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From drug trafficking to state capture: The dynamics of criminal governance, political violence, and crime diversification

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WIDER Working Paper 2025/19

From drug trafficking to state capture

The dynamics of criminal governance, political violence, and
crime diversification

Roxana Gutiérrez-Romero*

April 2025

Abstract: This article develops and tests a theory of criminal governance, examining how drug trafficking organizations (DTOs) use bribery and violence to dominate resource-rich regions and counter state interventions. The study draws on data on over 500 political assassinations and 156 lethal attacks on politicians' relatives in Mexico since 2000. Using an instrumental variable approach, the causal effects of government actions on criminal strategies are identified. The findings reveal that DTOs use rent-seeking violence to influence the pool of political candidates in high-value areas. These are primarily oil pipelines, which are central to large-scale oil theft. Government crackdowns intensify political violence against incumbent mayors while paradoxically increasing voter turnout and the probability of the incumbent party's re-election, reflecting public approval of anti-crime measures. Supporting the crime diversification hypothesis, DTOs adapt by expanding into high-profit crimes such as extortion and retail drug distribution. These shifts are geographically strategic, with oil pipelines becoming centres of criminal innovation. Meanwhile, crimes like car theft are suppressed in fuel-theft zones, which helps preserve gasoline demand. Instead, these crimes are displaced to international borders and selected urban centres. The findings reveal the full cycle of criminal governance, illustrating how organized crime reshapes governance, drives violence—including disappearances—and leaves civilians struggling with rising crime and co-opted governments.

Key words: criminal governance, political violence, *narcomenudeo*, extortion, *huachicol*, disappearances, instrumental variables, fixed-effects Poisson

JEL classification: D74, K42, O17, C36

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1 Introduction

Drug trafficking organizations (DTOs) have not merely expanded their geographic reach; they have embedded themselves within the political and economic fabric of many nations. These groups systematically infiltrate state institutions—co-opting politicians, military leaders, customs agents, border patrol officers, and prosecutors, among many others. By co-opting these key actors, they transform governance into a weapon, repurposing state structures to consolidate control over critical corridors and zones essential for resource extraction and their broader strategic objectives. Mexico offers a compelling case study of how this weaponization of governance exacerbates violence and instability. Since the onset of the militarized ‘war on drugs’ in 2006, the country has seen over 350,000 homicides—a staggering figure that reflects the erosion of state authority. This violence is not merely incidental to the narcotics trade but rather a direct consequence of criminal groups exploiting governance weaknesses to adapt under mounting enforcement pressure. These groups have diversified their operations into extortion, human trafficking, oil theft, and small-scale drug trafficking, among many other crimes, further entrenching their control over both legal and illegal markets (Battiston et al. 2024; Magaloni et al. 2020; Moncada 2022; Trejo and Ley 2020). A particularly underexplored driver of this crisis is the surge of political violence—a phenomenon with profound implications for governance and public policy, analysed here.

Over 500 politicians have been assassinated in Mexico since 2000, with most killings occurring in recent years (Gutiérrez-Romero and Iturbe 2024). Earlier studies had documented only a fraction of these assassinations, focusing specifically on the very onset of the war on drugs. These studies attributed these earlier cases to inter-cartel rivalries, self-defence, cartel territorial disputes, or refusals by politicians to share municipal tax revenues with drug cartels (Blume 2017; Hernández Huerta 2020; Ponce et al. 2022; Trejo and Ley 2021). However, my recent work has demonstrated that, over the last two decades (2000–21), the 500 political assassinations have been closely tied to the rent-seeking and retaliatory violence strategies used by DTOs (Gutiérrez-Romero and Iturbe 2024). These patterns are particularly evident in the targeting of political candidates in municipalities near oil pipelines, which are vital to DTOs involved in gasoline theft and criminal governance. Incumbent mayors, serving as heads of local police forces often co-opted by DTOs, are especially vulnerable to retaliation following the arrests or killings of organized crime members. Former mayors, too, face significant risks, likely stemming from their past associations with criminally strategic regions.

Building on these earlier insights, here I develop and empirically test a theory of criminal territorial governance, revealing how DTOs use targeted strategies to capture state authority. By subverting electoral processes and deploying retaliatory violence—including the assassinations of politicians and their families—these organizations manipulate national security policies to serve and diversify their criminal interests. In doing so, they consolidate their criminal and economic control over state institutions and local communities. To uncover the causal mechanisms behind these dynamics, I use an instrumental variable approach, moving beyond anecdotal accounts to analyse the impact of government crackdowns on DTOs’ strategies.

The analysis contributes to the literature on criminal governance in three significant ways. First, it provides compelling evidence of how DTOs deploy retaliatory violence to respond to state actions that threaten their survival. Beyond the visible assassinations of politicians, DTOs orchestrate broader campaigns of intimidation targeting the families and close collaborators of political figures. Drawing on a comprehensive database of political violence, I analyse the assassinations of 156 family members of politicians and 19 close collaborators between 2000 and 2021, where the intent was to send a message to the politicians themselves.

Second, the findings reveal the counterintuitive effects of crackdowns on organized crime on voter turnout and party loyalty during 2000–21. Arrests and killings of organized crime members by authorities escalate lethal violence against politicians, their families, and close collaborators. In contrast, the destruction of drug laboratories or illicit crops provokes non-lethal intimidation directed at local politicians. Despite these acts of violence and coercion, both types of crackdowns result in increased voter turnout, with drug destruction in particular bolstering support for incumbents, reflecting public approval of state efforts to combat organized crime. However, areas with clear evidence of opium poppy cultivation, as identified through satellite data, show lower voter participation, suggesting that dependency on illicit economies may suppress civic engagement.

Finally, I propose the crime diversification hypothesis. This argues that once DTOs adapt to enforcement pressures and co-opt local authorities to establish their criminal governance, they strategically diversify their criminal operations to maximize profitability. I show that extortion, small-scale drug trafficking, and disappearances increasingly mark this shift; yet their distribution is far from random or generalized across the country. These forms of violence and coercion are more concentrated in regions where resources offer strategic opportunities for extraction. Areas near oil pipelines used for oil theft have become centres of criminal innovation, reflecting calculated adaptation.

Paradoxically, as DTOs expand into fuel theft and extortion, other illicit activities may decline as a calculated strategy. An example of this is car theft, which has declined nationally by 34% since its peak in 2018—unlikely as a result of improved law enforcement but rather because DTOs have prioritized other crimes. Stealing vehicles would undermine the demand for gasoline—critical to their profits—making it strategically advantageous to suppress car theft in areas where fuel theft dominates. Meanwhile, car theft has been displaced to international border regions and a few major urban markets. These criminal patterns align with theories that crime concentrates near high-activity transit nodes where law enforcement oversight is limited (Brantingham and Brantingham 2017).

This analysis then traces the full cycle of criminal governance. It demonstrates how DTOs co-opt government officials and law enforcement to influence policies and protect their operations. When these arrangements are disrupted by state actions—such as arrests and drug eradications—DTOs retaliate with political violence to maintain control. While civilians are not the primary targets of such political violence, they endure its lasting effects: rising crime, weakened institutions, and the deep integration of criminal networks into local governance.

2 Towards a theory of criminal governance

This section analyses the mechanisms through which DTOs transform local economies into nodes of illicit enterprises, consolidating power and diminishing state capacity.

2.1 The logic of *plata o plomo*

At the core of DTOs' governance strategies lies a calculated equilibrium between bribery (*plata*) and coercive violence (*plomo*). These dual tactics, as theorized by a few studies already, are not mutually exclusive but complementary (Alesina et al. 2019; Dal Bó et al. 2006). DTOs deploy them based on local conditions, balancing incentives and threats to achieve compliance. In regions where state institutions are functional but fragile, bribery often takes precedence. Agreements between

DTOs and local officials enable the continuation of illicit activities while maintaining a façade of stability.

However, bribery loses its efficacy in competitive environments, when political actors resist co-operation, or when state interventions directly threaten DTOs' operations. On the international stage where these groups operate, political violence often escalates around election periods (Alesina et al. 2019). Criminal organizations aim to influence candidate selection by forming alliances with favourable candidates or intimidating rivals through coercive tactics. The primary goal of this pre-electoral violence is to gain control over the incoming government and its policies (Albarracín 2018; Daniele and Dipoppa 2017; Durán-Martínez 2008; Ponce et al. 2022). Additionally, post-electoral violence can serve as a means of coercion against politicians who do not uphold previous agreements or who take actions that threaten the interests of the criminal organizations (Dal Bó et al. 2006).

2.2 Drivers and targets of political violence

DTOs channel millions of dollars annually into bribes and political campaigns at all levels to secure the allegiance of officials who can advance their criminal agendas (Hernández 2014). In Mexico, allegedly, these criminal organizations have funded recent presidential campaigns, as suggested by testimonies from criminal actors, though these claims have not been tested in court (Hernández 2024). While definitive proof is lacking in Mexico, similar practices have been prosecuted elsewhere. For example, former Honduran President Juan Orlando Hernández was convicted in 2024 in the United States for facilitating the smuggling of 500 tonnes of cocaine into the country, according to prosecutors, after receiving millions of dollars in bribes from drug traffickers (Matza 2024).

Alongside financial incentives, DTOs strategically deploy targeted intimidation. As I argued in an earlier co-authored article (Gutiérrez-Romero and Iturbe 2024), DTOs use political violence in Mexico primarily targeting local political actors—candidates, incumbent mayors, and former officials—for two main reasons. First, *rent-seeking violence* is deployed to secure access to high-value resources. In Mexico, regions surrounding oil pipelines have become focal points for large-scale fuel theft, a criminal enterprise that generates profits rivalling those of narcotics trafficking. In these areas, DTOs seek to influence electoral outcomes by coercing or eliminating candidates who threaten their access to lucrative rents. This strategy ensures that local governments remain complicit or passive in the face of illegal resource extraction, preserving DTOs' control over key economic assets.

Second, *retaliatory violence* is used to punish political actions that disrupt DTOs' operations. Incumbent mayors, who serve as the heads of municipal police forces, are particularly vulnerable. DTOs systematically bribe municipal police forces, co-opting them not just to evade detection but to turn them into enforcers of their criminal agendas. This deep entanglement between local law enforcement and organized crime amplifies the strategic value of mayors. Despite their pivotal roles in local governance, mayors lack meaningful authority over state or federal security strategies, making them expendable targets whose removal sends a powerful message while minimizing federal repercussions. Their assassinations serve a dual purpose: warning higher-level officials of the costs of opposing DTOs while targeting lower-ranking officials whose deaths rarely provoke significant federal consequences.

Here, I extend the earlier retaliatory violence hypothesis by providing new evidence on the strategic targeting of politicians. Political assassinations are only the most visible aspect of DTOs' intimidation. More subtle forms of coercion, such as threats, attacks on families, and public

humiliation, are often used to enforce compliance while avoiding public scrutiny. A critical question is what conditions drive DTOs to escalate from non-lethal intimidation to lethal violence.

I hypothesize that the scale of economic losses suffered by DTOs determines the intensity of their responses. Minor disruptions, such as localized revenue losses derived from the destruction of illegal drugs, are likely to result in non-lethal intimidation aimed at political actors. In contrast, existential threats—such as the arrest or killing of DTO members—provoke lethal violence, targeting not only politicians but also their families and close collaborators as both retaliation and a deterrent to future interference.

2.3 Impact of criminal governance on voting behaviour

Electoral manipulation often includes the use of violence directed at voters. Depending on the context and closeness of elections, such violence in some instances may be used by the incumbent party, opposition groups, or politically motivated rebel factions to suppress voter turnout or influence electoral choices (Birch 2020; Collier and Vicente 2012). However, the political violence used by organized crime, particularly DTOs, operates through a distinct and targeted logic that serves a dual purpose: influencing electoral outcomes and reinforcing systems of governance.

In earlier work, I hypothesized that organized crime in Mexico uses a cost-effectiveness strategy during elections by targeting politicians rather than civilians. Violence against civilians to influence elections is risky; it undermines electoral legitimacy and destabilizes the political arrangements criminal actors rely on. Moreover, the secrecy of the ballot makes direct voter intimidation both costly and inefficient. As a result, DTOs focus on controlling the candidate pool, coercing or eliminating rivals while supporting candidates aligned with their interests. This strategy allows criminal organizations to exert influence over governance without the widespread disruption associated with voter manipulation. This mechanism explains the negligible impact of political violence on voter turnout during elections from 2000 to 2021 (Gutiérrez-Romero and Iturbe 2024).

Here, I show other ways in which organized crime can affect elections. For instance, voters in regions tied to opium poppy cultivation may perceive that the contest for power is resolved long before ballots are cast, rendering elections symbolic rather than decisive. This perception can thus undermine the perceived efficacy of voting, creating a structural disincentive for participation if not complemented with alternative clientelist strategies. Thus, depending on the scale of such clientelist strategies, areas with entrenched criminal economies can be marked by lower voter turnout. The results section provides evidence of this dynamic.

2.4 Criminal diversification

The ultimate objective of criminal governance extends beyond dominating the narcotics trade; it seeks to embed itself within local economies and political systems as part of a broader strategy of territorial control and governance. This involves the systematic use of coercion, including the assassination of politicians, to secure control over lucrative rents. Once these criminal cells have consolidated their criminal governance, they will diversify their activities to sustain profitability and territorial exploitation. This diversification is visible in their expansion of multiple crimes, including *narcomenudeo* (local drug retail) and extortion.

Extortion, in particular, has become a cornerstone of DTOs' revenue model. Through *pago de piso* (protection payments), DTOs impose systematic taxes on businesses, agricultural producers, and households. Far from being isolated acts of opportunism, these practices constitute a structured system of economic extraction that integrates DTOs into the everyday economic life of the

territories they govern, echoing dynamics observed in other contexts of criminal governance across several countries in Latin America (Moncada 2022). Other examples include the imposition of “shadow taxes” by mafias in Sicily, the control of natural resources such as diamonds by rebel groups in Africa, and the taxation of agricultural producers in Colombia (Balletta and Lavezzi 2023; Gambetta 1996; Olsson 2007; Vélez-Torres and Méndez 2022). These systems of extraction allow criminal organizations to compete directly with formal state governance, embedding themselves deeply into local economic and political structures.

Crime diversification, however, is not arbitrary; it reflects a strategic geographic logic. In the crime diversification hypothesis I advance, DTOs prioritize regions critical to their operations. In the Mexican case, these are areas surrounding oil pipelines, which serve as hubs for large-scale fuel theft. These regions offer significant logistical and economic advantages, enabling DTOs to maximize economies of scale and deepen territorial control.

Diversification often leads to a reallocation of resources, resulting in the suppression of some crimes to stabilize higher-return activities. For example, in Mexico, DTOs have suppressed car theft in areas dominated by fuel-theft operations to maintain local demand for gasoline and ensure market stability. By reducing car theft in these territories, DTOs protect their revenue streams, strengthening their governance capacity. Evidence of this diversification and simultaneous displacement of crime is presented in the following sections.

3 Setting: from modest narcotics player to leading smuggler

Mexico’s narcotics trade emerged from humble beginnings, rooted in marijuana farming and small-scale opium production. Today, Mexican DTOs have evolved into global enterprises, controlling complex supply chains and dominating the international narcotics market. These criminal organizations have not functioned entirely outside the state; rather, they have forged alliances with state institutions to entrench and expand their power. These alliances, rooted in complicit relationships, facilitated what could be termed a system of controlled illegality. Under the Partido Revolucionario Institucional’s (PRI; Institutional Revolutionary Party) dominance (1929–2000), this arrangement stabilized in what resembled a negotiated order: DTOs paid bribes to state actors and operated within tacit boundaries, minimizing public violence and respecting territorial divisions. In return, the PRI ensured non-interference and enforced adherence to these informal rules.

This ‘*pax mafiosa*’, however, was neither stable nor durable. External shocks, such as US-led anti-drug campaigns in the 1960s, revealed its fragility. Efforts to eradicate opium and marijuana cultivation in Mexico’s Golden Triangle disrupted established networks, forcing traffickers to decentralize their operations into other regions such as Guadalajara. This dispersal fostered more resilient and innovative trafficking networks, setting the stage for Mexico’s elevation within the global drug economy. By the 1980s, changes in the global cocaine trade, spurred by US enforcement crackdowns in the Caribbean, elevated Mexico to a central position in the supply chain. Colombian cartels found Mexican traffickers to be reliable partners, leveraging the country’s entrenched corruption and strategic geography to reroute shipments. Mexican DTOs, once peripheral actors, became indispensable intermediaries, using tunnels, vehicles, and even light aircraft and submarines to outmanoeuvre authorities.

The resulting influx of wealth empowered DTOs to reshape their relationships with the state. No longer limited to bribing local officials, traffickers began bypassing traditional networks, paying direct ‘taxes’ to key figures within political and enforcement hierarchies (Hernández 2014: 69).

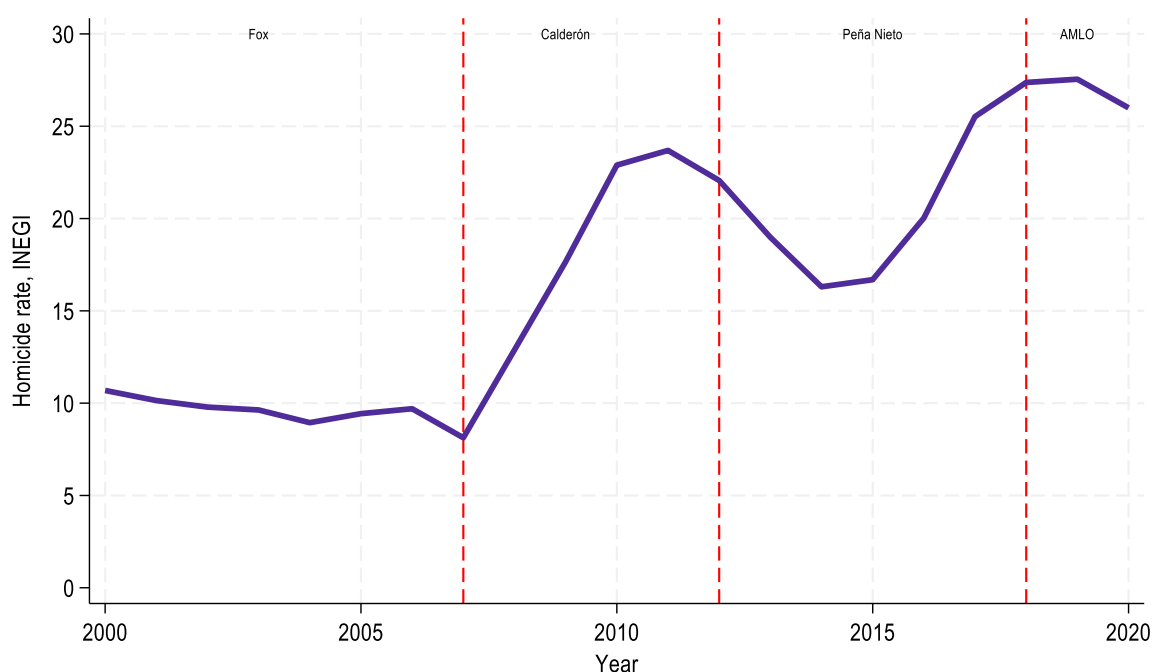
This consolidation of influence further blurred the boundaries between criminal enterprise and state authority, entrenching DTOs as key players within Mexico's political economy.

3.1 Fragmentation and adaptation

In the late 1990s, the democratization process, marked by the rise of competitive political parties, fragmented the state's capacity to manage its relationships with DTOs. What had once been a system of negotiated coexistence gave way to one of violent contestation. The 2000 presidential victory of Vicente Fox of the Partido Acción Nacional (PAN; National Action Party) further disrupted the dynamics with DTOs. The gradual fragmentation of political power weakened the coordination between federal, state, and municipal governments, leaving criminal organizations without the predictable system of patronage and control.

Felipe Calderón's contested 2006 presidential election marked a turning point in Mexico's criminal economy. Facing a legitimacy crisis after his polarizing victory, Calderón declared a war on drugs, framing it as a state-building effort to reassert authority over contested territories. Backed by the US-funded Mérida Initiative, his administration deployed the military to target cartel leadership. However, this decapitation strategy splintered the cartels, creating factions that fought for control over increasingly contested criminal economies. The rise of the Zetas, composed of elite military defectors, epitomized this transformation. Their reliance on militarized tactics, extreme violence, and psychological warfare changed the dynamics of organized crime. The backlash of militarization is evident in the trend of homicide rates. In 2006, Mexico stood out as one of the safest countries in the Americas, with a homicide rate of less than 10 per 100,000 inhabitants (Wainwright 2017). By 2012, that figure had more than doubled (Figure 1).

Figure 1: Annual homicide rate in Mexico



Source: author's estimates based on data from Instituto Nacional de Estadística y Geografía.

Corruption within state institutions further undermined Calderón's strategy, illustrating the fragility of state authority in the face of entrenched criminal networks. In 2019, the United States arrested, and 4 years later convicted, Genaro García Luna, Calderón's public security secretary, for

collaborating with the Sinaloa Cartel. This collapse of institutional integrity not only weakened the state's capacity to counter organized crime but also created opportunities for cartels to expand their influence and diversify their crimes.

DTOs expanded even further under the administration of Enrique Peña Nieto from the PRI. He temporarily reduced the arrests and killings of major drug kingpins. However, overall, there was a continued decline in the arrests of members of organized crime, broadly defined. This trend appeared to have temporarily reduced homicide rates, but soon the violence returned with a vengeance. The surge of violence, as explained in the next section, was driven by policy reforms to gasoline prices, which drew DTOs into large-scale oil theft operations.

3.2 Criminal innovation and predation

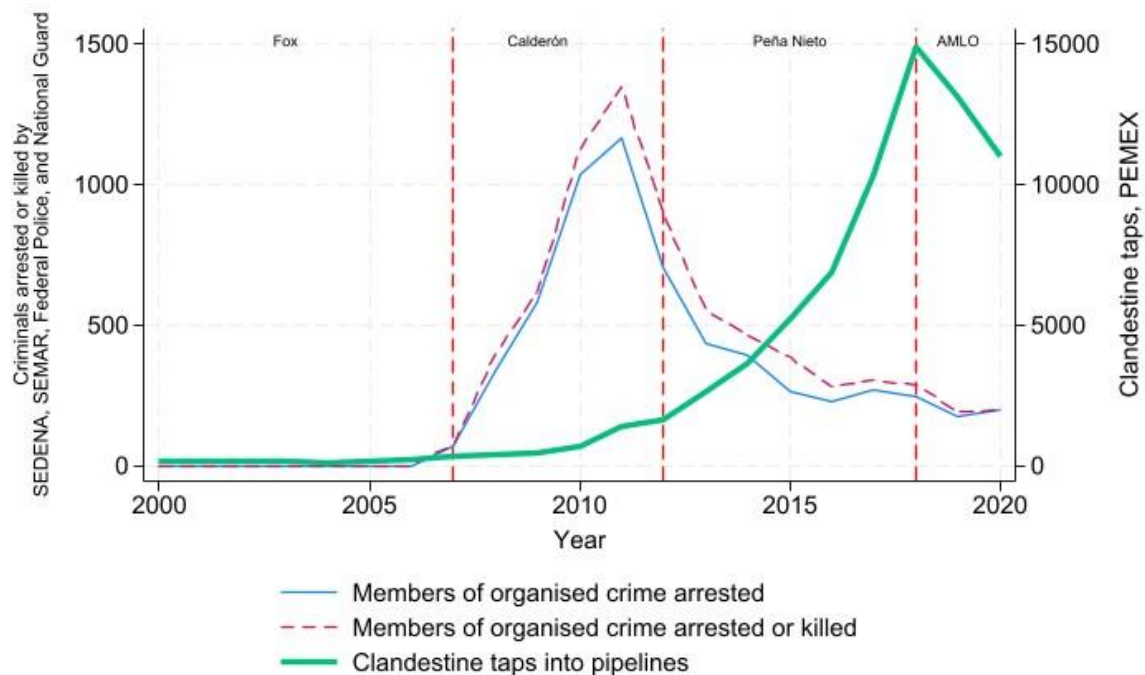
The rise of large-scale oil theft, commonly referred to as *huachicol*, stands as one of the most striking examples of criminal diversification by DTOs, evolving into a central pillar of their economic operations (Alesina et al. 2019). Fuel, like other high-value resources, offers both financial rewards and strategic advantages to those who control it.

Petróleos Mexicanos (PEMEX), Mexico's state-owned energy giant, was once a symbol of national sovereignty and a major contributor to public finances. Decades of corruption, underinvestment, and declining oil production weakened its production capacity. Efforts to reform the energy sector began in the 2000s. Felipe Calderón's administration introduced gradual subsidy reductions, framed as necessary for fiscal stability. Enrique Peña Nieto's 2013 constitutional reforms liberalized the energy market, allowing private investment and moving fuel prices closer to global benchmarks. By 2015, domestic fuel prices began to unexpectedly rise more frequently, culminating in the 2017 *gasolinazo*, when gasoline prices spiked by up to 20%, triggering widespread protests.

Attracted by the profitability of the market, DTOs capitalized on PEMEX's vulnerabilities, bribing employees to access pipeline maps and schedules and securing protection from local officials. The *Cártel Jalisco Nueva Generación* (CJNG; Jalisco New Generation Cartel) emerged as a dominant player, using violence to control pipeline routes and eliminate competitors. This competition was not limited to economic gains; it was fundamentally about territorial control. The CJNG's aggressive expansion into states like Puebla, Querétaro, Hidalgo, and Guanajuato brought it into direct conflict with local criminals, and the *Cártel de Santa Rosa de Lima*.

There is no fine-grained data on oil theft in Mexico, but the government has released information on the number of clandestine taps detected in pipelines used to extract gasoline and diesel. These taps reveal a sharp, organized response by DTOs, who quickly moved their operations towards fuel theft after the onset of the war on drugs, demonstrating their capacity to exploit economic opportunities (Figure 2). It is estimated that about 90% of stolen fuel is distributed to local gas stations and local companies, while only about 10% is sold directly to individual customers (Stevenson 2017). Some reports also suggest that DTOs regularly smuggle gasoline across borders to neighbouring countries (Seth 2018).

Figure 2: Arrests of members of organized crime and oil theft



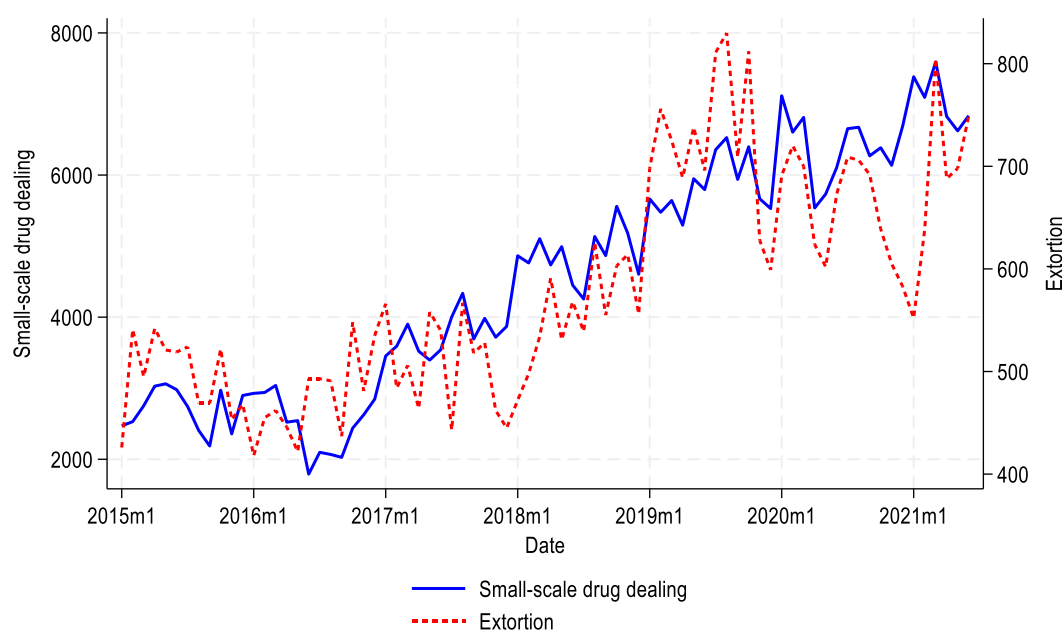
Source: reproduced from Gutiérrez-Romero and Iturbe (2024: Figure 2), under the [CC-BY-NC 4.0 license](#).

The 2018 presidential election of Andrés Manuel López Obrador (AMLO), representing the newly formed Morena party, brought renewed attention to Mexico's ongoing crisis of political violence. He promised to reduce violence with his 'hugs, not bullets' policy, emphasizing social programmes over military confrontation with DTOs. His policy appeared to aim at establishing another *pax mafiosa*, but it backfired. The ultimate failure of his 6-year administration is demonstrated in the nearly 200,000 homicides officially recorded. Such figures alone make it the deadliest administration in modern Mexican history.

Another significant failure of AMLO's administration was its inability to curtail the rampant issue of oil theft. Despite early efforts, such as shutting down pipelines and deploying military personnel to safeguard vital infrastructure, oil theft persisted and even expanded to an industrial scale. Criminal networks reportedly reaped annual revenues of approximately \$5.2 billion from this activity (Arzate 2023). The proliferation of oil theft contributed to broader changes in criminal dynamics, altering the types of illicit activities and exacerbating their impacts on local communities.

Analysing long-term trends in crime is complicated, as municipal-level data in Mexico has only been systematically available since 2015 for most crimes due to methodological changes. Despite these limitations, there are some notable patterns. Retail drug sales (*narcomenudeo*) have offered DTOs a reliable source of income as they moved beyond exclusive dependence on US-bound narcotics (Figure 3). Methamphetamines, fentanyl, and new synthetic drugs—cheap to manufacture and easy to distribute—have flooded neighbourhoods both in the United States and Mexico, targeting younger populations.

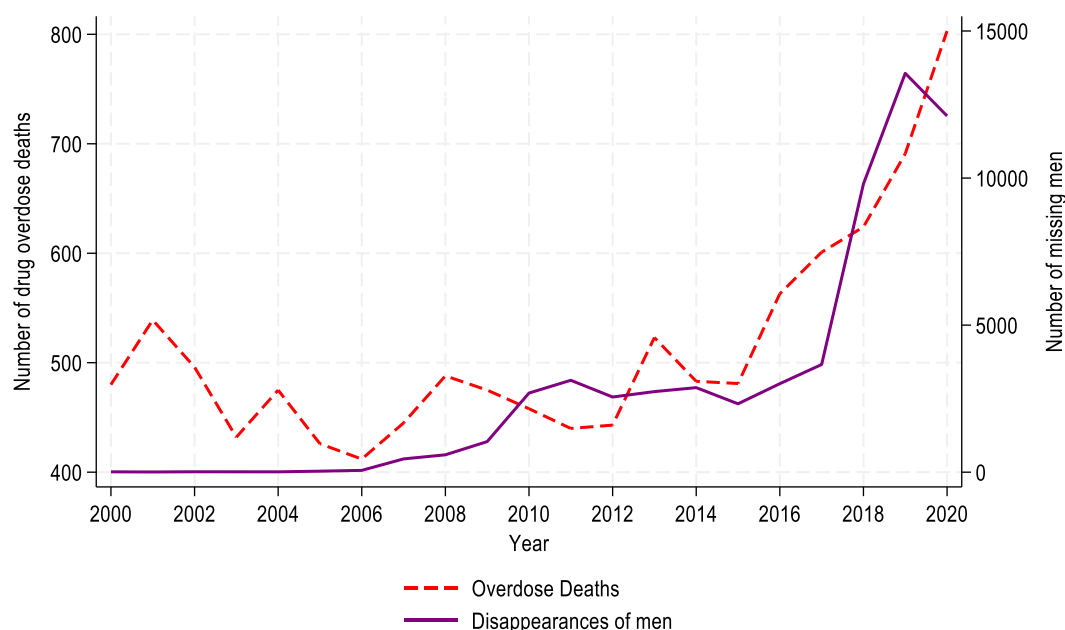
Figure 3: Small-scale drug dealing and extortions



Source: author's estimates based on data from Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024).

Given the increase in small-scale drug trafficking, it is reasonable to expect a corresponding rise in domestic drug consumption. Unfortunately, reliable statistics on drug abuse at the local level are unavailable. However, a proxy can be derived from official death certificates. As shown in Figure 4, overdose deaths, although still relatively low in Mexico, have been rising since the onset of the war on drugs, with a noticeable acceleration in recent years. This trend points to an increasing prevalence of domestic drug consumption.

Figure 4: Overdose deaths and disappearances of men



Source: author's estimates based on data from Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024) and the Registro Nacional de Personas Desaparecidas y No Localizadas (2022).

Extortion became another pillar of economic diversification (Figure 3). In Michoacán, DTOs turned agriculture into a captive industry. Avocado, berry, and lemon farmers faced demands at every stage of production: planting, harvesting, and transportation. These commodities rank among Mexico's most profitable agricultural exports, making them prime targets for organized crime. A refusal to comply often means violent retaliation, with entire communities brought under the control of criminal cells (Moncada 2022). Similarly, in Acapulco and Cancún's bustling tourism sector, DTOs have imposed informal taxes on everything from beachfront hotels to local street vendors. This form of extortion extended to other regions, leaving entire sectors vulnerable to coercion.

The reach of criminal organizations into the local economy created a shadow system of governance that operated with brutal efficiency. One of the most troubling consequences has been the dramatic rise in disappearances. Over 70% of the 117,000 officially reported disappearances involve young adult men, with cases soaring since 2018.¹ Allegations suggest that, under pressure from local and state authorities to reduce visible violence, criminal organizations recently resorted to enforced disappearances (Crisis Group 2024). This win-win strategy for criminality helps the state manage public perception while enabling these groups to consolidate control through fear and obscure accountability, minimizing public backlash.

3.3 The dynamics of political violence

The emergence of large-scale oil theft and other diversified criminal enterprises can be traced to the consolidation of *fragmented criminal governance*, a concept capturing how organized crime fills voids left by weakened political authority while exploiting emerging opportunities in resource-rich areas. Under the centralized dominance of the PRI, violence primarily served as a calculated tool for maintaining internal control, surfacing sporadically to suppress dissent. During the 1980s and 1990s, this strategy included some isolated and targeted assassinations and confrontations with opposition groups, revealing the fractures within an ostensibly cohesive system of political control (Calderón Molgóra 1994).

The erosion of this system—marked by the more frequent victories of opposition parties in the late 1990s and the PAN's presidential win in 2000—unleashed what could be termed a *pluralization of coercion*. The PRI's once-centralized control over state institutions and implicit alliances with criminal organizations unravelled, leaving no singular authority to mediate between political and criminal actors. This power vacuum transformed the dynamics of political violence, with organized crime increasingly turning to coercion as its principal strategy for asserting territorial and economic control.

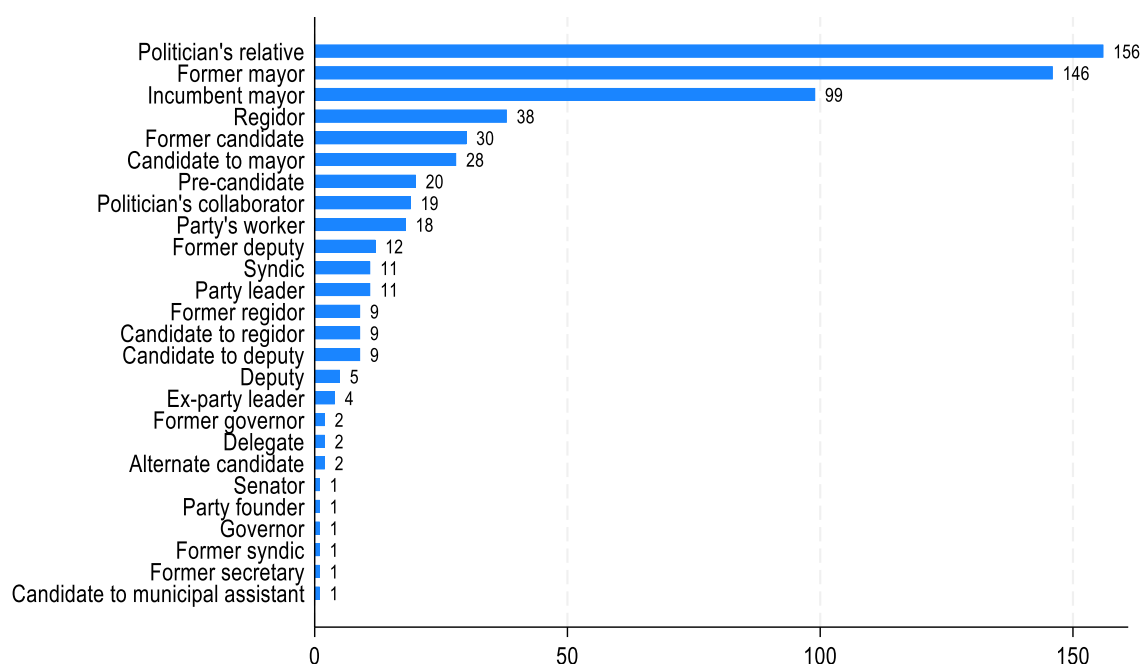
To gain a deeper understanding of political violence, I use the 'Political Assassinations, Intimidation and Actors in Mexico' (PAIAMEX) dataset—a project co-authored in an earlier study (Gutiérrez-Romero and Iturbe 2024). Covering the years from 2000 to 2021, it primarily integrates media reports that document political assassinations and non-lethal forms of intimidation against politicians. This dataset fills an important gap, as no other publicly available resources provide

¹ The remainder includes women, whose disappearances often involve more varied motives, including domestic violence and femicides. I explore this issue in greater depth in a separate study (Gutiérrez-Romero 2024b). Notably, nearly 98% of official disappearances are Mexican nationals, likely because the families of international migrants who fall victim to DTOs face challenges in reporting such cases in Mexico. These challenges include fear of retaliation, lack of resources, and uncertainty about where the disappearance occurred—whether in Mexico or along their migration route.

such comprehensive coverage or temporal scope. Neither the government nor the electoral commission maintains such vital information for national security.

Unlike the sporadic political violence of earlier decades, PAIAMEX reveals a distinct pattern: political assassinations are not random acts but deliberate tools of governance. Figure 5 illustrates the stark distribution of victims, overwhelmingly composed of mayors in office, former mayors, and municipal candidates. PAIAMEX also reveals both overt political violence and the subtler mechanisms of intimidation that sustain control. Between January 2000 and June 2021, 156 relatives and 18 close collaborators of politicians were murdered, often in their presence, delivering chilling warnings designed to enforce compliance. Additionally, the database records 281 instances of non-lethal intimidation directly targeting politicians.

Figure 5: Political assassinations in Mexico, January 2000–June 2021, PAIAMEX

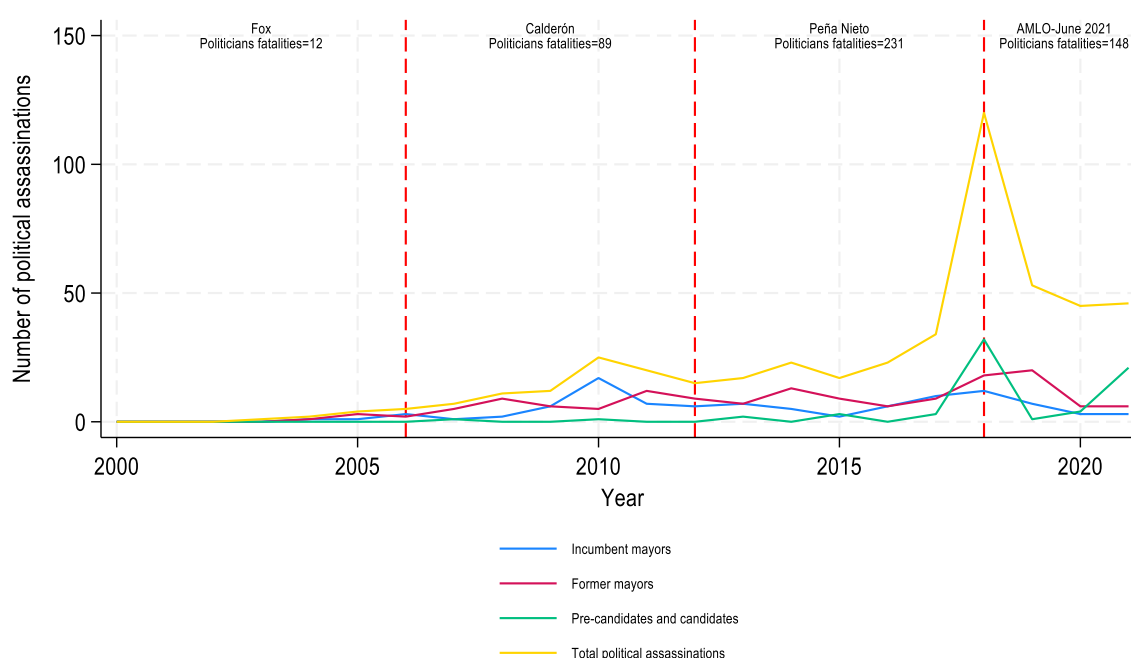


Source: author's estimates based on data from PAIAMEX, collected by Gutiérrez-Romero and Iturbe (2024).

To my knowledge, no individual has been held accountable for these crimes. However, the evidence overwhelmingly implicates organized crime. Over 80% of the assassinations were carried out using high-calibre firearms—a signature of organized crime's methods—frequently executed by convoys of heavily armed operatives.

Temporal trends in the dataset provide further evidence of the involvement of criminal organizations. Political assassinations rose sharply in the mid-2000s, aligning with the intensification of Mexico's drug war (Figure 6). As documented in Gutiérrez-Romero and Iturbe (2024) initially, opposition politicians were disproportionately targeted, reflecting their lack of state protection. Over time, however, as political pluralism expanded, figures from all major parties became vulnerable. By the mid-2010s, these assassinations had become systemic, driven by the fragmentation of state authority and the deepening integration of violence into Mexico's political economy.

Figure 6: Political assassinations over time until June 2021



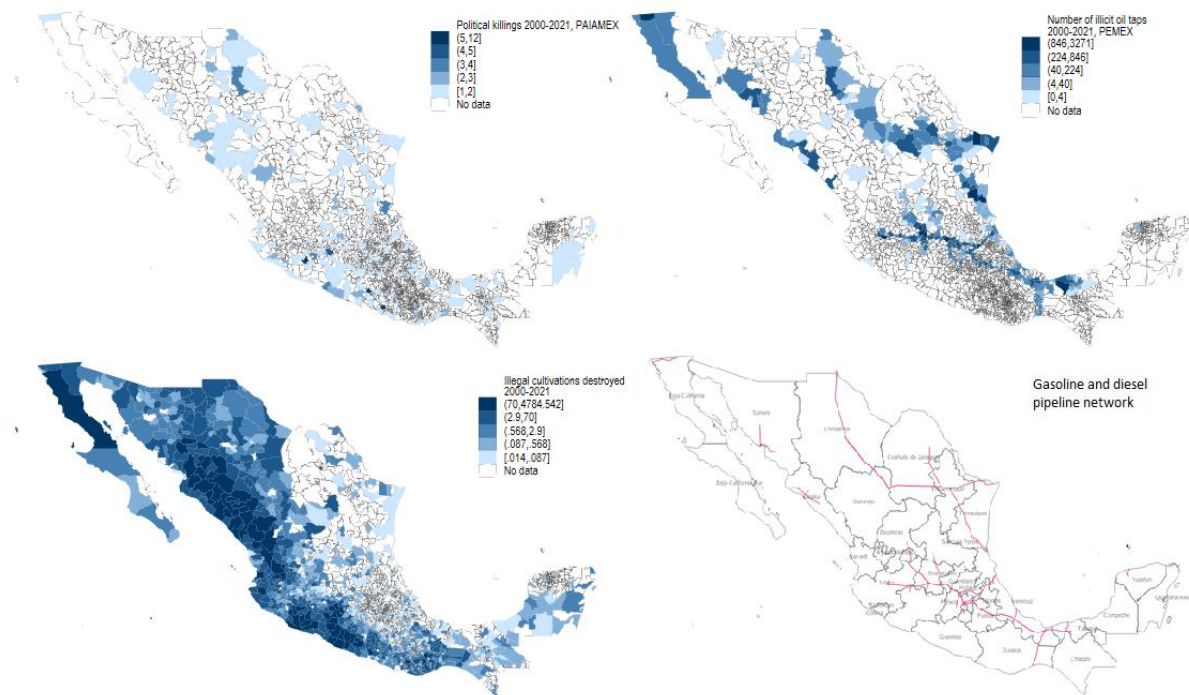
Source: revised and reproduced from Gutiérrez-Romero and Iturbe (2024: Figure 4), under the [CC-BY-NC 4.0 license](#).

The geography of these killings is equally telling. Ten states—Guerrero, Oaxaca, Veracruz, Michoacán, Puebla, Estado de México, Chihuahua, Guanajuato, Jalisco, and Tamaulipas—account for 75% of all recorded political assassinations. Each of these regions reveals a distinct nexus of violence and criminal ambition. In Veracruz, for example, the *huachicol* trade has made political figures pawns in larger battles for control over pipeline routes. In Guerrero, a state central to opium production, assassinations coincide with the eradication of illicit crops and cartel competition for trafficking corridors. Puebla, once relatively peaceful, has emerged as a focal point of violence because of its critical role in the fuel-theft economy.

Perhaps the most compelling evidence of organized crime’s involvement lies in the geographic distribution of these crimes over the past two decades. As illustrated in Figure 7, these incidents are concentrated in municipalities located near the country’s oil pipeline network—key infrastructure for distributing oil nationwide—and in areas where oil theft has been documented. In some coastal regions, these pipelines intersect with zones of illegal cultivation, creating a unique convergence that has facilitated criminal organizations’ diversification into additional illicit activities.

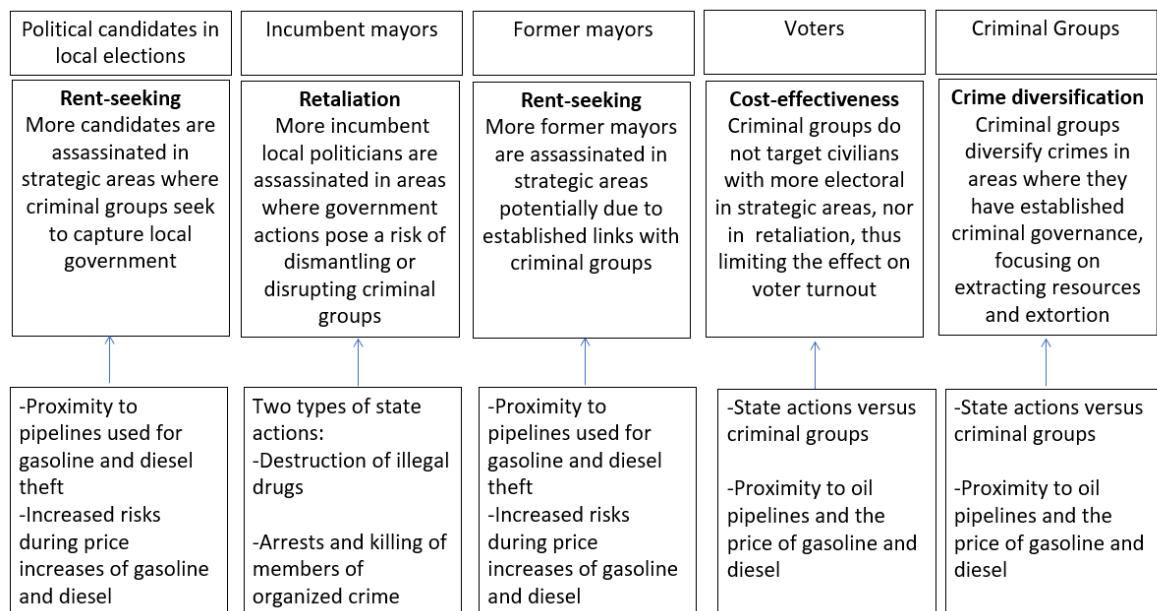
In the next sections, I will test the hypotheses elaborated in Section 2. As a recap, Figure 8 summarizes the hypotheses about the primary motivations behind political assassinations, the likely effects on voter behaviour, and the strategies used by criminal groups.

Figure 7: Political assassinations, oil theft, and destruction of illegal cultivations, 2000–21



Source: reproduced from Gutiérrez-Romero and Iturbe (2024: Figure 7), under the [CC-BY-NC 4.0 license](#).

Figure 8. Hypotheses



Source: revised and reproduced from Gutiérrez-Romero and Iturbe (2024: Figure 9), under the [CC-BY-NC 4.0 license](#).

4 Data

To test the rent-seeking, and retaliation hypotheses, I rely on PAIAMEX. From this dataset, I examine lethal and non-lethal attacks targeting politicians, as well as killings of their relatives or close associates. The dataset on political violence is aggregated monthly at the municipal level. It spans over two decades, from January 2000 to June 2021, capturing periods of both relative stability and heightened turmoil.

The cost-effectiveness hypothesis brings a different dimension to the analysis. For this, I turn to the Armed Conflict Location and Event Data Project (ACLED). This database has records of incidents of electoral violence and the number of fatalities related to such violence (Raleigh and Dowd 2016). From these data, available from 2018 to 2021, I exclude attacks on politicians. Voter turnout and vote share by competing parties in municipal elections from 2000 to 2021 are drawn from all the electoral institutes nationwide. I also consider the margin of victory; that is, the percentage-point difference between the votes received by the winning candidate and those secured by the second-place candidate.

To investigate the crime diversification hypothesis, I draw on three data sources. The first is the official crime statistics compiled by the Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024, Secretary of the National Public Security System), focusing on major crimes: small-scale drug dealing (commonly referred to as *narcomenudeo*), extortion, and car theft. Unfortunately, a change in the methodology for recording crime in 2015 limits the availability of historical data at the municipal level for many crimes. However, it is possible to obtain longer-term statistics for extortion, beginning in 2011. For small-scale drug dealing and car theft, the analysis covers the period from 2015 to 2021, with data aggregated at the monthly level. Although no official statistics exist for overdose deaths in Mexico, publicly available death certificate records provide a useful alternative. These records include causes of death, allowing me to identify cases linked to drug abuse, whether accidental or intentional. Additionally, I examine the number of men reported as disappeared, drawn from the Registro Nacional de Personas Desaparecidas y No Localizadas (2022, National Registry of Missing and Unlocated Persons).

The government does not release detailed information on oil theft at the municipal level due to national security concerns. To sidestep this limitation, I measure the distance from each municipality to the nearest oil pipeline, as well as the monthly local market prices of gasoline and diesel. These proxies are insightful. Oil pipelines were built long before Mexico's drug conflict. Fuel prices fluctuate along international markets, introducing an exogenous element to the analysis.

To examine government crackdowns, I track whether authorities (any of them) destroyed illicit crops, dismantled drug laboratories, or seized illegal drugs within a given municipality and month. I create an overall dummy indicator, a simple yes-or-no variable, to represent whether a municipality had implemented any drug-related interventions. This simplifies the aggregation of similar actions and reconciles varying metrics, including tonnes of drugs seized, pills confiscated, and laboratories destroyed. Separately, I include data on the number of arrests and killings of organized crime members carried out by all types of security authorities in the country. This information was obtained through transparency requests.

The analysis also accounts for broader patterns of violence by incorporating municipal homicide rates per 100,000 people from 2000 to 2021. These figures are sourced from Instituto Nacional de Estadística y Geografía (INEGI; National Institute of Statistics and Geography). I also include municipal revenue data adjusted for inflation, supplemented by satellite-derived nightlight intensity as a proxy for local wealth. Additional details for all variables can be found in Appendix Table A1.

5 Method

To investigate how government interventions targeting organized crime contribute to political assassinations, I adopt a panel fixed-effects Poisson estimator. This is shown in Equation 1. This approach is ideal for analysing rare events such as political killings, as it handles count data with many zero observations while remaining robust under various data dispersion conditions (Wooldridge 1999).

$$E(y_{it} | d_{it-1}, a_{it-1}, x_{it}, \beta_i) = \beta_i \exp(d_{it-1}\beta_1 + a_{it-1}\beta_2 + x_{it}\beta_3) + u_{it} \quad (1)$$

The analysis examines monthly counts of assassinated politicians—pre-candidates, incumbents, and former mayors—as well as their relatives and collaborators, across Mexican municipalities from January 2000 to June 2021. These types of assassinations are analysed separately, along with non-lethal intimidation acts, represented by y_{it} . The error term is denoted by u_{it} .

I examine whether government crackdowns, specifically the destruction of illicit drugs, are denoted by d_{it-1} . This is a dummy variable indicating whether the municipality destroyed any illegal crops, seized illegal drugs from organized crime, or dismantled laboratories to produce synthetic drugs. Additionally, a_{it-1} captures the number of arrests and killings of members of organized crime, at the municipality level, by any of the country's security forces. Both of these variables are lagged by 1 month to establish a clear sequence of events and reduce potential feedback effects where crackdowns could respond to prior violence rather than cause it.

Equation 1 includes a range of municipal characteristics, denoted by the vector x_{it-1} . These are indicators of economic opportunity, such as the ratio of proximity to fuel pipelines to local gasoline and diesel prices, as well as political alignment across levels of government, whether the same party controlled the municipality, state governorship, and presidency during the month analysed. Additionally, I add the lagged homicide rate, municipal revenue, and nightlight intensity as a proxy for economic activity. The homicide rate is from the previous month. To prevent double counting, I exclude political assassinations and the killings of organized crime members by authorities from this rate. The model accounts for heterogeneity by clustering standard errors at the municipal level.

5.1 Addressing endogeneity

An important concern is endogeneity—unmeasured factors that might simultaneously drive both government crackdowns and political violence. To address this, I use a two-stage pseudo-maximum likelihood fixed-effects Poisson estimator (Mullahy 1997).

In the first stage, I model the suspected endogenous variables—the destruction of illicit drugs d_{it-1} , and the arrests or killings of organized crime members a_{it-1} —on the vector of excluded instruments z_{it-1} . Since both suspected endogenous variables are rare events, I use fixed-effects Poisson regression to estimate the first-stage regressions. These instruments include the ratio of historical flows of Chinese people migrating to Mexico to local corn prices, proximity to ports interacted with cocaine prices in the United States, and the interaction of the percentage of mountainous terrain in municipalities with the heroin prices in the United States. These instruments meet the exclusion criteria for validity, as they shape the intensity and timing of crackdowns without directly affecting political violence. In the following sub-section, I expand on the rationale for their selection and relevance.

$$d_{it-1} = \varphi_i \exp(z_{it-1}\varphi_1 + x_{it}\varphi_2) + e_{1it-1} \quad (2)$$

$$a_{it-1} = \pi_i \exp(z_{it-1}\pi_1 + x_{it}\pi_2) + e_{1it-1} \quad (3)$$

The second stage uses predictions from the first stage, \hat{d}_{it-1} , and \hat{a}_{it-1} to assess the causal effects of government actions on political violence. This is shown in Equation 4, where v_{it} denotes the error term.

$$y_{it} = \delta_i \exp(\hat{d}_{it-1}\delta_1 + \hat{a}_{it-1}\delta_2 + x_{it}\delta_3) + v_{it} \quad (4)$$

To address potential endogeneity, I implement a Wu–Hausman-style test. This involves regressing y_{it} on the residuals from the first-stage regressions (Equations 2 and 3), along with d_{it-1} , \hat{a}_{it-1} , and x_{it} . If these residuals are statistically significant, it indicates that unobserved factors may influence both the dependent variable y_{it} and the suspected endogenous variables. If so, the second-stage parameters of the fixed-effects Poisson instrumental variable estimator should be preferred to determine the causal effects of government actions targeting criminal organizations on political assassinations.

5.2 Relevance of instruments used to model government crackdowns

The first instrument used connects the legacy of early twentieth-century migration of Chinese people to Mexico with the economic conditions of contemporary farmers. During the 1930s, immigration laws in the United States restricted migration of Chinese people, prompting many to migrate south to Mexico. This influx not only introduced a new culture but also brought opium poppy seeds and knowledge of opium production, leaving a lasting impact on the regions where these migrants settled. As Murphy and Rossi (2020) show, these areas have evolved into strongholds for DTOs. By integrating the historical settlement patterns of Chinese migrants with current corn prices, this instrument captures a distinctive interplay of historical inertia and economic volatility that informs state interventions. When corn prices decline, the incentive to engage in illegal drug cultivation increases, while simultaneously reducing the probability of state crackdowns to avoid major social unrest. In contrast, when corn prices are high, farmers are more reliant on legal crops, and state crackdowns are more likely to intensify.

The second instrument interacts municipalities' distance to the nearest port with cocaine prices in the United States, allowing me to identify the timing and locations where government crackdowns are most likely to occur. Proximity to ports, which are crucial conduits for international trade, is often important for trafficking as well. Higher drug prices increase the probability that Mexican criminal organizations will violently compete for control over smuggling routes (Castillo et al. 2020; Gutiérrez-Romero 2024a). Therefore, when cocaine prices rise, smuggling routes become more lucrative, and criminal groups are more likely to escalate their activities, along with government crackdowns to curb the violence.

Similarly, the third instrument interacts the percentage of mountainous terrain in municipalities with the size of the retail heroin market in the United States. Mountainous areas have historically provided refuge for illicit activities, offering the seclusion necessary for opium poppy cultivation and heroin production. When heroin prices rise, production and distribution increase, leading to more violence along with more government crackdowns to contain it, particularly the arrests or killings of organized crime members.

6 Results

To begin, I examine the factors driving political violence in Mexico over the past two decades. Appendix Table A2 reports the estimates from the Poisson fixed-effects estimation, which do not account for potential endogeneity and are therefore prone to bias. The results of the regression are reported as incidence rate ratios (IRRs). An IRR of 1 suggests no impact, while an IRR greater than 1 indicates an increase, and an IRR less than 1 signals a decrease in the expected number of political assassinations for each unit increase in the corresponding covariate. An alternative way to interpret this coefficient is to compute the expected percentage change in political assassinations by using the formula $[(IRR \text{ coefficient} - 1) \times 100]$ for each unit increase in the covariate.

Appendix Table A3 addresses endogeneity concerns by presenting the first-stage results of the instrumental variable regression, offering a more robust framework for causal inference. The first-stage instrumental variable regression findings reveal that the instruments are statistically significant, relevant, and consistent with theoretical expectations. Regions historically reliant on drug trafficking—shaped by the legacy of Chinese immigrants introducing opium poppy cultivation techniques—are less likely to face government crackdowns during periods of low corn prices, as economic hardship forces farmers to turn increasingly to drug production. In such times, the government appears reluctant to intervene, wary of exacerbating rural instability. In contrast, and consistent with expectations, areas with strategic importance for organized crime—such as proximity to ports or mountainous terrain—experience a significant increase in arrests and killings of criminal members when US drug prices rise.

Table 1 provides the results of the instrumental variable fixed-effects Poisson estimator, alongside tests for endogeneity. These tests strongly support the instrumental variable specifications as the more reliable approach. The results remain consistent when focusing exclusively on arrests of organized crime members, rather than combining arrests and killings. For simplicity and clarity, I present these two forms of crackdowns, arrests and killings of members of organized crime, together in the analysis.

To begin with, I focus on the rent-seeking hypothesis. This hypothesis posits that areas rich in economic resources, particularly areas vulnerable to extraction or exploitation, are more susceptible to political violence targeting candidates. The results align with this view: pre-candidates and confirmed local candidates are significantly less likely to face assassination if they are competing for municipalities far from oil pipelines. That is why its IRR coefficient is below 1 and statistically significant. That is, a unit increase in the ratio of the distance to oil pipelines to the average price of gasoline and diesel results in an 88% reduction $[(0.119 - 1) \times 100]$ in the expected number of assassinations of candidates.

By the same token, their risk of political assassination increases if these candidates are contending in areas near oil pipelines targeted for large-scale oil theft, particularly during periods of rising gasoline and diesel prices. Similarly, former mayors, as shown in Column 3 of Table 1, also face an increased risk of political assassination if they governed areas near oil pipelines. According to independent analysts, this heightened risk stems from their co-optation by organized crime during their incumbency, leaving them entangled in criminal networks and business ties even after leaving office (Mejía 2021). These alleged businesses involve oil theft, along with other activities related to money laundering in such areas, including *narco-ranching*, which uses trading cattle to legalize money. These results align with the evidence presented in Figure 7, which highlights a striking overlap between political assassinations and the oil pipeline infrastructure.

Table 1: Political assassinations, 2000–21—incidence rate ratios

	(1)	(2)	(3)	(4)	(5)	(6)
	Pre- and candidates	Incumbent mayor	Former mayor	Non-lethal intimidating attacks on politicians	Politicians' relatives assassinated	Politicians' relatives and collaborators assassinated
	Second-stage instrumental variable fixed-effects Poisson					
State actions against illegal drugs (destroyed cultivations, seized drugs, dismantled laboratories) in the previous month	44.141	0.739	13.905	22.363**	12.349	5.660
	(112.548)	(1.623)	(23.174)	(28.284)	(26.310)	(11.287)
Number of members of organized crime arrested or killed in the previous month	1.205	2.470***	0.746	1.740**	1.700*	1.851**
	(0.584)	(0.705)	(0.211)	(0.402)	(0.503)	(0.529)
Distance to the oil pipeline divided by the average price of gasoline and diesel	0.119**	0.873	0.614***	0.299***	0.551***	0.512***
	(0.116)	(0.122)	(0.092)	(0.070)	(0.109)	(0.104)
Homicide rate in the previous month (excluding criminals and political assassinations)	1.040	0.998	1.001	0.996	0.997	0.998
	(0.035)	(0.011)	(0.007)	(0.011)	(0.008)	(0.008)
Political coordination: The municipality was ruled by the same party as its respective state and presidency	0.764	0.781	0.595	1.054	0.789	0.795
	(2.394)	(1.268)	(0.309)	(0.337)	(0.318)	(0.317)
Annual income of the government municipal budget, in real terms	1.000	1.000	1.000	0.675	0.926	1.032
	(0.000)	(0.000)	(0.000)	(0.192)	(0.343)	(0.333)
Annual nightlight in logarithm	0.376	2.413*	0.623	1.000	1.000	1.000
	(0.297)	(1.100)	(0.216)	(0.000)	(0.000)	(0.000)
Observations	8,907	12,453	16,892	29,042	15,540	18,611
Wald χ^2	38.17	35.29	33.49	103.1	44.22	46.52
Log pseudo-likelihood	-161.4	-298.5	-424.9	-636.6	-439.7	-519.0
Endogeneity test	4.77	23.52	0.640	16.71	17.61	10.38
P-value	0.029	0.000	0.424	0.000	0.000	0.001

Note: political assassinations based on PAIAMEX; the source of each of the covariates is listed in Appendix Table A1.

Source: author's estimates.

The findings suggest that elections, rather than disrupting criminal governance, serve to regenerate it, as criminal groups compete to secure their influence over new political actors. These groups do not thrive solely because of powerful drug kingpins commanding armies. Their dominance is rooted in their ability to infiltrate political systems, capturing politicians who provide protection and enable their activities.

A widely held belief in Mexico, which is revived with every political assassination, is that incumbent mayors are being targeted for refusing to share tax revenue with organized crime (Ferri and Zerega 2024). Over the 20 years analysed, I find no evidence that the size of a municipality's tax revenue is linked to political assassinations (Table 1). Instead, the main driver for the assassination of candidates, incumbents, and former mayors is undeniably their location in areas with a strong

presence of organized crime, particularly near oil pipelines. However, oil pipelines are not the sole driver of political violence.

Table 1, Column 2, shows that the only statistically significant factor increasing the risk of assassination for incumbent mayors is the arrest or killing of organized crime members by authorities in the preceding month. Specifically, for each additional arrest or killing of members of organized crime, the expected number of assassinations increases by a factor of 2.47. This finding supports the retaliation hypothesis.

Reassuringly, Table 1, Column 1, also shows that the risk of political assassination for pre-candidates and candidates is not linked to government crackdowns against organized crime. This is unsurprising, as these candidates have yet to assume power and therefore lack the authority to enact or obstruct policies affecting criminal organizations.

Interestingly, the destruction of illegal drugs, while representing a significant economic blow to these organizations, does not appear to drive the assassination of candidates, incumbent mayors, or former mayors. Instead, as shown in Column 4, such actions provoke other non-lethal forms of intimidation against politicians, suggesting that criminal groups prioritize coercion over outright political executions when seeking to counter the state for this type of crackdown. These documented tactics include explicit threats, such as, among many others, the delivery of beheaded pig heads as grotesque warnings, the use of *narcomantas*—banners with intimidating messages displayed in public spaces—and shootings targeting homes. Non-lethal intimidation of politicians also sees an increase following the arrests or killings of members of organized crime, as well as with proximity to oil pipelines (Column 4).

Different types of government crackdowns elicit varying responses from criminal organizations. For instance, the destruction of illegal drugs does not provoke other types of political assassinations, such as those targeting family members or collaborators of politicians. Thus, criminal organizations seem to resort to intimidation as an initial response to economic losses. However, political assassinations are predominantly triggered by the arrest or killing of members of organized crime. This pattern extends to the assassinations of politicians' relatives and close collaborators, as evidenced in Columns 5 and 6. Specifically, the expected number of such politically linked assassinations increases by a factor of 1.8 for every additional organized crime member arrested or killed by authorities (Column 6). Furthermore, the findings also reveal that the assassinations of relatives and collaborators of politicians are consistently more likely to occur near oil pipelines. This reinforces the notion that such acts are strategically motivated by the economic stakes tied to territorial control.

The findings also demonstrate that political assassinations and intimidation in Mexico are not driven by partisan allegiance. This conclusion holds across multiple specifications. The model presented in Table 1 tests whether the politician's party aligns with that of the state governor and the president. I tested various approaches to examine the role of partisan affiliation, but none of the specifications produced statistically significant results. These results reveal the pragmatic and opportunistic nature of organized crime in Mexico. Criminal groups in settings such as Mexico do not act out of ideological motives or loyalty to a political party, but instead focus on what serves their interests. The past two decades of political change in Mexico, marked by the rise of new parties like Morena and the formation of diverse coalitions, have further blurred the lines of organized crime targeting political allegiance.

Political violence stems from motives distinct from those driving other forms of criminal violence. To explore this distinction, the model incorporates the previous month's homicide rate, excluding cases involving political assassinations or lethal actions against organized crime by government

authorities. The results, presented in Table 1, reveal that homicide rates consistently fail to explain political assassinations, whether of candidates, incumbents, former mayors, or their relatives and collaborators. Instead, both non-lethal intimidation and political assassinations are strongly associated with the presence of organized crime, especially in regions affected by government crackdowns. These results suggest that political violence is not the result of random crimes but is instead a deliberate strategy by DTOs to establish and enforce systems of criminal governance.

6.1 Electoral violence and voting behaviour

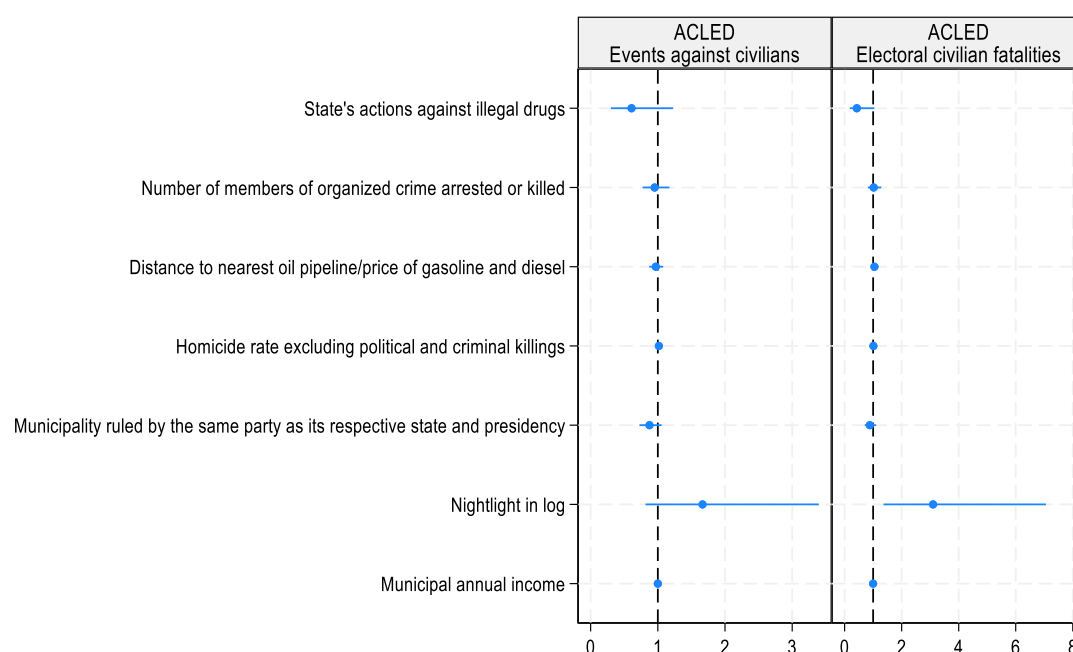
To test the cost-effectiveness hypothesis, I use ACLED, which has systematically tracked election-related violence in Mexico since 2018, a period marked by a significant rise in political assassinations. I examine the number of electoral violence events targeting civilians and the number of civilian fatalities resulting from such violence. I exclude any events—lethal or otherwise—directed at political figures. This distinction allows for a clearer understanding of violence specifically targeting civilians during electoral periods.

Given that electoral violence incidents are statistically rare events, I use a fixed-effects Poisson estimator. To address potential endogeneity concerns when testing the impact of government crackdowns on electoral violence, I use the same instrumental variable identification strategy outlined earlier. This approach ensures consistency and robustness in estimating the causal effects of government actions on electoral violence outcomes.

Figure 9 presents the results of the instrumental variable panel fixed-effects Poisson estimator. The dots illustrate the IRR, and the horizontal bar indicates the confidence intervals. The findings show that government crackdowns, whether through the destruction of illegal drugs or the arrest or killing of organized crime members by authorities, do not statistically significantly affect the number of electoral violence episodes targeting civilians or the number of civilian fatalities associated with such violence. Supporting the cost-effectiveness hypothesis, state-led actions against criminal organizations are not associated with electoral violence directed at civilians. Similarly, the general homicide rate in municipalities (excluding the assassination of politicians and members of organized crime) shows no statistically significant association with incidents of electoral violence targeting civilians.

The analysis also reveals that proximity to oil pipelines does not affect either of the indicators used for electoral violence targeting civilians. Furthermore, there is no link between electoral violence against civilians and municipalities' fiscal revenue. If fiscal resources were a primary motivation for criminal groups seeking to control local governments, one might expect greater efforts to intimidate civilians into supporting specific candidates. However, the results do not reveal this pattern, indicating that electoral violence is not rooted in economic considerations related to the fiscal capacity of the municipality.

Figure 9: Electoral violence against civilians, 2018–21—second-stage instrumental variable fixed-effects Poisson, incidence rate ratios



Source: author's estimates based on ACLED (Raleigh and Dowd 2016).

I now turn to the impact of political violence on electoral outcomes. The data are aggregated by electoral term. Because electoral outcomes are observed in every election, they are not rare events, making panel fixed-effects the appropriate model rather than Poisson specifications. The controls aggregated over the 3-year local administrative term leading up to the election include all the previous socio-economic indicators, including government crackdowns against organized crime. In cases of drug crackdowns, I create a dummy variable indicating whether any crackdown occurred during the administration. I also add the number of incumbent mayors, pre-candidates, and candidates assassinated during the administration, up to election day.

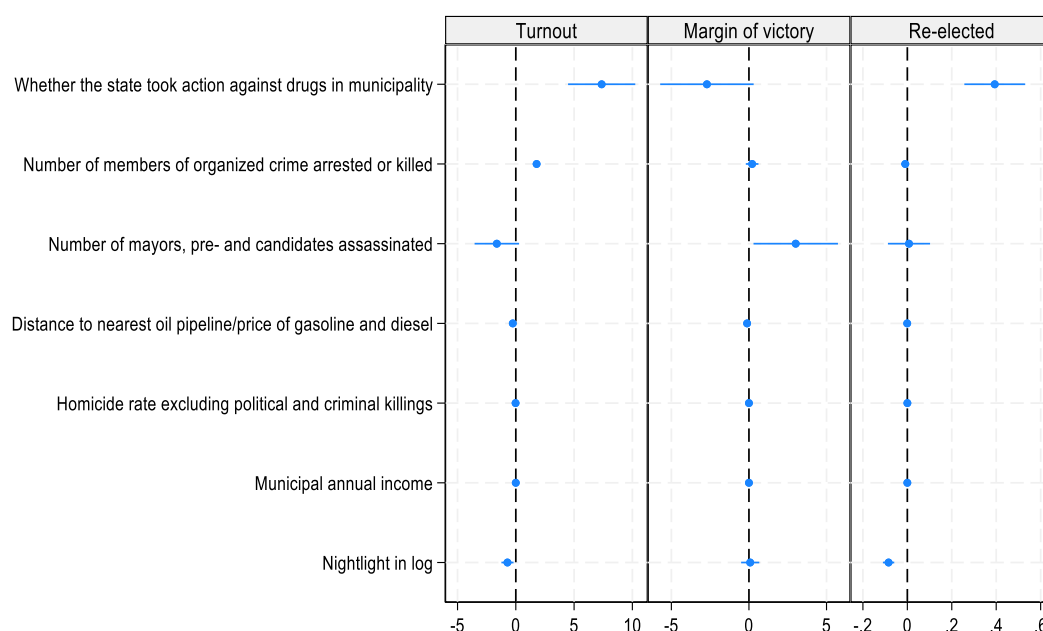
One major challenge is addressing the potential endogeneity arising from unobserved factors that could simultaneously influence government actions against criminal organizations and electoral results. To account for this, I combine panel fixed-effects with an instrumental variable approach. The first-stage results, presented in Appendix Table A4, instrument two variables: whether the government destroyed illegal drugs, and the number of organized crime members arrested or killed by authorities during the administration just ending. Because this analysis aggregates municipal-level data across electoral cycles, I adapt the instrumental variable specification accordingly.

The instruments I use include the interaction between a municipality's distance to the nearest port and US cocaine prices, as well as the interaction between US heroin prices and the percentage of mountainous terrain of the municipality. The rationale behind these choices is that changes in drug prices abroad affect the profitability of trafficking in Mexico, which, in turn, influences government enforcement actions, especially in areas of strategic geographic significance. Given the rarity of these enforcement actions, I use a panel fixed-effects Poisson estimator exclusively for the first-stage instrumental variable regression.

Appendix Table A4 confirms that the instruments are both statistically significant and strongly correlated with the instrumented variables. The second-stage instrumental variable results, which

estimate the relationship using panel fixed-effects with instrumental variable, are presented in Figure 10.

Figure 10: Voter turnout, margin of victory, and the probability of the incumbent local party winning in mayoral elections, 2000–21—second-stage instrumental variable panel fixed-effects



Source: author's estimates based on ACLED (Raleigh and Dowd 2016).

Voter turnout remains largely unaffected by the general homicide rate, excluding political assassinations or killings of organized crime members by authorities during the electoral cycle leading up to election day. For a unit increase in the homicide rate, voter turnout declines by 0.018 percentage points, a rather small yet statistically significant effect.

As anticipated, for every political assassination, there is a small reduction in voter turnout of 1.62 percentage points, and it is only statistically significant at the 10% level. This finding aligns with the cost-effectiveness hypothesis, which suggests that political violence predominantly targets politicians rather than civilians, thereby causing minimal disruption to overall voter participation.

For every political assassination at the municipal level, there is a boost in the margin of victory by approximately 3 percentage points. This slight increase in the vote share difference between the two leading parties suggests that voters may consolidate their support for a particular party in response to such events. However, this does not result in a statistically significant change in the probability of the incumbent party being re-elected, indicating that the effects of political violence on electoral outcomes are nuanced and do not inherently favour incumbent parties.

Another indication that criminals do not retaliate against civilians is the observed increase in voter turnout following government crackdowns during the 20 years analysed. For every increase in arrests or killings of organized crime members by authorities, voter turnout is boosted by approximately 1.8 percentage points. This trend suggests that such crackdowns galvanize civic engagement, reinforcing the notion that a strong stance against organized crime resonates positively with the electorate.

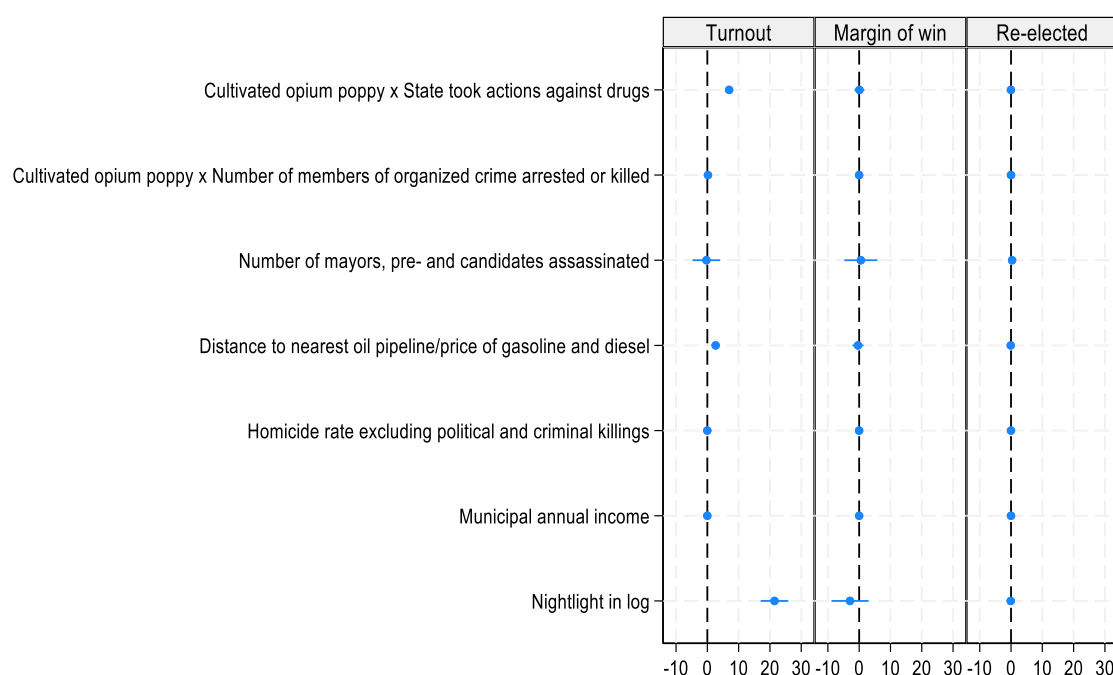
In the case of actions targeting illegal drug operations, they not only boost voter turnout—by approximately 7 percentage points—but they also significantly increase the probability of the

incumbent party's re-election, raising their probability of victory by 40 percentage points. This suggests that voters tend to reward governments that take decisive action against organized crime, rather than those that tolerate or ignore its presence.

One may wonder whether the observed increase in voter turnout and re-election rates hints at electoral manipulation, such as ballot stuffing. While the available data do not allow for a direct test of this possibility, indirect evidence provides useful insights. In an earlier study, voting behaviour in areas near opium poppy drug cultivation, identified through satellite imagery, was examined (Gutiérrez-Romero and Iturbe 2024). The analysis revealed that these regions experience slightly lower voter turnout—around 1.4 percentage points less—than areas without such activity. This suggests that zones engaged in opium production may naturally exhibit reduced levels of electoral participation. Furthermore, the findings imply that anti-drug enforcement could enhance voter participation in areas where organized crime's dominance might otherwise suppress political participation.

Building on that analysis, here I examine whether voter turnout is any different in areas with confirmed illegal drug cultivation where there were also government crackdowns. Figure 11 presents findings from second-stage instrumental variable panel fixed-effects regressions, featuring an interaction term between a dummy variable that identifies whether a municipality is located in a sampled area with confirmed opium poppy cultivation and the occurrence of drug crackdowns.² I also include a second interaction between the presence of opium poppy cultivations and the arrests and killings of members of organized crime by authorities.

Figure 11: Voter turnout, margin of victory, and the probability of the incumbent local party winning in mayoral elections, 2015–19—second-stage instrumental variable panel fixed-effects



Source: author's estimates based on data released by the 32 electoral institutes in Mexico.

² The corresponding first-stage Poisson regression is similar to the one used for Figure 10, and particularly adjusted to cover the period 2015–19 only.

The presence of illegal cultivation is determined using satellite data spanning 2015–19, a period that includes the 2018 general election—one of the most violent in the country’s history. The regression is confined to the period 2015–19, constrained by the availability of satellite data.

The results, shown in Figure 11, indicate that voter turnout is increased by nearly 7 percentage points in areas with confirmed opium poppy cultivation that experienced crackdowns against drugs, compared with areas without recorded cultivation data and without such crackdowns. Figure 11 also reveals that voter turnout remains unaffected in areas with opium poppy drug cultivation when they experience the arrests or killings of organized crime members by the authorities. Neither of these types of crackdowns enhance nor diminish the probability of the incumbent party’s re-election, suggesting a neutral impact on incumbency re-election chances.

6.2 Legacies of drug trafficking on crime

So far, I have analysed how organized crime establishes criminal governance, often overriding the preferences of civilians who aim to elect leaders with a strong stance against crime. A reasonable follow-up question is how crime evolves once criminal governance is firmly established.

Table 2 tests the crime diversification hypothesis. I do so for municipalities, examining crimes on a monthly basis during the periods denoted in Table 2, depending on their availability. Since crimes are not rare events, I use a panel fixed-effects specification to analyse the role of government crackdowns alongside geographic proximity to oil pipelines.

Since government crackdowns are not random, they create potential endogeneity in the analysis. To address this challenge, I use the same identification strategy with instrumental variable as in the baseline results. The first-stage instrumental variable regression is presented in Appendix Table A3. The instruments, which capture external shocks to US drug markets along areas with a tradition of drug trafficking, allow for a more accurate assessment of the causal impact of government interventions. These instruments are statistically significant and exhibit expected signs. There is also evidence of endogeneity. Hence, the instrumental variable results in Table 2 should be preferred to the panel fixed-effects (shown in Appendix Table A5).

The findings suggest that dismantling criminal cells through targeted crackdowns can reduce these crimes, with impacts often observable within a month. For every member of organized crime arrested or killed by authorities, small-scale drug dealing (*narcomenudeo*) cases decrease by 1.33, and extortion cases decline by 0.035 (Table 2, Columns 1 and 4). However, this trend does not apply to all types of crime. For every organized crime member arrested or killed by authorities, car theft increases by nearly three vehicles stolen. This suggests that dismantling criminal groups may force remaining members into lower-skill crimes, such as car theft, which demand less organization, logistics, and investment compared with operations requiring merchandise to sell, such as *narcomenudeo*.

Other government crackdowns yield similarly mixed outcomes. The destruction of illegal drugs in the previous month results in three additional official cases of small-scale drug dealing and 0.33 more extortion cases, as shown in Columns 1 and 4. At the same time, it significantly reduces car theft, with nearly 19 fewer vehicles stolen. This suggests that eliminating large drug shipments and laboratories—primarily intended for international markets—forces criminal groups to diversify. The loss of merchandise drives them towards local markets, increasing small-scale drug sales and extortion as alternative revenue streams while deprioritizing other crimes such as car theft.

Table 2: Crime

	(1)	(2)	(3)	(4)	(5)
	Small-scale drug dealing, 2015–21	Overdose deaths, 2000–20	Disappearances of men, 2015–21	Extortion, 2011–21	Car theft, 2015–21
Second-stage instrumental variable panel fixed-effects					
State actions against illegal drugs (destroyed cultivations, seized drugs, dismantled laboratories) in the previous month	3.352*** (0.987)	0.007 (0.004)	0.704*** (0.105)	0.333*** (0.045)	-19.052*** (0.896)
Number of members of organized crime arrested or killed in the previous month	-1.335*** (0.410)	-0.000 (0.001)	-0.145*** (0.026)	-0.035*** (0.008)	2.863*** (0.256)
Distance to the oil pipeline divided by the average price of gasoline and diesel	-0.459*** (0.079)	-0.001*** (0.000)	-0.139*** (0.012)	-0.038*** (0.005)	1.293*** (0.069)
Homicide rate in the previous month (excluding criminals and political assassinations)	0.021*** (0.005)	0.000 (0.000)	0.001*** (0.000)	-0.001*** (0.000)	0.029*** (0.002)
Political coordination: The municipality was ruled by the same party as its respective state and presidency	-0.966** (0.400)	0.000 (0.001)	-0.274*** (0.026)	-0.028*** (0.007)	1.732*** (0.186)
Annual income of the government municipal budget, in real terms	1.439*** (0.286)	0.002 (0.001)	-0.073*** (0.021)	-0.065*** (0.009)	3.834*** (0.230)
Annual nightlight in logarithm	0.000*** (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)
Constant	25.756* (13.860)	0.005 (0.023)	4.488*** (0.888)	1.097*** (0.264)	-77.147*** (7.789)
Observations	633,648	633,648	108,906	633,648	633,648
Log pseudo-likelihood	-426,865	104,518	-199,606	-221,761	-400,892
Endogeneity test	6.500	5.070	3.370	30.890	354.100
P-value	0.011	0.024	0.067	0.000	0.000

Note: the source of each of the covariates is listed in Appendix Table A1.

Source: author's estimates based on death certificates released by INEGI, crime figures released by Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024), and disappearances released by Registro Nacional de Personas Desaparecidas y No Localizadas (2022).

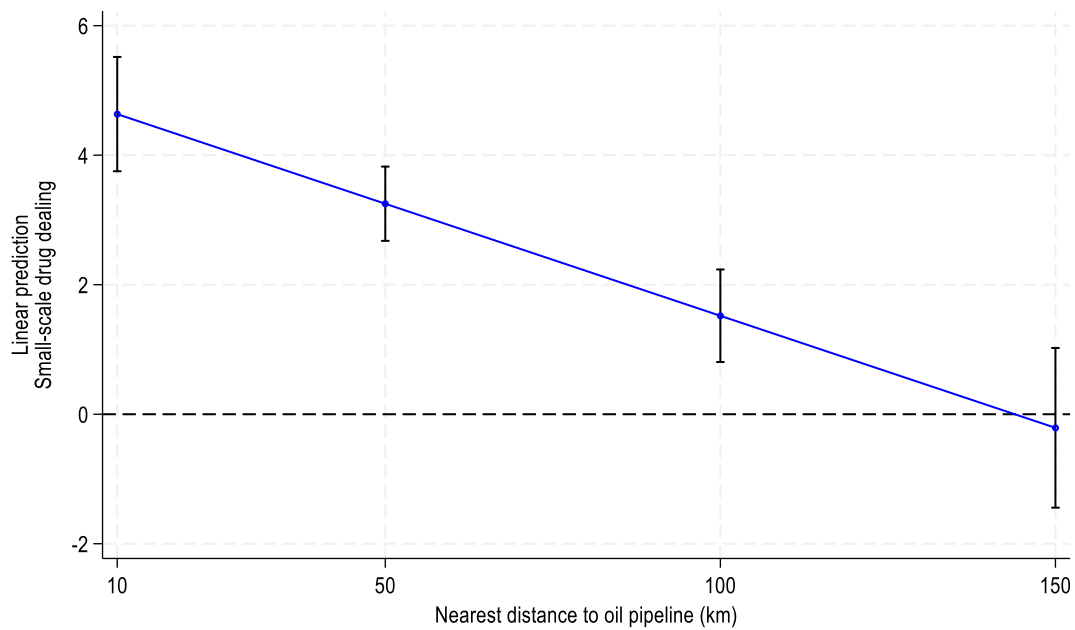
A natural question arises: how has drug addiction evolved in Mexico now that small-scale drug trafficking has risen? Reliable statistics on drug addiction are scarce, as no regular surveys provide a comprehensive picture. However, overdose drug deaths, which can be more easily estimated using death records, offer an indirect measure. The analysis finds no significant relationship between the destruction of illegal drugs and overdose deaths, whether examining the entire period from 2000 to 2020 (Table 2, Column 2) or focusing on data since 2015 (results not shown in Table 2). This suggests that the destruction of specific drug shipments has little impact on overdose deaths, likely due to the sheer diversity and availability of drugs across the country. This insight is important. Supply-side measures, such as targeting drug shipments or production, do little to address the public health crises driven by widespread drug use. Addressing these challenges

requires strategies focused on prevention, treatment, and harm reduction, rather than relying solely on interdiction efforts.

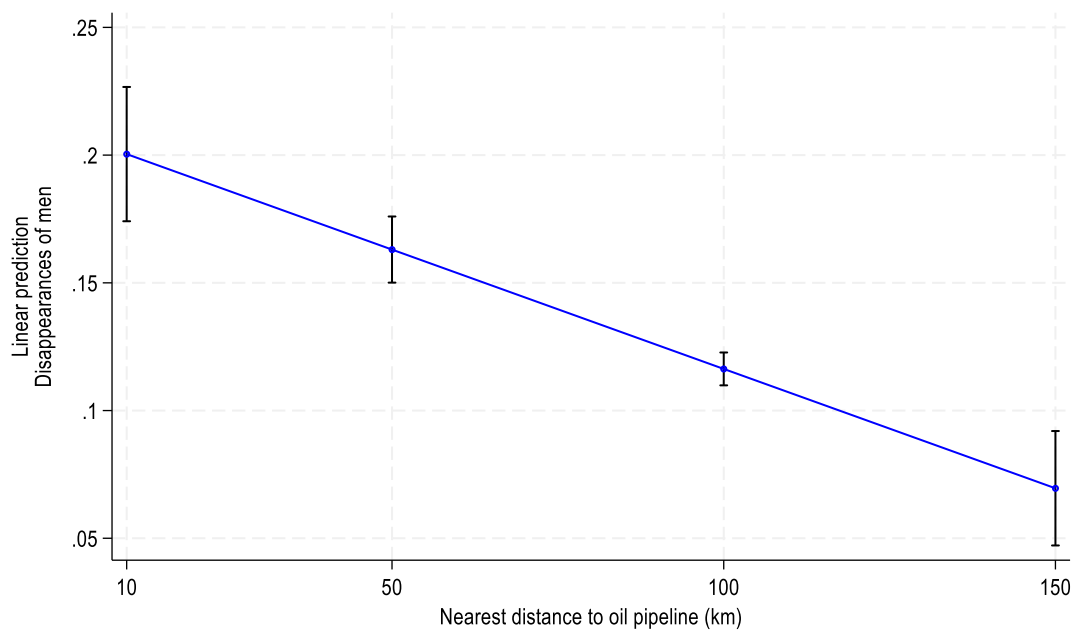
Another important finding is the higher frequency of small-scale drug dealing, disappearances, and extortion in areas near oil pipelines. Figure 12 illustrates some of the marginal effects already shown in Table 2 but projected at different distances from oil pipelines. Municipalities closer to oil pipelines, given the average fuel prices during the analysed period, report more cases of small-scale drug dealing (Figure 12a) and male disappearances (Figure 12b). The only exception is car theft (Figure 12c).

Figure 12: Marginal effects of distance to the oil pipeline, given the average price of gasoline and diesel

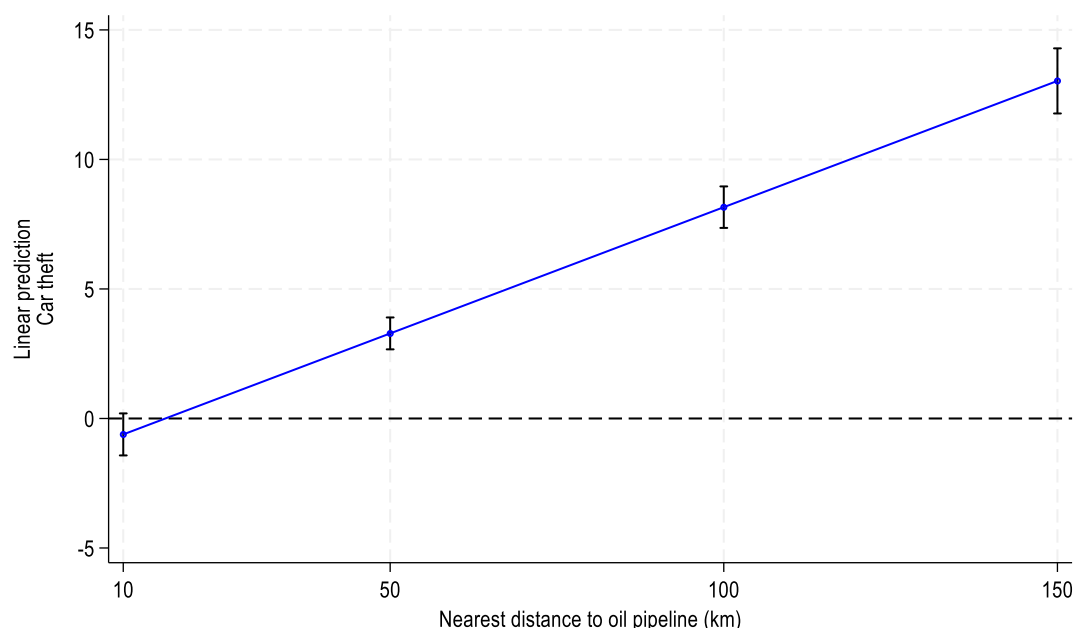
(a) Small-scale drug dealing



(b) Disappearances of men



(c) Car theft



Source: author's estimates based on crime statistics released by Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024) and disappearances released by Registro Nacional de Personas Desaparecidas y No Localizadas (2022).

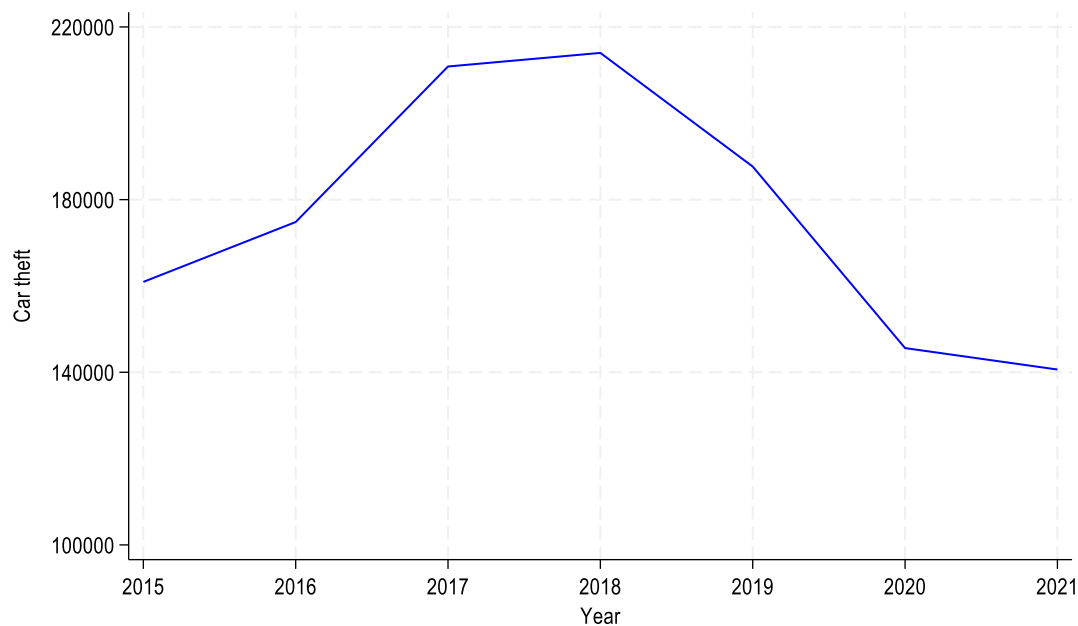
Car theft serves as a telling example of how criminality evolves in regions dominated by organized crime. During the administration of Peña Nieto, this type of crime surged, reaching its peak in 2018. However, by 2021, it had declined by 34%, falling slightly below the levels observed at the beginning of the series (Figure 13). While this decline could be interpreted as a success of the incumbent Morena administration, it is also closely tied to the diversification of organized crime operations. DTOs shifted their focus to more lucrative activities such as extortion, oil theft, and small-scale drug dealing. Stealing vehicles would reduce the demand for gasoline, which is essential for their profits. Therefore, it would be strategically beneficial to suppress car theft in areas where fuel theft is prevalent.

Figure 12 shows that car theft was reduced in areas dominated by *huachicol* (large-scale oil theft operations) while remaining prevalent in municipalities farther from oil pipelines. Appendix Figure A1 shows more clearly the areas where car theft has increased, contrasting with the national trend. This is the case for Morelos, Oaxaca, and Quintana Roo at the southern border. In these areas, DTOs face reduced risks and costs, as stolen vehicles can be quickly and discreetly moved across international borders. Additionally, other hotspots closer to Mexico City have experienced a rise in car theft, driven by the high profitability of selling stolen vehicles or auto parts to the extensive urban market. These patterns reflect criminological theories, suggesting that such crimes cluster around high-activity nodes and areas where international law enforcement faces coordination challenges (Brantingham and Brantingham 2017).

Another key finding is the role of political coordination in reducing crime. When local, state, and federal authorities share the same political affiliation, small-scale drug dealing, disappearances of men, and extortion are reduced (see Table 2, Columns 1, 3, and 4). This alignment appears to enhance the ability of governments to implement cohesive policies and coordinate enforcement efforts, weakening the grip of organized crime in these areas. The exceptions to this are overdose deaths (where there is no association with political coordination) and car theft (where such coordination boosts car theft). The positive association found for car theft may be related to the

fact that once criminals move the stolen vehicles abroad or quickly dismantle the cars, it is easy to evade capture, no matter how coordinated authorities are within the country.

Figure 13: Car theft



Source: author's estimates based on crime statistics released by Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024).

7 Conclusion

This study examined the evolving dynamics of criminal governance, exploring its historical roots, drivers, and the most lethal manifestations of political violence. It also addressed the broader consequences for citizens, including rising crime, economic underdevelopment, and the erosion of democratic institutions.

Demand from global markets and the enforcement strategies of the war on drugs have fundamentally reshaped the local economies in which DTOs operate. In Mexico, what began as modest, localized narcotics production evolved into a central hub of the international drug trade, bolstered by the tacit complicity of political actors and security forces. This shift offers a stark warning for other developing countries that, while not yet primary nodes in the global drug supply chain, face the risk of becoming so if enforcement policies redirect trafficking routes towards them.

In Mexico, this transformation was enabled by the *pax mafiosa* maintained under the PRI's hegemonic rule. Criminal organizations operated as junior partners to the centralized state, bound by unwritten agreements to limit overt violence. In exchange, they were granted protection and operational autonomy. Yet this arrangement was inherently unstable. The gradual erosion of the PRI's dominance in the late twentieth century disrupted the centralized order, forcing organized crime to adapt. No longer content to remain in the shadows, criminal organizations exploited the fragmentation of political authority, forging alliances with emerging political parties and infiltrating local governance. Organized crime moved from influencing governance through informal bribery to wielding violence as an overt tool of political control. This transition reshaped local governance

in its image, marked by escalating levels of political violence as criminal groups consolidated their authority and enforced their interests in a more fragmented and competitive political landscape.

Political assassinations in Mexico, far from being random acts of violence, follow clear patterns tied to the strategic interests of criminal organizations. More than 500 politicians have been assassinated, as well as 156 family members of politicians and at least 19 of their close collaborators since 2000, with a sharp increase after 2017. The geographic concentration of these assassinations reveals that criminal groups prioritize regions with high-value economic resources, particularly those linked to oil pipelines. By diversifying into large-scale fuel theft, criminal organizations have expanded their dominance over local economies, generating profits on par with those from narcotics trafficking.

This form of criminal governance is characterized by strategic integration into local political and economic systems, achieved in part through targeted violence against political candidates to secure incoming local governments. In such settings, government crackdowns against organized crime, such as the arrest or killing of members of organized crime, provoke lethal retaliatory acts against incumbent politicians, their families, and close associates, perpetuating the cycle of criminal governance. By examining the connection between economic resources and political violence, this analysis provides a novel framework for understanding how criminal groups reshape governance and how state fragility bolsters their power.

Another key contribution is the revelation that political assassinations orchestrated by DTOs undermine democratic accountability—not by deterring voter turnout, but by fundamentally distorting the pool of viable candidates and the policies they are willing to pursue. These targeted killings dictate who can safely run for office and who stands a chance of winning, effectively reshaping the political landscape to suit the interests of criminal organizations. By eliminating candidates who oppose their agendas or resist co-optation, criminal groups transform electoral processes into tools for consolidating their influence. This normalization of violence, combined with the state's inability to safeguard its representatives, highlights a deeper crisis: the erosion of institutional authority and the entrenchment of organized crime as a parallel force within governance.

Finally, I showed the multiple burdens imposed on civilians under criminal governance. This system allows criminal organizations to evolve into quasi-governmental entities, exerting territorial control not only for illicit purposes but also to enforce compliance and regulate local economies. Unlike earlier portrayals of DTOs as narrowly focused on the drug trade, here I show these organizations manage a diversified portfolio of crimes while influencing political processes to secure their dominance. This explains why, in areas rich with rent-seeking opportunities, such as oil theft zones, several crimes rise and levy extortion payments with more frequency than in other faraway areas.

This diversification of criminal portfolios is strategic, prioritizing profitable ventures while de-emphasizing others that can be outsourced to peripheral actors or relocated to less contentious areas. Criminal diversification inevitably generates an economy of violence, where competition among rival groups triggers distinct patterns of conflict and retaliation across territories. Responding to state pressure to curb overt displays of violence, these organizations increasingly rely on covert tactics to avoid public backlash, project an illusion of state control, and solidify their grip on local governance (Crisis Group 2024). A stark reflection of this shift is the alarming surge

in disappearances, many of which appear tied to DTOs, driven by territorial disputes and efforts to consolidate control.³

To date, there are officially 117,000 people reported as disappeared, and more than 50,000 human remains are yet to be identified by forensic services. Also, Mexican authorities have reported the discovery of 5,698 clandestine graves between January 2007 and April 2023 (Ferri 2023). These figures reveal not only the scale of the crisis but also the barbaric methods used to obliterate traces of victims—burning bodies to ashes, mixing remains with those of other victims and animals, and deploying techniques designed to frustrate identification. This extraordinary level of violence, unprecedented in Mexico’s history, has exposed a staggering failure of institutional capacity. In the absence of an effective state response, several grassroots groups, such as the Madres Buscadoras (Searching Mothers), have taken on the Herculean task of searching for their loved ones and demanding accountability and justice.

The implications of these findings are profound. DTOs do not simply coexist with governance systems; they actively transform them. By embedding themselves within local political and economic structures, these organizations leave a lasting legacy of deep human suffering, economic stagnation, and democratic erosion.

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³ Disappearances are an intricate and multifaceted issue, demanding far more depth and nuance than can be provided within the scope of this analysis. For a comprehensive historical examination, I recommend the evolution of disappearances in Mexico by Mandolessi and Olalde (2022).

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Appendix

Table A1: Data sources

Variable	Description	Level	Term	Source
Pre-candidates and candidates killed in political violence	Politicians killed in acts of political violence	Municipality	Monthly 2000–21	PAIAMEX
Incumbent mayor killed in political violence	Politicians killed in acts of political violence	Municipality	Monthly 2000–21	PAIAMEX
Former mayor killed in political violence	Politicians killed in acts of political violence	Municipality	Monthly 2000–21	PAIAMEX
Non-lethal intimidation attacks on politicians	Number of intimidation incidents against politicians with no resulting killings	Municipality	Monthly 2000–21	PAIAMEX
Politicians' relatives assassinated	Politicians' relatives killed in acts of political violence	Municipality	Monthly 2000–21	PAIAMEX
Politicians' collaborators assassinated	Politicians' collaborators killed in acts of political violence	Municipality	Monthly 2000–21	PAIAMEX
Incidents of electoral violence	Number of events of electoral violence	Municipality	Monthly 2018–2021	ACLED, 2022
Fatalities of civilians	Number of civilian fatalities	Municipality	Monthly 2018–21	ACLED, 2022
Voter turnout	Voter participation rate	Municipality	Yearly 2000–21	Electoral office in each of the 32 states
Margin of victory	Percentage-point difference between the votes received by the winning candidate and those secured by the second-place candidate	Municipality	Yearly 2000–21	Electoral office in each of the 32 states
Incumbent party gets re-elected	Dummy variable=1 when the same political party remains in power	Municipality	Yearly 2000–21	Electoral office in each of the 32 states
Monthly homicide rate (excluding criminals and political assassinations)	Homicide rate excluding political assassinations and members of organized crime that the state killed per 100,000 inhabitants	Municipality	Monthly 2000–21	INEGI, CONAPO, SEDENA, SEMAR, the national guard, the federal police, and PAIAMEX
Small-scale drug dealing	Number of officially recorded crimes related to <i>narcomenudeo</i> , small-scale drug dealing cases	Municipality	Monthly 2015–21	Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública

Overdose deaths	Number of casualties related to drug overdose	Municipality	Monthly 2000–21	INEGI
Disappearances of men	Number of disappearances of men, likely related to a crime	Municipality	Monthly 2000–21	Registro Nacional de Personas Desaparecidas y No Localizadas (RNPDO)
Extortion	Number of officially recorded crimes related to extortion	Municipality	Monthly 2011–21	Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública
Car theft	Number of officially recorded vehicle thefts	Municipality	Monthly 2015–21	Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública
Destruction of illegal drug cultivation	Destruction of illegal drug cultivations: Number of square kilometres of illegal crops of marijuana and poppy destroyed by government state forces	Municipality	Monthly 2000–21	SEDENA and SEMAR
Opium poppy cultivation	Satellite data detecting opium poppy cultivation covering sampled locations in 10×10 km ² cells	10×10 km ² cells	Yearly 2015–19	United Nations Office on Drugs and Crime, and Oficina de las Naciones Unidas contra la Droga y el Delito y el Gobierno de México
Seized drugs	Total kilograms of seized drugs (cocaine, fentanyl, heroin, methamphetamine, opium, and marijuana) by government state forces	Municipality	Monthly 2000–21	SEDENA, SEMAR, the national guard, and the federal police
Drug laboratories seized	Number of drug laboratories confiscated by government state forces	Municipality	Monthly 2000–21	SEDENA, SEMAR, the national guard, and the federal police
Members of organized crime who were arrested or killed by authorities	Criminals that belong to organized crime as typified by authorities such as drug trafficking, fraud, extortion	Municipality	Monthly 2000–21	SEDENA, SEMAR, the national guard, and the federal police
Clandestine oil pipeline taps	Number of illegal oil taps in pipelines. It is a proxy for oil theft but does not give the number of gasoline or diesel stolen	Municipality	Monthly 2000–21	PAIAMEX
Annual income of the government municipal budget, in real terms	Municipal annual in real terms, including tax revenue and transfers from the federal government	Municipality	Yearly 2000–21	INEGI

Nightlight	Satellite nightlight	Municipality	Yearly 2000–20. The first six months of 2021 are taken from the annual values of the previous year	Earth Observation Group, Payne Institute for Public Policy
Political coordination	Dummy variable = 1 when the municipality was ruled by the same party as its respective state and presidency	Municipality	Yearly 2000–21	Electoral office in each of the 32 states
Chinese population in 1930	Chinese population by area in 1930	State	Yearly, 1930	INEGI
Percentage of mountainous territory	Percentage of territory with mountains within the municipality	Municipality	Constant	INEGI
Average price of gasoline and diesel	Average price of gasoline and diesel	Municipality	Monthly 2000–21	INEGI
Price of corn	Average price of green corn	Municipality	Quarter 2000–21	INEGI
Distance to ports	Distance to the nearest port	Municipality	Constant	Own estimates based on INEGI's geospatial files
Annual price of cocaine adjusted for purity and inflation in the United States	Retail price in the United States	United States	Annual	Office of National Drug Control Policy (ONDCP) and the United Nations Office on Drugs and Crime (UNODC)
Price of heroin adjusted for purity and inflation in 2019 in the United States.	Retail price in the United States	United States	Annual	Office of National Drug Control Policy (ONDCP) and the United Nations Office on Drugs and Crime (UNODC)

Source: author's compilation.

Table A2: Political assassinations, 2000–21—panel fixed-effects Poisson, incidence rate ratios

	(1)	(2)	(3)	(4)	(5)	(6)
	Pre- and candidates	Incumbent mayor	Former mayor	Non-lethal intimidating attacks on politicians	Politicians' relatives assassinated	Politicians' relatives and collaborators assassinated
Fixed-effects Poisson						
State actions against illegal drugs (destroyed cultivations, seized drugs, dismantled laboratories) in the previous month	2.650** (1.145)	0.768 (0.315)	0.979 (0.287)	0.823 (0.200)	0.783 (0.253)	0.867 (0.248)
Number of members of organized crime arrested or killed in the previous month	1.075 (0.076)	1.056 (0.040)	1.047** (0.024)	0.994 (0.059)	0.958 (0.192)	0.895 (0.210)
Distance to the oil pipeline divided by the average price of gasoline and diesel	0.231*** (0.069)	0.814*** (0.061)	0.752*** (0.053)	0.451*** (0.066)	0.662*** (0.068)	0.610*** (0.067)
Homicide rate in the previous month (excluding criminals and political assassinations)	1.044*** (0.012)	1.006 (0.005)	1.005** (0.002)	1.005** (0.002)	1.005** (0.002)	1.005* (0.002)
Political coordination: The municipality was ruled by the same party as its respective state and presidency	0.466 (0.276)	0.421** (0.184)	0.710 (0.257)	0.737 (0.157)	0.623 (0.210)	0.661 (0.187)
Annual income of the government municipal budget, in real terms	1.000 (0.000)	1.000 (0.000)	1.000** (0.000)	1.000 (0.000)	1.000* (0.000)	1.000** (0.000)
Annual nightlight in logarithm	0.695 (0.297)	1.175 (0.312)	0.995 (0.179)	0.680** (0.120)	0.888 (0.226)	0.878 (0.216)
Observations	11,756	15,766	24,564	45,539	22,640	26,514
Wald χ^2	97.31	18.49	45.00	55.72	40.13	42.94
Log pseudo-likelihood	-230.7	-391.9	-608.5	-1055	-652.2	-757.4

Note: political assassinations based on PAIAMEX; the source of each of the covariates is listed in Appendix Table A1.

Source: author's estimates.

Table A3: First-stage regression of Table 1, Figure 9, and Table 2—panel fixed-effects Poisson, incidence rate ratios

	(1)	(2)
	State's actions against drugs	Members of organized crime arrested or killed
Log Chinese population in the area in the 1930s divided by the average price of corn in the previous quarter	0.772*** (0.034)	0.424*** (0.135)
Distance to the nearest port multiplied by the annual price of cocaine in the United States per kilogramme	1.012*** (0.002)	1.106*** (0.014)
Log percentage of mountainous territory multiplied by the annual price of heroin in the United States	0.893** (0.045)	25.990*** (13.579)
Distance to the oil pipeline divided by the average price of gasoline and diesel	1.077*** (0.011)	1.075 (0.053)
Homicide rate in the previous month (excluding criminals and political assassinations)	1.002*** (0.000)	1.005 (0.004)
Political coordination: the municipality was ruled by the same party as its respective state and presidency	0.972 (0.028)	0.476*** (0.129)
Annual income of the government municipal budget, in real terms	1.000*** (0.000)	1.000 (0.000)
Annual nightlight in logarithm	1.218*** (0.028)	0.619** (0.126)
Observations	301,898	90,329
Log pseudo-likelihood	-89141	-17034
Wald χ^2	267.2	177.6
Excluded instruments		
Log pseudo-likelihood	-98,662	-17,989
Wald χ^2	22.63	122.4

Note: the source of each of the covariates is listed in Appendix Table A1.

Source: author's estimates based on actions against drug trafficking organizations according to SEDENA, SEMAR, the national guard, and the federal police.

Table A4: First-stage regression of Figure 10—panel fixed-effects Poisson, incidence rate ratios

	(1)	(2)
	Whether the state has taken any actions against illegal drugs	Number of members of organized crime arrested or killed
Distance to the nearest port multiplied by the annual price of cocaine per kilo in the United States	1.006*** (0.001)	1.118*** (0.034)
Log percentage of mountainous territory multiplied by the annual price of heroin in the United States	0.513*** (0.044)	24.982*** (28.661)
Mayors, pre-candidates, and candidates assassinated in the administration term prior to the election	1.058 (0.044)	1.822** (0.513)
Pre-candidates and candidates assassinated in the administration term prior to the election		
Distance to oil pipeline divided by the average price of gasoline and diesel	1.019*** (0.006)	1.083 (0.055)
Homicide rate in the administration (excluding criminals and political assassinations)	1.000*** (0.000)	1.005*** (0.001)
Annual income of the government municipal budget, in real terms	1.000*** (0.000)	1.000** (0.000)
Annual nightlight in logarithm	1.156*** (0.024)	0.625** (0.115)
Observations	7,901	2,965
Wald χ^2	154.5	83.04
Log pseudo-likelihood	-4,842	-5,537
Excluded instruments		
Wald χ^2	62.93	15.97
Log pseudo-likelihood	-5,639	-6,309

Note: The source of each of the covariates is listed in Appendix Table A1.

Source: author's estimates based on actions against drug trafficking organizations according to SEDENA, SEMAR, the national guard, and the federal police.

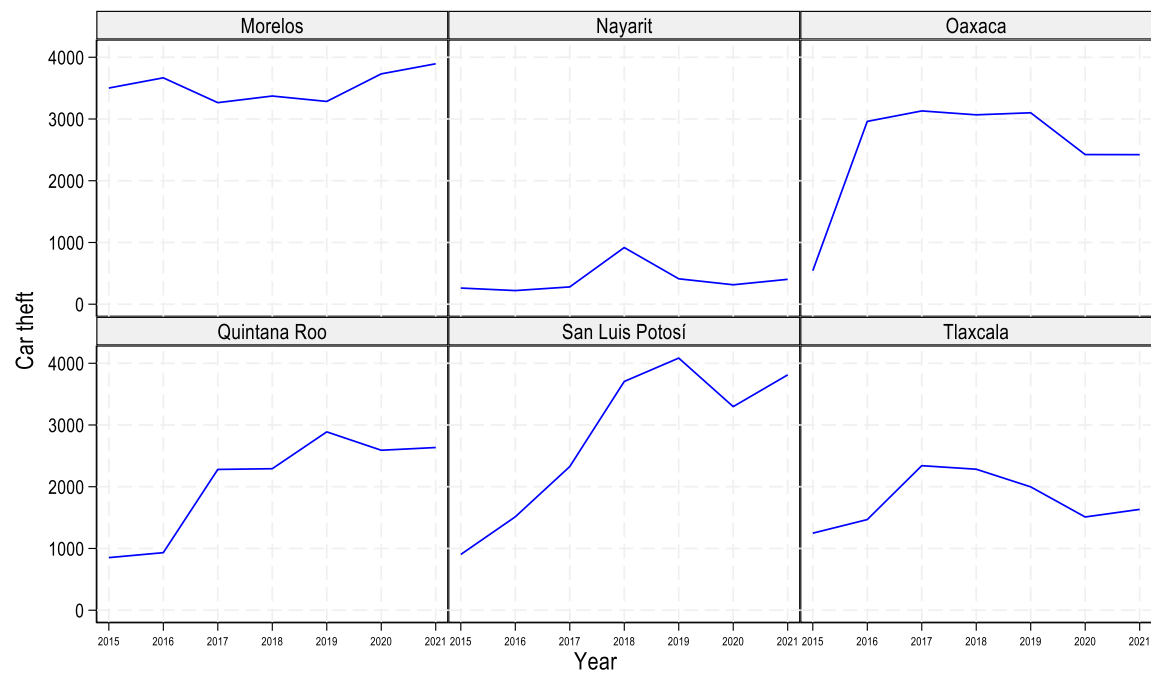
Table A5: Crime

	(1)	(2)	(3)	(4)	(5)
	Small-scale drug dealing, 2015–21	Overdose deaths, 2000–20	Disappearances of men, 2015–21	Extortion, 2011–21	Car theft, 2015–21
Panel fixed-effects					
State actions against illegal drugs (destroyed cultivations, seized drugs, dismantled laboratories) in the previous month	1.113 (0.758)	0.004* (0.002)	0.060 (0.037)	0.018 (0.018)	0.591** (0.258)
Number of members of organized crime arrested or killed in the previous month	0.083 (0.073)	0.001 (0.003)	–0.048 (0.038)	–0.023 (0.018)	0.751 (0.526)
Distance to the oil pipeline divided by the average price of gasoline and diesel	–0.300* (0.161)	–0.001 (0.001)	–0.093*** (0.017)	–0.013*** (0.005)	–0.199 (0.168)
Homicide rate in the previous month (excluding criminals and political assassinations)	0.016* (0.008)	0.000 (0.000)	0.002*** (0.000)	–0.000 (0.000)	0.012*** (0.003)
Political coordination: The municipality was ruled by the same party as its respective state and presidency	–0.353 (0.500)	–0.000 (0.002)	–0.200*** (0.040)	–0.024 (0.015)	0.248 (0.229)
Annual income of the government municipal budget, in real terms	0.000 (0.000)	0.000 (0.000)	0.078*** (0.027)	0.000 (0.000)	0.000 (0.000)
Annual nightlight in logarithm	1.768* (1.037)	0.002*** (0.001)	0.000 (0.000)	0.003 (0.007)	–0.817** (0.366)
Constant	–11.002 (9.767)	0.003 (0.012)	0.211 (0.328)	0.213* (0.126)	6.571 (4.775)
Observations	131,346	453,118	138,702	222,450	131,346
Log pseudo-likelihood	–534,143	157,860	–247,967	–285,182	–509,633

Note: the source of each of the covariates is listed in Appendix Table A1.

Source: author's estimates based on death certificates released by INEGI, crime statistics released by Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024), and disappearances released by Registro Nacional de Personas Desaparecidas y No Localizadas (2022).

Figure A1: Selected states with car theft trends diverging from national levels



Source: author's estimates based on crime statistics released by Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (2024).