question is if alternation of political party at the local level is associated with reductions of torture. We perform a range of tests for the effects of local democratization. First, we assess how prisoners were treated in states where the PRI never lost power in the entire period under study. These correspond to Campeche, Coahuila, Colima, Hidalgo, and Estado de Mexico. We add a dummy variable that takes the value of 1 for arrests in these states and 0 otherwise.

Secondly, we analyze if alternation of political power at the gubernatorial level impacts torture. We add a dummy variable that takes the value of 1 if a prisoner was arrested in a state after the PRI lost power for the first time and 0 otherwise. Table 3 in the Electronic Appendix provides a list of the states and dates where the PRI lost power for

the first time and when the opposition took office. 65% of the prisoners were arrested under democracy, or after the PRI had lost power for the first time. As before, we use state fixed effects to hold constant state-level time-invariant characteristics. We also use fixed effects for the year of the arrest due to possible secular improvements in the quality of police and criminal justice with the passing of time. To make sure the criminal justice reform doesn't confound the effects of local democratization we truncate the data until 2013, when the first states began to implement the reform.

Mexican governorships last for nonrenewable six year terms. In a third set of models, we exploit this to run models that examine six year buffers around the initial alternation of power. Finally, we run a placebo check in which we artificially move the date of the first alternation back by six years, effectively examining the PRI's final term in office as the hegemonic party.

Results on the effects of local democratization are presented in Table 8. The results suggest that prisoners arrested in states where the PRI never lost power are subject to more institutional torture, brute force and threats. With the exception of models 5 and 6 on brute force and threats using state-fixed effects, all models produce a positive and statistically significant coefficient for the dummy variable indicating that arrests took place in a state where the PRI has never lost power. The models for alternation of political power demonstrate that prisoners arrested after the first alternation of political power are subject to less abuses than those arrested before. Table 8 suggests that the results are robust to restricting the sample to one term before and one term after the first PRI's loss of power. The last set of models presented in Table 8 presents placebo tests by artificially moving the first alternation of political power in each state by one gubernatorial term. None of the placebo results are statistically significant ²²

A question that emerges from these results is why, over the longer run, democracy in Mexico failed to significantly reduce torture, as revealed in Figure 2. To explore how the accumulation of more years of local democracy shapes torture, we interact alternation

²²Model 3 even shows a positive effect for the placebo for local democratization.

Table 8: Effects of local democratization: OLS regressions

	Torture M1	Brute M2	Threats M3	Torture M4	Brute M5	Threats M6	Torture M7	Brute M8	Threats M9
PRI never lost									
Never	0.0610*** (0.0079)	0.0706*** (0.0072)	0.0525*** (0.0074)	-0.123*** (0.0270)	-0.0291 (0.0246)	-0.0377 (0.0238)	0.0611*** (0.0100)	0.0644*** (0.0093)	0.0372*** (0.0095)
Constant	0.568** (0.2745)	0.562** (0.2805)	0.667** (0.2785)	0.847*** (0.2547)	0.728*** (0.2709)	0.831*** (0.2729)	0.615** (0.2658)	0.576** (0.2781)	0.704** (0.2897)
N	26358	26395	26362	26358	26395	26362	26126	26162	26132
Alternation									
Dem	-0.0370*** (0.0064)	-0.0238*** (0.0060)	-0.0108* (0.0061)	-0.0359** (0.0146)	-0.0305** (0.0137)	-0.0414*** (0.0141)	-0.0465*** (0.0075)	-0.0272*** (0.0070)	-0.0107 (0.0072)
Constant	0.567** (0.2738)	0.564** (0.2796)	0.670** (0.2778)	0.857*** (0.2578)	0.737*** (0.2740)	0.843*** (0.2784)	0.617** (0.2669)	0.579** (0.2782)	0.705** (0.2896)
N	26358	26395	26362	26358	26395	26362	26126	26162	26132
Alternation (one term)									
Dem	-0.0664*** (0.0117)	-0.0389*** (0.0111)	-0.0353*** (0.0114)	-0.0657*** (0.0254)	-0.0575** (0.0242)	-0.0854*** (0.0248)	-0.0753*** (0.0134)	-0.0517*** (0.0127)	-0.0419*** (0.0130)
Constant	0.879*** (0.0552)	-0.0889 (0.0544)	0.985*** (0.0549)	0.410*** (0.1328)	-0.414*** (0.1209)	0.589*** (0.1217)	0.876*** (0.1266)	-0.1 (0.1194)	1.034*** (0.1183)
N	7614	7628	7614	7614	7628	7614	7553	7567	7555
Alternation (placebo)									
Dem	0.0142 (0.0178)	0.0195 (0.0170)	0.0495*** (0.0176)	-0.00632 (0.0309)	-0.0124 (0.0298)	0.0164 (0.0305)	-0.0232 (0.0203)	-0.0126 (0.0192)	0.0231 (0.0200)
Constant	0.853*** (0.0562)	0.841*** (0.0551)	0.476 (0.3525)	0.837*** (0.3002)	0.682** (0.3162)	0.148 (0.4414)	0.886*** (0.1805)	0.891*** (0.1454)	0.715* (0.4340)
N	5162	5177	5163	5162	5177	5163	5114	5128	5116
State FE				Y	Y	Y			
Mun. FE							Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes: Estimated coefficients for alternation of political power at the local level. PRI never lost is a dummy variable that takes the value of 1 to arrests in states where this party never lost power during the period of study and 0 otherwise. Alternation is a dummy variable that takes the value of 1 for arrests that took place after the PRI lost power and 0 for arrests before the PRI lost power in a gubernatorial election for the first time. Models with Alternation (one term) restrict the sample to one term before/after the PRI's first power loss. Alternation (placebo) artificially moves the date of alternation by one term or six years before the actual democratization date. All models include socio-economic characteristics and year fixed effects. Robust standard errors in parenthesis. *** : $p < 0.01$, ** : $p < 0.05$, * : $p < 0.1$.

with the party that first defeated the PRI in a given state: the right wing National Action Party (PAN), the left-wing Party of the Democratic Revolution (PRD) or a coalition of these two (PAN-PRD). As before, we restrict the sample to arrests one term before/after the PRI's first power loss and hence measure the short term effects of local democratization. We then re-run the model adding all arrests before and after the PRI's first loss of power. This second model captures the long-term effects of democratization. The full interactive models are presented in the Electronic Appendix. Here we present in Table 9 marginal predicted probabilities focusing on institutional torture only.²³

Table 9: **Political party that first defeated the PRI and institutional torture**

Before PRI's first defeat				After PRI's first defeat		
Coef.	95% Conf. Interval			Coef.	95% Conf. Interval	
Short term effects (1 term before/after)						
0.57	0.54	0.61	PAN	0.49	0.45	0.51
0.62	0.59	0.66	PRD	0.56	0.53	0.59
0.58	0.56	0.60	PAN-PRD	0.53	0.50	0.55
Long term effects (All before/after)						
0.55	0.52	0.58	PAN	0.60	0.59	0.62
0.61	0.58	0.64	PRD	0.46	0.45	0.48
0.59	0.57	0.60	PAN-PRD	0.58	0.56	0.60

Notes: Estimated marginal effects for Alternation of political power and political party that first defeated the PRI in a gubernatorial election. The coefficients for the models are provided in Table 14 in the Electronic Appendix. Short term effects correspond to margins comparing arrests one term before and one term after the PRI's first loss of power. Long term effects are margins for all arrests before and after the PRI first lost power in a given state. The data is truncated at 2013 so as not to confound the effects of the criminal justice reform. All models include socio-economic characteristics and are calculated using year fixed effects and robust standard errors.

Columns 1-3 display the predicted values of institutional torture for arrests before the PRI lost a governorship for the first time and their 95% confidence intervals. Column 4 reports the party that first defeated the PRI. Columns 5-7 display predicted values for arrests after the PRI first power loss to each of these parties. Predicted values in the upper rows show the short-term effects of alternation of political power, and those in the lower rows show how much torture changed as more years of democracy accumulated.

The difference between values in columns 1 and 5 reflect how much torture was re-

²³All these models eliminate arrests after 2013 so as not to confound the effects of the criminal justice reform.

duced after the PRI lost power. The short-term effects suggests that institutional torture significantly decreased regardless of whether the PAN, PRD or a coalition defeated the PRI. States where the PAN won for the first time appear to have slightly stronger effects, institutional torture dropping from 58% to 48%. The incidence drops from 63% to 56% after the PRD first defeated the PRI. The long-term effects suggests that as the number of years with democracy increases, the probability of being tortured in a state where the PRD first unseated the PRI continues to drop to 46%, whereas in states where the PAN first defeated the PRI or where a coalition did, these probabilities are 60% and 58%, as high as when the PRI hadn't lost power for the first time. To explain why torture might have increased in some states as the number of years of democracy accumulated, the next section focuses on organized crime and the drug war that began in 2007 during the Calderón presidency.

8 The Drug War

The literature has demonstrated that the drug war increased torture by the armed forces, which were increasingly involved in security functions, not only engaging in armed confrontations with DTOs but directly performing many arrests. A question is whether the drug war also increased torture among local police forces and agents of the MP. The literature has argued that PAN-controlled governors had a stronger mandate to support Calderón's security strategies and that they were significantly more collaborative with the drug war than non-PAN governments ([Dell, 2015](#); [Trejo and Ley, 2016](#); [Duran Martinez, 2018](#)). To test if PAN governments responded differently to the drug war, we created an indicator of the party of the governor of the state where the prisoner was arrested and interacted this with a dummy for drug war that takes the value of 1 for arrests after 2007 and 0 otherwise. We use data from before 2014 to not confound the effects of the drug war with the criminal justice reform.

In a second model, we interact the drug war by the presence of “joint operations”,

which as mentioned earlier were security interventions that deployed the armed forces and the federal police to provide assistance with security to local authorities. During the Calderón presidency, there were seven joint operations, including in Baja California (Tijuana), Chihuahua (Juárez), Frontera Sur (Istmo), Guerrero, Michoacán, Sinaloa (Cu-
liacán-Navolato), Triángulo Dorado (Chihuahua-Sinaloa-Durango) and Northeast (Nuevo León – Tamaulipas).²⁴ The exact date on which these joint operations started is presented in the Electronic Appendix. We consider a prisoner “treated” when he or she was arrested after the joint operation took effect in a given state.

Lastly, we add indicators of the level of organized crime threat. We define a municipal-level “turf war” as an increase in violence in a given municipality of more than three standard deviations relative to its historic mean using homicide of males aged 18 to 39 since 1990. The data comes from the National System of Health Information (SINAIS) and the information is based on individual death certificates. All these models include federal prisoners because prisoners convicted for crimes related to drug trafficking and organized crime are likely to be detained in federal prisons. Although local police don’t have jurisdiction over these crimes, they are the first respondents and often are involved in these arrests, although prisoners eventually would get transferred to federal detention centers.²⁵

The results for these models are presented in Table 10. The evidence doesn’t support the notion that torture increased disproportionately in PAN-controlled states during the drug war. In fact, models 1 and 2 reveal that torture in PAN-controlled states is generally lower, although these differences tend to dissipate with the drug war. By contrast, the results compellingly demonstrate that increases in torture happened disproportionately where the federal government sent a joint operation. The effects for these security interventions are substantial: arrests where a joint operation took place are associated with an 8% increase in torture. Models 3 and 4 demonstrate that the effect of joint operations

²⁴<http://calderon.presidencia.gob.mx/tag/operativos-conjuntos/>.

²⁵The Electronic Appendix provides basic descriptive statistics of arrests according to joint operations and turf wars.

Table 10: Institutional torture and the drug war

	Torture M1	Torture M2	Torture M3	Torture M4	Organized crime M5
Party in power					
PAN	-0.0739*** (0.0134)				
PRD	0.0178 (0.0199)				
IND	-0.0226 (0.0420)				
PRI x drug war		0.0343 (0.0421)			
PAN x before drug war		-0.0631*** (0.0194)			
PAN x drug war		-0.047 (0.0441)			
PRD before drug war		0.0956*** (0.0237)			
PRD x drug war		0.0162 (0.0467)			
Federal Interventions					
Joint Operations			0.0838*** (0.0134)	0.0825*** (0.0141)	0.123*** (0.0101)
Turf wars				0.0368*** (0.0104)	0.0258*** (0.0087)
Federal prisoner	0.176*** (0.0081)	0.174*** (0.0081)	0.173*** (0.0080)	0.191*** (0.0089)	0.424*** (0.0094)
Constant	0.819*** (0.2582)	0.764*** (0.2660)	0.834*** (0.2036)	0.758*** (0.0484)	0.0228 (0.0324)
N	24395	24395	25713	23711	24608
r2	0.0922	0.0938	0.091	0.0938	0.213
State FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y

Notes: Estimated coefficients from OLS regressions. Models 1 to 4 use institutional torture as dependent variable. Model 5 uses organized crime arrests. All models include socio-economic characteristics. Robust standard errors in parenthesis. *** : $p < 0.01$, ** : $p < 0.05$, * : $p < 0.1$.

Table 11: **Placebos for federal military interventions**

	(1)	(2)	(3)	(4)	(5)	(6)
	Inst. Torture	Inst. Torture	Inst. Torture	Org. crime	Org. crime	Org. crime
One year	-0.0201 (0.0357)			0.000954 (0.0248)		
Two years		-0.00551 (0.0295)			0.00192 (0.0190)	
Three years			0.00306 (0.0271)			0.0117 (0.0169)
Constant	0.374 (0.284)	0.374 (0.284)	0.374 (0.284)	0.223 (0.283)	0.224 (0.283)	0.224 (0.283)
<i>N</i>	6942	6942	6942	7253	7253	7253

Notes: In these tests we artificially move the dates of joint operations back by one, two, and three years. Data for these tests truncate all data at the beginning of the real federal intervention to avoid including data after the real treatment is applied. All models include socio-economic characteristics. Robust standard errors in parenthesis. *** : $p < 0.01$, ** : $p < 0.05$, * : $p < 0.1$.

is robust to including municipal-level turf wars, associated with a 3 percentage point increase in torture that is statistically significant. All models reveal that federal prisoners are 20% more likely to have been tortured at the time of the arrest than state prisoners. The last model in Table 10 uses organized crime as dependent variable. The results reveal that joint operations are associated with a more than 40% increase in arrests for organized crime. Overall, the results demonstrate that during the democratic era, the deployment of the armed forces and the federal police through joint operations to combat organized crime played a substantial role increasing institutional torture. These results also demonstrate that joint operations substantially increased the number of arrests for organized crime, which as we reported in Figure 1 is associated with a more torture.

We present a series of robustness tests where we artificially move the date of joint operations back by one, two and three years. Data for these tests truncate all data at the beginning of the real federal intervention to avoid including data after the real treatment is assigned. We report the coefficients in Table 11, where we find no significant result.

9 Conclusion

In this paper we have traced the emergence in Mexico of a system of state sanctioned abuse in the prosecution of common crimes. This institutional support for abuse created a criminal justice system reliant on torture to extract confessions and clear cases. We show how the authoritarian era's legal structures embedded a disregard for the procedural rights of accused criminals that persevered through the democratic transition and how torture remained an endemic problem. We then exploited the staggered incorporation of a far-reaching constitutional reform into state judicial systems to examine the effectiveness of institutional reforms in combating an institutionalized culture of abuse. We showed consistent and substantive declines across different forms of police abuse – both physical abuse and threats of harm. Interviews with police officers corroborated the result that the police see the new criminal justice system as a real constraint on their freedom of action.

Our study is relevant not only to understanding the process by which a country traversing a democratic transition can restrain its repressive institutions, but also the policy relevant question of how to restrain abuses by police. Because this was abuse directed not at political dissidents but rather at those accused of common crimes, the lessons of Mexico are relevant to any country engaged in reforming and restraining abusive police forces, including, of course, the United States. This evidence bears on a debate about the extent to which personality traits in individual police officers or institutions drive the incidence of police abuse. We provide robust evidence that changes in criminal procedure can constrain police enough to lower the incidence of abuse of detainees. One set of theories of repression suggests that democratic pressure should constrain a democratic state's abuses. Yet this case operates less on the basis of social pressure operating through democratic institutions and more through an elite decision to adopt reforms and an institutional willingness to implement them. Moreover, Mexico provides a case in which democratization failed to impose the necessary restraints on the government's use

of coercion, which allowed a democratic government under threat from organized crime to increase its use of torture. The paper demonstrates that the drug war that began in 2007 and the militarization of security was associated with substantive increases in torture. The federal government deployed the armed forces and the federal police through "joint operations" to combat organized crime, and these federal interventions resulted in substantial increases in torture.

Our paper additionally signals avenues for further related research. First, while we have thus far examined the effect of institutional changes on the agents of the institution in question, we recognize that the behavior of the police structures the behavior of other members of society including, crucially, criminals. The question of whether and how criminal behavior changes in response to an institutional overhaul of the police remains for further investigation. Second, citizen attitudes about police abuse remain unclear. On the one hand, one may reasonably expect opposition to an abusive police force in a democracy – repression runs counter to democratic norms and any given individual may reasonably fear falling victim to abuse. Yet at the same time, one might also expect individuals who have not had personal contact with the criminal justice system to be unaware of or indifferent to the suffering it engenders. Moreover, reforms that constrain police might plausibly lead people to associate the incidence of crime in their community, regardless of whether crime rates change, with new procedural protections built into the criminal justice system and engender a backlash. Finally, we trace a reversal in jurisprudence on procedural rights in criminal trials. This part of the story is, in fact, crucial, as our interviews reveal that it is judicial zeal in enforcing procedural rights that has caused the police to change their behavior. Yet the process by which the law and its application has evolved in this context remains an area open to further investigation.

References

- Abouharb, M. R. and Cingranelli, D. (2006). The human rights effects of world bank structural adjustment, 1981-2000. *International Studies Quarterly*, 50:233–262.
- Anaya, A. (2014). Violaciones a los derechos humanos en el marco de la estrategia militarizada de lucha contra el narcotráfico en México, 2007-2012. Cuadernos de Trabajo del Monitor del Programa de Política de Droga.
- Aviña, A. (2012). Seizing hold of memories in moments of danger. In Herrera, F. and Cedillo, A., editors, *Challenging Authoritarianism in Mexico: Revolutionary Struggles and the Dirty War, 1964-1982*. Routledge.
- Bailey, J. and Dammert, L. (2005). *Public security and police reform in the Americas*. University of Pittsburgh Pre.
- Balch, R. (1972). The police personality: Fact or fiction? *The Journal of Criminal Law, Criminology and Police Science*, 63(1):106–119.
- Barba-Sánchez, D. (2015). Transitional impunity along class lines: One can walk the legal labyrinth and the other can ‘sell her disappeared son.
- Biebesheimer, C. and Payne, J. M. (2001). *IDB Experience in Justice Reform: Lessons learned and elements for policy formulation*. Inter-American Development Bank, Sustainable Development Department.
- Blackwell, M., Iacus, S., King, G., and Porro, G. (2009). cem: Coarsened exact matching in stata. *The Stata Journal*, 9(4):524–546.
- Blaydes, L. (2018). *State of Repression: Iraq under Saddam Hussein*. Princeton University Press.
- Brinks, D. M. (2007). *The judicial response to police killings in Latin America: inequality and the rule of law*. Cambridge University Press.

- Calderón, G., Robles, G., Díaz-Cayeros, A., and Magaloni, B. (2015). The beheading of criminal organizations and the dynamics of violence in Mexico. *Journal of Conflict Resolution*, 59(8):1455–1485.
- Castellanos, L. (2007). *México armado*. Ediciones Era.
- Cingranelli, D. and Richards, D. (1999). Measuring the level, pattern and sequence of government respect for physical integrity rights. *International Studies Quarterly*, 43:407–418.
- Conrad, C. R. and Moore, W. H. (2010). What stops the torture? *American Journal of Political Science*, 54(2):459–476.
- Correll, J., Park, B., Judd, C., and Wittenbrink, B. (2007). The influence of stereotypes on decisions to shoot. *European Journal of Social Psychology*, 37:1102–1117.
- Cross, F. B. (1999). The relevance of law in human rights protection. *International Review of Law and Economics*, 19(1):87–98.
- Dammert, L. and Bailey, J. (2006). Police force reform and military participation against delinquency. *Revista Fuerzas Armadas y Sociedad*, 1(SE):0–0.
- Dancy, G. and Michel, V. (2016). Human rights enforcement from below: Private actors and prosecutorial momentum in Latin America and Europe. *International Studies Quarterly*, 60(1):173–188.
- Danner, M. and Fay, G. R. (2004). *Torture and truth: America, Abu Ghraib, and the war on terror*, volume 2. New York review books New York.
- Davenport, C. (1995). Multi-dimensional threat perception and state repression: An inquiry into why states apply negative sanctions. *American Journal of Political Science*, pages 683–713.

- Davenport, C. (1996). "constitutional promises" and repressive reality: A cross-national time-series investigation of why political and civil liberties are suppressed. *The Journal of Politics*, 58(3):627–654.
- Davenport, C. (1999). Human rights and the democratic proposition. *Journal of Conflict Resolution*, 43(1):92–116.
- Davenport, C. and Armstrong, D. A. (2004). Democracy and the violation of human rights: A statistical analysis from 1976 to 1996. *American Journal of Political Science*, 48(3):538–554.
- Davenport, C., Moore, W. H., and Armstrong, D. (2007). The puzzle of abu ghraib: Are democratic institutions a palliative or panacea? Working Paper.
- Davis, D. E. (2006). Undermining the rule of law: Democratization and the dark side of police reform in Mexico. *Latin American Politics and Society*, 48(1):55–86.
- De Mesquita, B. B., Smith, A., Morrow, J. D., and Siverson, R. M. (2005). *The logic of political survival*. MIT press.
- Dell, M. (2015). Trafficking networks and the Mexican drug war. *American Economic Review*, 105(6):1738–79.
- Domingo, P. (2000). Judicial independence: the politics of the supreme court in Mexico. *Journal of Latin American Studies*, 32(3):705–735.
- Doyle, K. (2003). Forgetting is not justice, Mexico bares its secret past. *World Policy Journal*, 20(2):61–72.
- Doyle, K. (2006). Los muertos de Tlatelolco: Usando los archivos para exhumar el pasado. Technical report, Electronic Briefing Book 201, Washington, D.C.: National Security Archive.

- Dube, A., Dube, O., and García-Ponce, O. (2013). Cross-border spillover: Us gun laws and violence in mexico. *American Political Science Review*, 107(3):397–417.
- Duran Martinez, A. (2018). *The Politics of Drug Violence Criminals, Cops and Politicians in Colombia and Mexico*. Oxford University Press.
- Eberhardt, J., Goff, P., Purdie, V., and Davies, P. (2004). Seeing black: Race, crime, and visual processing. *Journal of Personality and Social Psychology*, 87(6):876–893.
- Eisenstadt, T. A. (2003). *Courting democracy in Mexico: party strategies and electoral institutions*. Cambridge University Press.
- Elkins, Z., Ginsburg, T., and Melton, J. (2009). *The endurance of national constitutions*. Cambridge University Press.
- Ely Yamin, A. and Noriega Garcia, P. (1999). The absence of the rule of law in mexico: Diagnosis and implications for a mexican transition to democracy. *Loyola of Los Angeles International and Comparative Law Review*, 21:467–520.
- Epp, C. R. (1998). *The rights revolution: Lawyers, activists, and supreme courts in comparative perspective*. University of Chicago Press.
- Esberg, J. (2018). The audience of repression: Killings and disappearances in pinochet’s chile. Under Review.
- Escalante, F. (2011). Homicidios 2008-2009: La muerte tiene permiso. *Nexos*.
- Evans, M. and Morgan, R. (1998). *Preventing Torture: A Study of the European Convention for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment*. Oxford University Press.
- Fein, H. (1995). More murder in the middle: Life-integrity violations and democracy in the world, 1987. *Human Rights Quarterly*, 17:170–91.

- Fielding, N. and Fielding, J. (1991). Police attitudes to crime and punishment: Certainties and dilemmas. *The British Journal of Criminology*, 31:39–53.
- Finnemore, M. and Sikkink, K. (1998). International norm dynamics and political change. *International organization*, 52(4):887–917.
- Franklin, J. (2008). Shame on you: The impact of human rights criticism on political repression in latin america. *International Studies Quarterly*, 52:187–211.
- Gallagher, J. (2017). The last mile problem: Activists, advocates, and the struggle for justice in domestic courts. *Comparative Political Studies*, 50(12):1666–1698.
- Gelman, A., Fagan, J., and Kiss, A. (2007). An analysis of the new york city police department’s “stop-and-frisk” policy in the context of claims of racial bias. *Journal of the American Statistical Association*, 102(479):813–823.
- Glaser, J., Spencer, K., and Charbonneau, A. (2014). Racial bias and public policy. *Policy Insights from the Behavioral and Brain Sciences*, 1(1):88–94.
- Godoy, A. S. (2006). *Popular injustice: violence, community, and law in Latin America*. Stanford University Press.
- Goel, S., Rao, J., and Shroff, R. (2016). Precinct or prejudice? understanding racial disparities in new york city’s stop-and-frisk policy. *The Annals of Applied Statistics*, 10(1):365–394.
- González Ocantos, E. (2014). Persuade them or oust them: Crafting judicial change and transitional justice in argentina. *Comparative politics*, 46(4):479–498.
- González, Y. (2019). The societal origins of institutional weakness and change: Preferences, power and police reform in latin america. *World Politics*, 71(1):44–97.
- González Villarreal, R. (2014). *Historia de la desaparición: Nacimiento de una tecnología represiva*. Editorial Terracota.

- Greenberg, J. (1999). Israel court weighs legality of what many call torture. *The New York Times*.
- Greenberg, K. J. (2005). *The torture debate in America*. Cambridge University Press.
- Hafner-Burton, E. (2008). Sticks and stones: Naming and shaming the human rights enforcement problem. *International Organization*, 62:689–716.
- Hafner-Burton, E. and Tsutsui, K. (2005). Human rights in a globalizing world: The paradox of empty promises. *American Journal of Sociology*, 110(5):1373–1411.
- Hargrave, G., Hiatt, D., and Gaffney, T. (1988). F+4+9+cn: An mmpi measure of aggression in law enforcement officers and applicants. *Journal of Police Science and Administration*, 16(4):268–273.
- Heisler, M., Moreno, A., DeMonner, S., Keller, A., and Iacopino, V. (2003). Assessment of torture and ill treatment of detainees in mexico: Attitudes and experiences of forensic physicians. *Journal of the American Medical Association*, 289(16):2135–2143.
- Hibbs, D. (1973). *Mass Political Violence: A Cross-National Causal Analysis*. Wiley.
- Hill, D. (2010). Estimating the effects of human rights treaties on state behavior. *The Journal of Politics*, 72(4):1161–1174.
- Hill, D. W. and Jones, Z. M. (2014). An empirical evaluation of explanations for state repression. *American Political Science Review*, 108(3):661–687.
- Keith, L. (1999). The united nations international covenant on civil and political rights: Does it make a difference in human rights behavior? *Journal of Peace Research*, 36:95–118.
- Keith, L. C. (2002). Constitutional provisions for individual human rights (1977-1996): Are they more than mere “window dressing?”. *Political Research Quarterly*, 55(1):111–143.

- Krain, M. (1997). State-sponsored mass murder: the onset and severity of genocides and politicides. *Journal of Conflict Resolution*, 41(3):331–360.
- Laguna, L., Linn, A., Ward, K., and Rupslaukyte, R. (2009). An examination of authoritarian personality traits among police officers: The role of experience. *Journal of Police and Criminal Psychology*, 25:99–104.
- Legewie, J. (2016). Racial profiling and use of force in police stops: How local events trigger periods of increased discrimination. *American Journal of Sociology*, 122(2):379–424.
- Lessing, B. (2015). Logics of violence in criminal war. *Journal of Conflict Resolution*, 59(8):1486–1516.
- Luban, D. (2007). Liberalism, torture, and the ticking bomb. In *Intervention, Terrorism, and Torture*, pages 249–262. Springer.
- Lupu, Y. (2013). Best evidence: The role of information in domestic judicial enforcement of international human rights agreements. *International Organization*, 67:469–503.
- Magaloni, A. L. (2007). “¿por qué la suprema corte no ha sido un instrumento para la defensa de derechos fundamentales?”. Documento de Trabajo, Centro de Investigación y Docencia Económicas, CIDE.
- Magaloni, B. (2006). *Voting for autocracy: Hegemonic party survival and its demise in Mexico*. Cambridge University Press Cambridge.
- Magaloni, B. (2008). Enforcing the autocratic political order and the role of courts: the case of Mexico. *rule by law: the politics of courts in authoritarian regimes*, 43:180–206.
- Magaloni, B., Magaloni, A. L., and Razu, Z. (2018). La tortura como método de investigación criminal: el impacto de la guerra contra las drogas en México. *Política y gobierno*, 25(2):223–261.

- Magaloni, B. and Zepeda, G. (2004). *Dilemmas of Political Change in Mexico*, chapter Democratization, Judicial and Law Enforcement Institutions, and the Rule of Law in Mexico. Center for U.S.-Mexican Studies, UCSD and the Institute of Latin American Studies, University of London.
- Michel, V. and Sikkink, K. (2013). Human rights prosecutions and the participation rights of victims in latin america. *Law & Society Review*, 47(4):873–907.
- Milgram, S. (1974). *Obedience to Authority; an Experimental View*. Harper and Row.
- Mitchell, N. and McCormick, J. (1998). Economic and political explanations of human rights violations. *World Politics*, 40:476–498.
- Mitchell, S. M., Ring, J. J., and Spellman, M. K. (2013). Domestic legal traditions and states’ human rights practices. *Journal of Peace Research*, 50(2):189–202.
- Mummolo, J. (2018). Modern police tactics, police-citizen interactions, and the prospects for reform. *The Journal of Politics*, 80(1):1–15.
- Murdie, A. and Davis, D. (2012). Shaming and blaming: Using events data to assess the impact of human rights ingos. *International Studies Quarterly*, 56:1–16.
- Neumayer, E. (2005). Do international human rights treaties improve respect for human rights? *Journal of Conflict Resolution*, 49(6):925–953.
- Niederhoffer, A. (1967). *Behind the Shield: the Police in Urban Society*. Doubleday.
- North, D. C. and Weingast, B. R. (1989). Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century england. *The journal of economic history*, 49(4):803–832.
- Osorio, J. (2015). The contagion of drug violence: spatiotemporal dynamics of the mexican war on drugs. *Journal of Conflict Resolution*, 59(8):1403–1432.

- Phillips, B. J. (2015). How does leadership decapitation affect violence? the case of drug trafficking organizations in Mexico. *The Journal of Politics*, 77(2):324–336.
- Piccato, P. (2017). *A History of Infamy: Crime, Truth, and Justice in Mexico*. University of California Press.
- Poe, S. and Tate, N. (1994). Repression of human rights to personal integrity in the 1980s: a global analysis. *American Political Science Review*, 88(4):853–872.
- Poe, S. C., Tate, C. N., and Keith, L. C. (2009). Is the law a mere parchment barrier to human rights abuse? *The Journal of Politics*, 71(2):644–660.
- Powell, E. and Staton, J. (2009a). Domestic judicial institutions and human rights treaty violation. *International Studies Quarterly*, 53:149–174.
- Powell, E. J. and Staton, J. K. (2009b). Domestic judicial institutions and human rights treaty violation. *International Studies Quarterly*, 53(1):149–174.
- Regan, P. and Henderson, E. (2002). Democracy, threats and political repression in developing countries: Are democracies internally less violent? *Third World Quarterly*, 23(1):119–136.
- Ríos, V. (2013). Why did Mexico become so violent? a self-reinforcing violent equilibrium caused by competition and enforcement. *Trends in organized crime*, 16(2):138–155.
- Rodrigo de la Barra Cousino, C. (1998). Adversarial vs. inquisitorial systems: The rule of law and prospects for criminal procedure reform in Chile. *Sw. JL & Trade Am.*, 5:323.
- Sánchez, A., Magaloni, B., and Magar, E. (2011a). Legalist versus interpretivist. *Courts in Latin America*, pages 187–218.
- Sánchez, A., Magaloni, B., Magar, E., Helmke, G., and Ríos-Figueroa, J. (2011b). *Courts in Latin America*. Cambridge University Press.

- Schatz, S., Concha, H., and Magaloni Kerpel, A. (2007). The mexican judicial system: continuity and change in a period of democratic consolidation. *Reforming the administration of justice in Mexico*, pages 197–224.
- Shirk, D. A. and Cázares, A. R. (2007). Introduction: Reforming the administration of justice in mexico. *Reforming the administration of justice in Mexico*, pages 1–47.
- Simmons, B. (2009a). *Mobilizing for Human Rights: International Law in Domestic Politics*. Cambridge University Press.
- Simmons, B. A. (2009b). *Mobilizing for human rights: international law in domestic politics*. Cambridge University Press.
- Svolik, M. (2012). *The Politics of Authoritarian Rule*. Cambridge University Press.
- Trejo, G. (2012). *Popular Movements in Autocracies: Religion, Repression, and Indigenous Collective Action*. Cambridge University Press.
- Trejo, G. and Ley, S. (2016). Federalism, drugs, and violence: Why intergovernmental partisan conflict stimulated inter-cartel violence in mexico. *Politica y gobierno*, 23(1):9–52.
- Trejo, G. and Ley, S. (2018). Why did drug cartels go to war in mexico? subnational party alternation, the breakdown of criminal protection, and the onset of large-scale violence. *Comparative Political Studies*, 51(7):900–937.
- Twersky-Glasner, A. (2005). Police personality: What is it and why are they like that? *Journal of Police and Criminal Psychology*, 20:56–67.
- Uildriks, N. (2009). *Policing insecurity: police reform, security, and human rights in Latin America*. Lexington Books.
- Uildriks, N. (2010). *Mexico's Unrule of Law: Implementing Human Rights in Police and Judicial Reform Under Democratization*. Lexington Books.

- Ungar, M. (2002). *Elusive reform: democracy and the rule of law in Latin America*. Lynne Rienner Publishers.
- Walzer, M. (2004). *Arguing about War*. Yale University Press.
- Wantchekon, L. and Healy, A. (1999). The “game” of torture. *Journal of Conflict Resolution*, 43(5):596–609.
- Weingast, B. R. (1997). The political foundations of democracy and the rule of the law. *American political science review*, 91(2):245–263.
- Zanger, S. (2000). A global analysis of the effect of political regime changes on life integrity violations, 1977-93. *Journal of Peace Research*, 37:213–233.