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Social Vulnerabilities and Crime: A Structural Analysis of Crime in Mexico

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Abstract

This study analyzes how multiple dimensions of social vulnerability shape the incidence and territorial distribution of common crime in Mexico between 2016 and 2024. Drawing on an ecological and structural perspective, the article argues that everyday criminality cannot be explained solely through individual behavior but rather emerges from the interaction between persistent socioeconomic inequalities, institutional limitations, and local criminal dynamics. Using a biannual panel dataset covering all 32 Mexican states, the analysis incorporates indicators of inequality, extreme poverty, educational lag, economic structure, and crime incidence. Fixed-effects models with robust clustered errors reveal differentiated effects across crime types. While structural vulnerabilities show limited direct explanatory power for homicide, variables associated with criminal markets—particularly robbery and drug dealing—exhibit strong positive associations with lethal violence. In contrast, property crime is significantly shaped by social deprivation, educational attainment, and state-level economic structures. These findings highlight the multidimensional and territorially specific nature of crime in Mexico and underscore the need for security policies that integrate social, economic, and institutional interventions. The paper contributes with empirical evidence supporting the view that everyday crimes are part of a broader criminal ecosystem in which social vulnerability and illegal markets interact among themselves to reproduce violence.

Keywords: México, security, crime incidence, social vulnerability, inequality, homicides rate, robbery rate.

JEL Classification: K42, I32, R11

Introduction

For more than two decades, Mexico has been facing a sustained and complex phenomenon of insecurity, characterized by the increase and persistence of common crimes, which affect regions, social groups, and both urban and rural environments in a differentiated way. Official statistics show a high incidence of crimes such as robbery with violence, intentional injuries, family violence and, in some contexts, intentional homicides (SESNSP, 2025). These crimes, although diverse in nature and motivation, have in common the direct impact on the daily life of the population and the deterioration of trust in the institutions responsible for guaranteeing security and access to justice.

In recent years, the academic and public policy debate in Mexico has placed particular emphasis on high-impact crimes linked to organized crime. However, common crimes not only constitute the majority of court filings registered in the country (SESNSP, 2025), but also directly reflect social, economic, and territorial conditions that configure highly risky scenarios (Kang, 2016; Kelly, 2000; Zepeda Gil, 2018). Rather than isolated events, evidence indicates that many of these offenses are connected to organized-crime dynamics, suggesting a more complex relationship between both spheres of criminal activity (de la Peña, 2025; HRW, 2025). This underscores the importance of adopting a comprehensive approach that allows for the analysis of crime, and its connection with the structures of inequality and vulnerability that enclose Mexican society.

This work is based on the premise that common-jurisdiction crime cannot be explained exclusively by individual factors or attributed to the mere absence of criminal deterrence. By contrast, it is proposed that the incidence of crime is shaped by the interaction between structural conditions (the precariousness of public services) and individual or group factors (such as educational lag, age, social disconnection or ethnic origin). Based on the ecological approach of Kelly (2000), which underscores how different levels of context affect behavior and opportunities, this study seeks to explore the territorial patterns of common law crime in the light of indicators of social vulnerability.

This work is part of a line of research that has gained strength in the last decade: that links poverty and inequality with crime, not as mechanical or unidirectional relationships, but as

expressions of broader structural processes that configure territories with differentiated capacities to prevent, absorb or reproduce violence. Various studies have shown the influence of structural conditions on the incidence of crime. Bourguignon (2009) highlights how inequality, rather than absolute poverty, has a significant impact on crime generation, while other approaches underscore the role of inequality and urban segregation in explaining violent crime (Kang, 2016; Messner & Rosenfeld, 2001). In the Mexican context, some research has highlighted the relevance of social factors such as educational level, youth disconnection or spatial marginalization in the distribution and concentration of crimes (Zepeda Gil, 2018).

From this perspective, the general objective of this study is to analyze the relationship between different dimensions of social vulnerability and the incidence of common crimes in the states of Mexico. It is based on the idea that crime is not homogeneous or responds to the same causes depending on its type, and that vulnerability factors can have differentiated, cumulative or even contradictory effects depending on the crime and the environmental context. In this sense, it seeks to identify which dimensions of social vulnerability have a greater correlation with common crimes, also exploring how this relationship varies depending on the type of crime.

This study aims to identify the specific combinations of structural and individual conditions that best explain crime incidence at the state level. To this end, a set of indicators was built based on public sources from the National Institute of Statistics and Geography (INEGI) and the Executive Secretariat of the National Public Security System (SESNSP), which allows measuring both the incidence of different types of crimes and the levels of social vulnerability. Among the variables considered are the GINI index, the percentage of population in extreme poverty and the index of educational lag. The analysis covers 2016-2024 period.

This article provides an empirical, spatially grounded perspective on the common crime in Mexico. The hypothesis is that the incidence of crime in the country is shaped by the interaction between structural conditions of social vulnerability and local dynamics of criminality, which generates differentiated effects depending on the type of crime and the territorial context. To support this, we examined how various forms of social vulnerability influence the distribution and persistence of crime patterns. By distinguishing between violent and property crimes,

relevant evidence is provided to enrich the explanatory framework of everyday insecurity and guide public policies that are more preventive and sensitive to structural inequalities.

The implications of this approach are threefold. First, it allows for the construction of empirical evidence that complements and refines certain visions focused exclusively on the logic of organized crime. Second, it offers inputs for rethinking public security strategies from a social perspective, which recognizes the weight of structural determinants in the production of violence and crime. Finally, it contributes to identifying territories where the accumulation of vulnerabilities may be configuring scenarios conducive to the breakdown of community relations and the expansion of crime, allowing anticipation and prevention, rather than just containment.

In addition to this introduction, this text is organized into four sections. First, we address both the theoretical framework and relevant debates around vulnerability, criminality and the social context. Next, we describe the data used and the methodology used for the analysis. The third section presents the main findings, while in the last section we discuss our conclusions and propose some lines of intervention aimed at a more equitable and effective security policy. It is worth noting that, for reasons of time, space and updating of the available data, the statistical analysis presented here constitutes only a first approach to the relationships between the variables considered, leaving a broader and more detailed approach for later studies.

Theoretical framework

Social vulnerability can be understood as a complex and multidimensional condition that results from the interaction between structural disadvantages, such as income inequality or lack of basic and public services, and individual trajectories of exclusion, such as educational lag, or ethnic or gender discrimination. This condition significantly limits the social resilience of individuals and communities, i.e., their ability to anticipate, resist, and recover from adverse events (Qamar, 2024). It is not a static characteristic or a natural attribute of certain groups, but a historically and socially constructed expression of the unequal distribution and access to resources, opportunities and institutional protections (Fajnzyblber et al., 2002; Kelly, 2000; Shindaini et al., 2025).

The study of the relationship between social vulnerability and crime is situated within a line of research that has gained significant momentum over the past decade. This perspective

has shifted away from the traditional view that links poverty and crime as a mechanical or unidirectional relationship, focusing instead on broader structural processes that shape differential capacities to prevent, absorb, or reproduce violence. This theoretical approach has been advanced by studies that critique the excessive reliance on individualistic models and emphasize the need to consider how social and institutional structures influence criminal trajectories (Garland, 2002; Moser, 2004; Wacquant, 2001). From this standpoint, crime is understood not as an individual decision but as the outcome of combined structural deficiencies and accumulated inequities that erode the social fabric and undermine norms of cooperation.

From an economic perspective Becker (1968), in a pioneering approach, formulated the decision to commit a crime as a rational choice based on a calculation between expected benefits and probable costs. Although influential, this view has been widely adjusted by studies showing that the material and symbolic conditions of the environment substantially alter perceptions of risk, necessity, and legitimacy. Similarly, Bourguignon (2009) states that relative inequality has a stronger impact than extreme poverty in the generation of criminal behavior; the author stresses that when individuals, or communities, perceive themselves excluded from the economic and social benefits accessible to others, the probability that they will turn to violent or illegal strategies as an alternative form of integration increases.

This idea is empirically supported by Fajnzylber et al. (2002), who, based on an extensive comparative study of Latin America and the United States, showed that countries with higher levels of inequality had significantly higher rates of violent crimes. In this way, the perception of relative deprivation, that is, the feeling of being worse off than others with whom one shares space seems to act as a key factor in criminal motivation (Fajnzylber et al., 2002), reinforcing the anomie effect described by Merton (1968).

Along with inequality, socio geographic distribution also matters. In his study of American cities, Kang (2016) highlights that economic segregation between neighborhoods is a determining factor of violent crimes. Urban context where poverty is highly concentrated, without social mixing or support networks, tend to develop higher levels of interpersonal violence. This approach connects with the theory of social disorganization (Sampson & Groves, 1989), which argues that sociodemographic heterogeneity, residential mobility, and the absence

of strong local institutions weaken informal mechanisms of social control, such as neighborhood policing or community sanction.

An institutional variant of this reasoning is developed by Messner and Rosenfeld (2001), who argue that in societies where economic success is the dominant goal, but access to legal means is unevenly distributed, the pressure to achieve results by any means increases, including transgression. When the economy subordinates the rest of social institutions such as education, family, and community, collective values are eroded and competitive individualism intensifies, thus creating structural conditions for violence.

Thornton et al. (2023) offer a complementary perspective by examining how property crime may increase alongside with income and inequality. They argue that the relationship between inequality and crime is not linear but may take complex forms depending on the local economic context. Their findings show that income levels influence crime rates in multiple ways, and that in contexts of extreme inequality elites invest in private security to protect themselves. This, in turn, alters the spatial distribution of crime and can reinforce its concentration in less protected areas.

Along these lines, Büttner (2025), in his analysis of the South African case, shows that income inequality is associated with an increase in violent crimes, while its relationship with property crimes varies according to the level of inequality: in contexts of low inequality, an increase in inequality is linked to more property crime, but beyond a certain threshold the trend is reversed and rates decrease. The author also finds that educational inequality is more related to violent crimes, and housing inequality to property crime (Büttner, 2025). One of the most consistent findings of this study is the positive association between racial heterogeneity and criminality in all its forms, especially in urban areas with a high incidence of violence. By distinguishing between intra- and interracial inequality, he identifies that the former is linked to interpersonal violence, and the latter to crimes against property. These dynamics, the author points out, can be interpreted through the theory of social tension, which maintains that frustration derived from unattainable goals in contexts of structural exclusion can be translated into criminal behavior (Büttner, 2025).

In the Latin American context and specifically in Mexico, these theories have been taken up and refined by studies that incorporate variables such as educational lag, the labor condition of young people or spatial marginalization. For example, the group of young people who neither study nor work has been identified as a vulnerable sector to criminal recruitment and participation in common crimes (Zuluaga et al., 2018). Likewise Zepeda Gil (2018) shows that, even when controlling for variables related to the presence of illegal markets, factors such as low schooling and spatial marginalization maintain their explanatory power over homicides.

This evidence points towards a more complex and situated understanding of crime; it is not a question of behaviors unrelated to their context, but of responses inserted in territorial configurations marked by vulnerability. Ordinary crime, far from being random, reflects historical patterns of unequal accumulation of capabilities, services, and infrastructure. Thus, the crime of the common jurisdiction, in its various modalities, both violent and patrimonial, can be seen as a critical expression of territories in which the social contract has been weakened.

From this approach, this study articulates structural dimensions such as income inequality and the lack of basic services; individual dimensions such as educational lag and age or ethnic composition; and contextual elements such as institutional capacity. The assumption is that crime-prone contexts emerge precisely at the intersection of these factors. Far from attributing linear causality, it seeks to understand how certain combinations generate scenarios that are especially vulnerable to crime, and how these configurations vary between types of crime and regions. This approach, therefore, allows us to explore criminality as a territorially differentiated and socially conditioned phenomenon, rather than as a simple individual decision or collateral effect of drug trafficking.

Data and methodology

This work is based on the construction of a panel database with biannual observations of the 32 states of Mexico, which covers the period from 2016 to 2024. It is important to underscore that, for the descriptive section, only a comparison between the periods of 2018 and 2024 is shown to visualize changes at the start and end of the presidential administration. The database integrates indicators of three major dimensions: (1) vulnerability and poverty, measured through the Gini

index, the proportion of the population in extreme poverty and educational lag; (2) economic structure, in particular the participation of the secondary sector in the state GDP, and (3) crime, for which homicide, robbery, domestic violence and drug dealing rates per 100,000 inhabitants are taken into account.

For the construction of this database, data from official sources were considered, including the National Institute of Statistics and Geography (INEGI), the National Council for the Evaluation of Social Development Policy (CONEVAL), the Ministry of Public Education (SEP) and the Executive Secretariat of the National Public Security System (SESNSP). In addition to the descriptive analyses, some exploratory regressions were performed in which homicide and robbery rates were used as dependent variables, while some structural indicators at the state level served as independent variables, with the aim of exploring possible associations between socioeconomic conditions and crime levels.

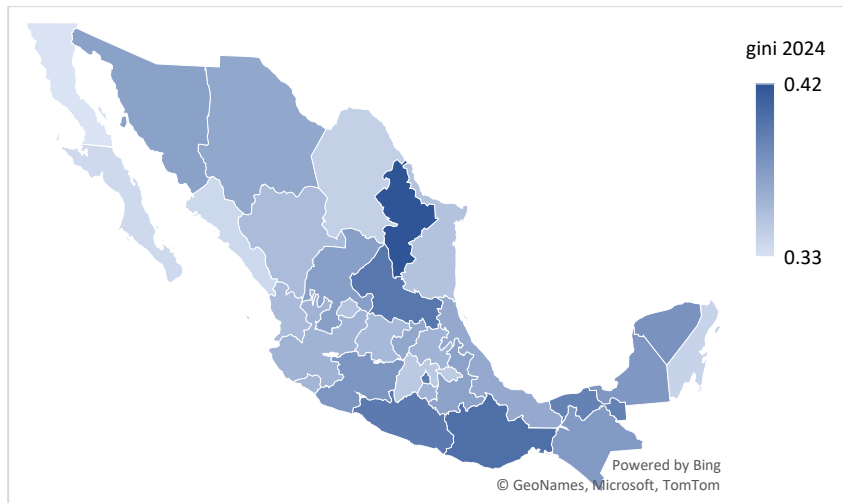
It is a work in progress. The methodology presented here is exploratory in nature and will be adjusted in later stages. In particular, the results should be read as observed associations and not as definitive causal relationships, since an exogenous design that identifies causal effects has not yet been implemented. In addition, it is important to recognize that some variables have extreme values that can distort averages and variances; Therefore, future analyses will incorporate additional robustness tests, as well as other statistical measures and complementary estimation techniques.

Results

Descriptive statistics

The descriptive indicators show a complex and heterogeneous panorama among the states. Mexico's Gini index decreased from about 0.43 in 2018 to 0.37 in 2024, suggesting a general trend towards lower inequality. However, the territorial differences remained high, while in 2018 some states had values as high as 0.52, in 2024 the extremes ranged between 0.33 and 0.41. This indicates that, although on average inequality fell by 14.7%, certain states maintain a strong concentration of income, which can have differentiated effects on crime incidence.

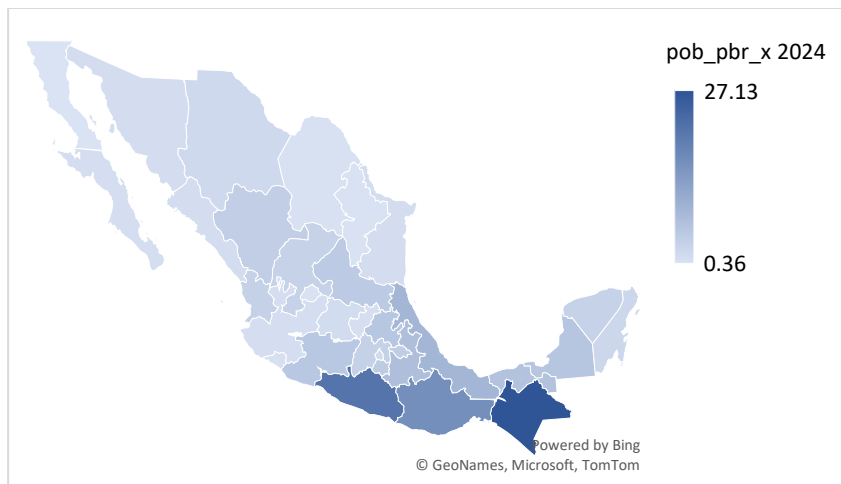
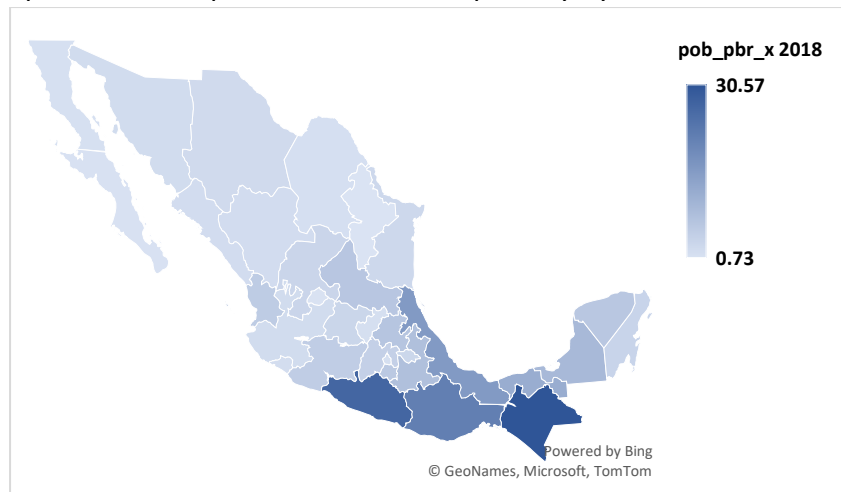
Graphs 1 and 2. GINI Index by State 2018 and 2024



Source: Own elaboration based on Coneval 2022; Inegi 2025.

As for the population in extreme poverty, the national average fell from 6.5% in 2018 to 4.9% in 2024. Even so, critical values persist in states such as Chiapas or Guerrero, the proportion of the population in extreme poverty is still several times higher than that of states in the industrialized north. This heterogeneity reinforces the idea that extreme poverty, beyond the downward trend, continues to be concentrated spatially.

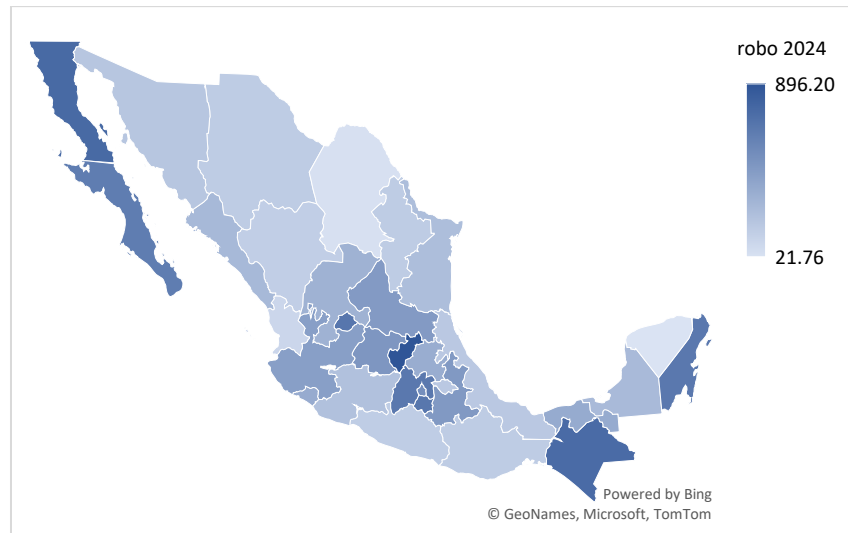
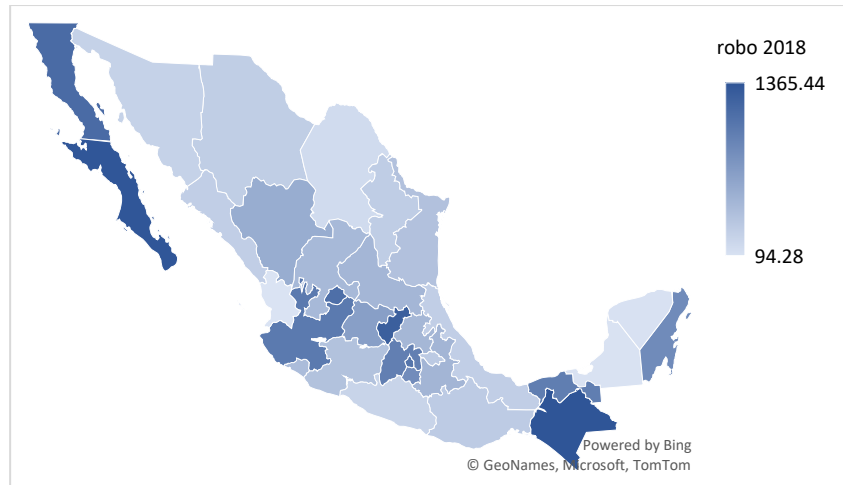
Graph 3 and 4. Population in extreme poverty by state 2018 and 2024



Source: Own elaboration based on Coneval 2022; Inegi 2025

In the incidence of crime, the patterns are mixed. The rate of robberies per 100,000 inhabitants decreased from an average of 605 in 2018 to 382 in 2024, which could reflect improvements in certain entities. However, extreme values remain high (up to 1,365 in 2018 and 896 in 2024), indicating that a few states concentrate the burden of this crime. The asymmetry of the distribution suggests that the national averages hide critical factors that deserve focused attention.

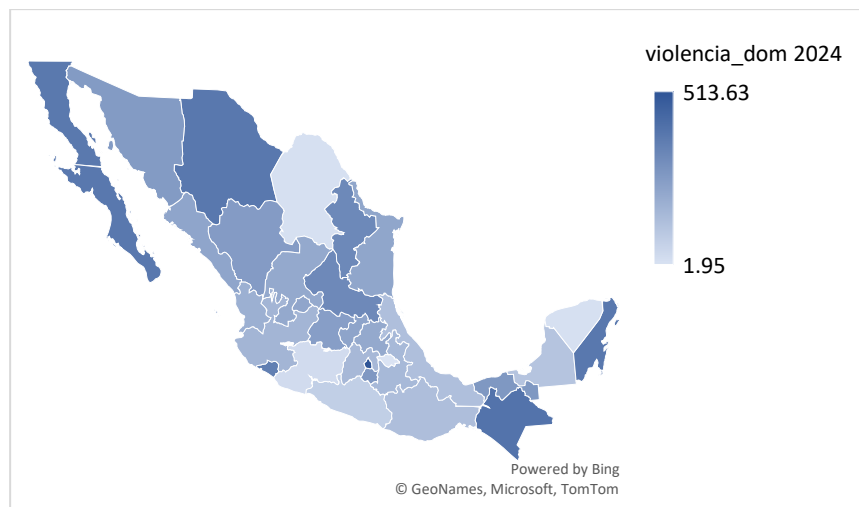
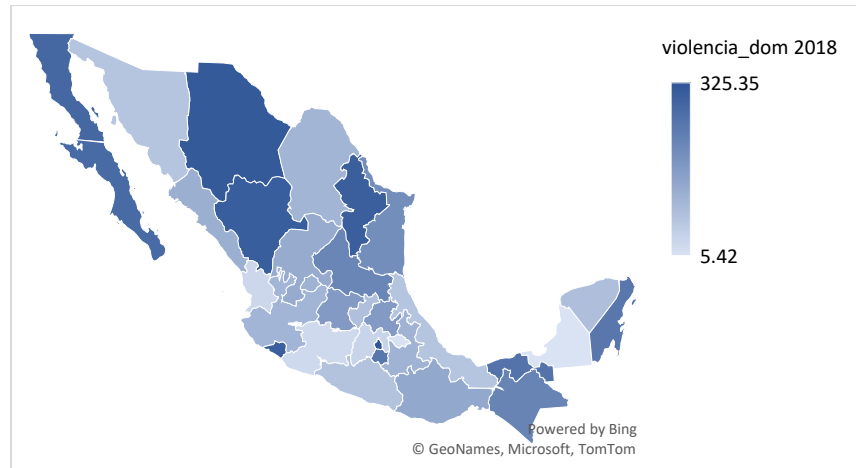
Graphs 5 and 6. Robbery rate per 100 thousand inhabitants 2018 and 2024



Source: Own elaboration based on SESNSP 2025.

The behavior of domestic violence is different, instead of decreasing it increased on average from 162 to 228 cases per 100,000 inhabitants between 2018 and 2024, with peaks above 500 in some states. This could result from a real increase in the phenomenon or an improvement in its record. In any case, it shows dynamics that are not always related to property crimes, but that constitute an environment of daily violence that must be considered in the analysis of crime.

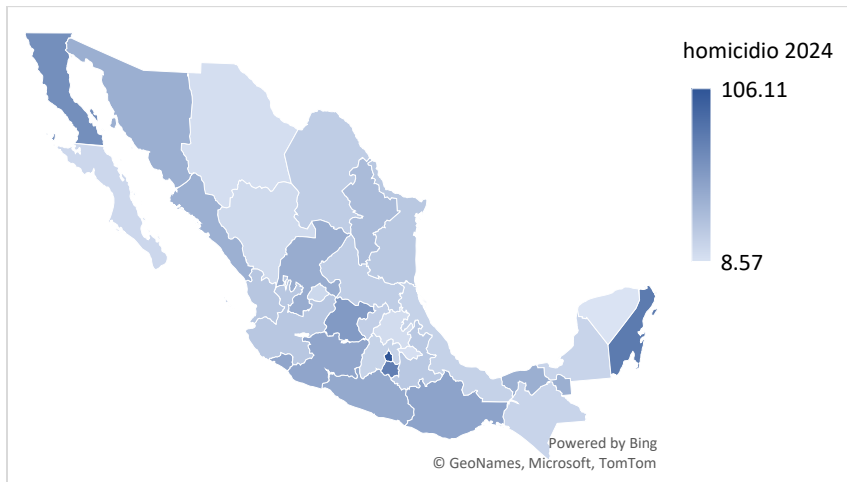
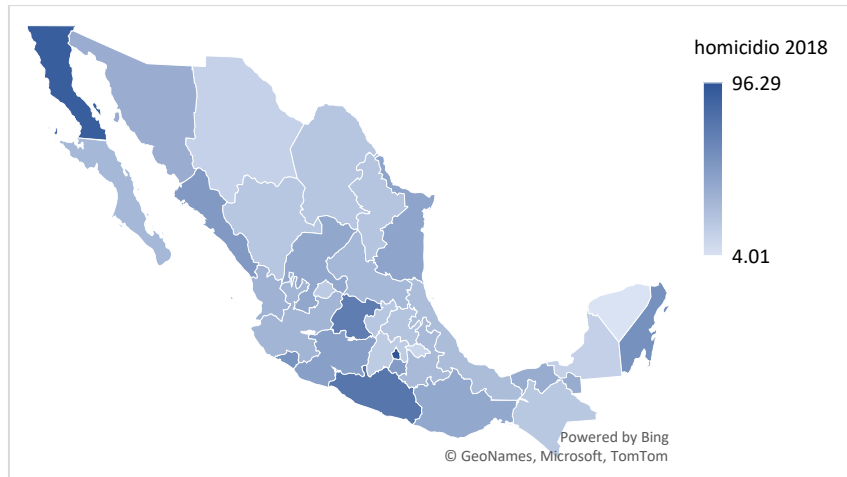
Graphs 7 and 8. Domestic violence rate per 100 thousand inhabitants. 2018 and 2024



Source: Own elaboration based on SESNSP 2025.

The homicide rate shows a slight reduction on average of 5.6% from 2018 to 2024, that is, from 38 to 36 per 100,000 inhabitants. However, the dispersion across states is substantial; while some states report single-digit figures, in others the homicide rate exceeds 100 per 100,000 inhabitants, causing the standard deviation to rise from 21.9 in 2018 to 23.2 in 2024. This pattern underscores the spatial concentration of this type of crime.

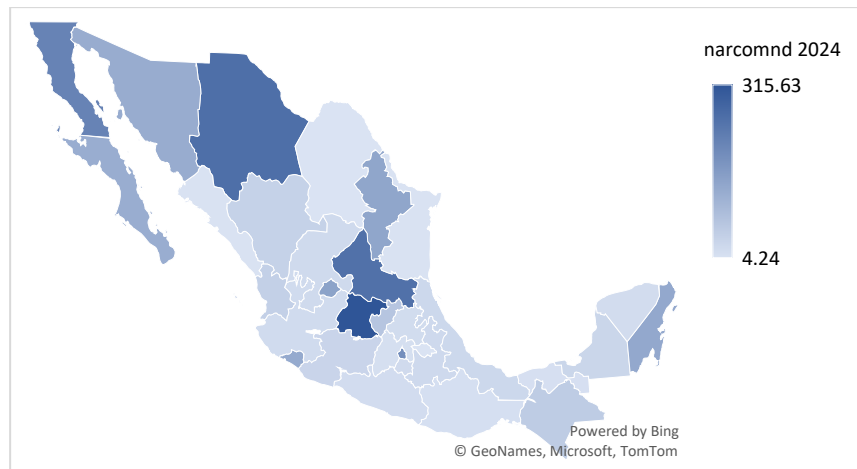
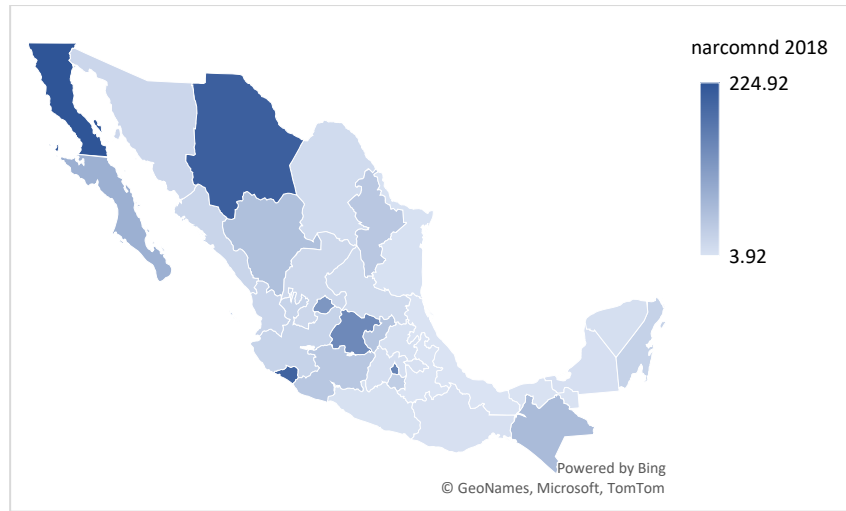
Graphs 9 and 10. Homicide rate per 100 thousand inhabitants. 2018 and 2024



Source: Own elaboration based on SESNSP 2025.

Finally, drug dealing increased significantly, going from 54 to 80 cases on average, with maximums exceeding 300 in 2024. This growing rate points to changes in the local dynamics of drug trafficking and greater institutional visibility of crime, suggesting that illicit drug markets are an increasingly determinant factor in the criminal structure of states.

Graphs 11 and 12. Rate of drug dealing per 100 thousand inhabitants 2018 and 2024



Source: Own elaboration based on SESNSP 2025.

Overall, the descriptives reveal that, while inequality and poverty tend to decrease on average, certain crimes such as domestic violence and drug dealing grow; and others, such as robberies and homicides show marginal reductions but with extreme values that indicate red flags in the territory.

Table 1. Descriptive statistics. Period 2018 and 2024

	MAX		MIN		Average		Standard deviation		Percentage change
	2018	2024	2018	2024	2018	2024	2018	2024	2018-2024
Gini	0.526	0.419	0.362	0.331	0.430	0.367	0.032	0.021	-0.147
Population in extreme poverty	30.568	27.127	0.734	0.355	6.458	4.906	7.440	6.026	-0.240
Robbery rate per 100 thousand inhabitants.	1365.441	896.198	94.280	21.755	605.028	381.614	402.904	240.972	-0.369
Domestic violence rate per 100 thousand inhabitants.	325.350	513.628	5.423	1.954	162.208	228.170	100.813	128.607	0.407
Homicide rate per 100 thousand inhabitants.	96.292	106.113	4.009	8.574	38.305	36.163	21.910	23.241	-0.056
Rate of drug dealing per 100 thousand inhabitants.	224.924	315.627	3.925	4.240	53.939	79.690	64.856	86.774	0.477

Source: Own elaboration based on Coneval 2022; Inegi 2025; SESNSP 2025.

Regression results

To control for those unobserved characteristics that remain in each state over time, such as geography, culture, politics and local institutions, we used *Fixed Effects* in each model. This increases internal causal validity by eliminating bias for omitted variables that do not vary over time. Standard errors grouped by state correct for heteroskedasticity and autocorrelation derived from repeated observations over time, so that the *t*- and *F*- tests, as well as the confidence intervals, remain robust against violations of the classic linear model's assumptions.

The model shows that structural variables such as inequality, economic vulnerability, criminal exposure, robbery and drug dealing exert a significant joint effect on the homicide rate, and these results remain strong in the face of heteroskedasticity and intrastate correlation. By using robust standard errors grouped by state, error variance and autocorrelation within each panel are simultaneously corrected for time series by state. This produces more reliable, although more conservative, standard errors, implying that the *t*- and *p-values* are adjusted for robustness and that the significance levels are more realistic.

The fixed-effect models that were estimated for the homicide rate offer relevant findings to understand the relationship between vulnerabilities and violence. The Gini index appears with a negative and statistically significant coefficient; implying that an increase in inequality is associated with a decrease in homicides¹. This result is counterintuitive in the light of the theory on the subject, but it can be explained by more complex mechanisms. One possibility is that the relationship between inequality and violence is non-linear, with different effects at low and high levels of inequality. It is also plausible that in contexts of high inequality there are containment mechanisms, such as spatial segregation or private investment in security, that cushion violence. Another hypothesis is that the declines observed in certain states are due to local reconfigurations of drug trafficking, which alters the expected relationship between inequality and homicides. This is indicated by the fact that all the states showed reductions in their Gini index from 2018 to 2024, while the homicide rate per 100 thousand inhabitants showed a significant increase in 40% of the states, in the same period.

The population in extreme poverty has a positive coefficient, but only marginally significant, which suggests that, although poverty tends to be associated with greater violence, the statistical evidence is still inconclusive. The educational lag and the economic structure are not significant either, although they show the expected signs. In contrast, local crimes do exhibit robust associations; drug dealing and robberies have positive and significant coefficients, indicating that where these crimes are more frequent, more homicides are also recorded. This concurrence points to dynamics of “crime clustering” and the intensification of risk in territories with high crime density.

The estimated rho (0.88) confirms that most of the variance in homicides is explained by factors specific to each state and not by variations over time, which highlights the need for a differentiated territorial analysis.

¹ Let us remember that, in the Gini, zero represents total equality and one absolute inequality. Under an inverse relationship, while the Gini decreases, homicides increase.

Table 2. Regression homicide rate 1. Period 2016 - 2024

<i>Homicide</i>	Models							
	1		2		3		4	
<i>Variables</i>	Coeff.	P-Value	Coeff.	P-Value	Coeff.	P-Value	Coeff.	P-Value
gini	-68.35	0.041	-48.5	0.038	-48.55	0.034	-52.69	0.052
pob_pbr	0.28	0.179						
pob_vln_ing			0.75	0.075	0.75	0.082	0.85	0.041
rzg_ed	1.19	0.361	1.42	0.236	1.42	0.214	1.15	0.301
pib_strprim					-0.04	0.983		
pib_strsec							0.51	0.109
theft							0.02	0.065
Narcomnd							0.06	0.143
_Nocs	31.32	0.193	23.67	0.24	23.82	0.311	1.1	0.961
rho	0.8576		0.8446		0.8434		0.8676	
Prob > F	0.1372		0.1226		0.1674		0.0259	

All models were run with fixed effects and robust bugs

N = 160, 32 groups

Source: Own elaboration based on (Coneval, 2022; Inegi, 2025; SEP, 2024; SESNSP, 2025).

It is observed that structural factors, inequality and poverty, do not have a direct and uniform effect on the homicide rate, but their impact depends on territorial contexts and local criminal dynamics. By contrast, common crimes such as robbery and drug dealing show a consistent relationship with the dependent variable, reinforcing the idea that criminality is built from complex interactions between social vulnerability and local illegal markets. These findings underscore the need for multidimensional public policies that combine social interventions to reduce vulnerabilities with security strategies focused on everyday crimes and the containment of drug trafficking.

The results of model number 4 in Table 2 indicate that economic vulnerability by income is the main determinant of homicide rates among Mexican states during 2016-2024. An increase of one percentage point in the population with incomes below the poverty line is associated with an increase of approximately 0.85 homicides per 100,000 inhabitants. Marginally, inequality measured by the Gini index shows a negative effect, while the incidence of robberies shows a positive association with homicides. These results suggest that structural factors of economic

vulnerability and the general criminal context influence significantly the lethal violence observed in the country.

The behavior of the Gini index deserves additional precision. The coefficient does not present the expected sign. This implies that its temporal variation is very low, that its effect may be absorbed by other structural variables or that its relationship with violence is not linear at the level of aggregation used. An inherent limitation of the fixed-effects model is that it only takes advantage of variation within each entity over time. In this case, the Gini changes very little between 2016 and 2024, while homicides vary substantially. Therefore, fluctuations in homicides cannot be explained by the Gini coefficient, which becomes unstable or unexpectedly signed. When a variable hardly varies over time, its coefficient tends to be unreliable.

On the other hand, and in line with the revised theory, results in model 4 of table 3 from the regression for the *robbery rate* as dependent variable, show consistent patterns with the literature. The coefficient of social deprivation, measured as the percentage of the population with at least one deprivation, is positive and statistically significant. This suggests that, as the proportion of people in conditions of social backwardness increases, the rate of robberies per 100 thousand inhabitants also increases. This finding reinforces the hypothesis that social vulnerabilities not only limit community and institutional protection capacities but can also lead to environments that are more prone to crime.

Expectedly, terminal efficiency, measured as the percentage of the population that completes basic education, shows a negative and statistically significant coefficient. This indicates that higher basic educational attainment is associated with a lower incidence of theft. In line with what has been pointed out in the literature, education operates as a protective factor against crime by expanding opportunities for social and economic integration, reducing the probability of resorting to illicit activities.

Finally, the economic structure also has a relevant effect. The negative and statistically significant coefficient of the primary sector as a percentage of the State's economy, suggests that in states with greater dependence on agricultural or extractive activities, the theft rate tends to be lower. One possible explanation is that the job profiles associated with this economic sector

generate employment dynamics different from those observed in more diversified urban environments, where property crime has greater incentives or opportunities.

Table 3. Regression of robbery rate. Period 2016 - 2024

<i>Robbery</i>	Models							
	1		2		3		4	
<i>Variables</i>	Coeff.	P-Value	Coeff.	P-Value	Coeff.	P-Value	Coeff.	P-Value
<i>gini</i>	1294.14	0.013	245.25	0.445				
<i>pob_vln_ing</i>	7.55	0.464						
<i>rzg_ed</i>	5.82	0.637	-21.91	0.182	-19.81	0.213		
<i>pib_strsec</i>	-2.54	0.822	-2.43	0.805				
<i>Narcomnd</i>	-0.14	0.746						
<i>pob_1_crn_scl</i>			21.29	0.002	23.54	0	12.19	0.008
<i>pib_strprim</i>					-64.45	0.083	-70.03	0.054
<i>eftrm_medsup</i>							-9.71	0.000
<i>_Nocs</i>	-114.31	0.802	-518.62	0.254	-393.13	0.142	668.34	0.073
<i>rho</i>	0.816		0.8634		0.8803		0.867	
<i>Prob > F</i>	0		0.0003		0.0004		0	

All models were run with fixed effects and robust bugs

N = 160, 32 groups

Source: Own elaboration based on (Coneval, 2022; Inegi, 2025; SEP, 2024; SESNSP, 2025).

The findings confirm that property crime cannot be understood as an isolated phenomenon, but rather as an expression of the structural conditions that shape territorial dynamics. At the same time, it is shown that the homicide rate responds to broader and more complex dynamics, linked both to local criminal markets and to institutional and contextual factors that exceed the indicators for social vulnerability considered in this work. Statistical evidence aligns directly with the initial approach of this study and reinforces the need to address everyday insecurity from a comprehensive approach that combines social, educational, and economic policies with focused security strategies.

Discussion and conclusions

The findings of this analysis confirm that the relationship between social vulnerability and criminality in Mexico is more complex than traditional linear approaches suggest. Although national averages show a reduction in inequality and extreme poverty between 2018 and 2024, territorial dispersion reveals that certain states maintain high levels of marginalization. This indicates that improvements in aggregate indicators do not automatically translate into lower levels of violence, as local contexts retain critical risk configurations. The persistence of these territorial gaps suggests that social vulnerability should be understood as a discrepancy and not a homogeneous phenomenon, with diverse expressions that particularly affect the incidence of crime.

A striking aspect is the counterintuitive behavior of the Gini index in our regression. While the literature has consistently documented that greater inequalities tend to be associated with increases in violence, here a negative and statistically significant relationship is observed with respect to homicides. This result should not be interpreted as a refutation of known theories, but as evidence that territorial dynamics and mediation mechanisms can alter the expected links. Spatial segregation differentiated institutional capacity, or even reconfigurations of illicit markets could explain why in some contexts inequality does not translate into a higher homicide rate.

It is also important to consider that the Gini index is constructed from the distribution of income, so its relationship with crime may vary according to its economic nature. In property crimes, such as robbery, makes sense that income inequality is positively associated with this type of incidence. On the other hand, in homicides, inequality due to economic conditions is not always the motivation; factors linked to personal conflicts, domestic violence or territorial power dynamics may intervene. Even in cases involving organized crime, whose goal is to make economic gain, the homicide rate may respond more to internal disputes or strategic adjustments than to economic inequality per se.

In contrast, common crimes such as robbery and drug dealing show consistent and significant effects on homicides: where these crimes are most frequently recorded, homicide rates are also higher. This suggests that lethal violence does not emerge in isolation, but as part of a criminal ecosystem in which the density of everyday crime increases the risk of homicides.

The observed co-occurrence supports the idea that security policies cannot focus only on high-impact crimes, but must address the local dynamics of criminality that, although less burdensome, generate the conditions for the expansion of violence.

Another relevant finding is the marginal role of structural variables such as extreme poverty and educational lag. Although they show the expected signs, their statistical significance is weak. This does not imply that they lack influence, but that their effects are likely to be expressed indirectly or through interactions with other factors. In this sense, the high value of the parameter rho (0.88) reinforces the importance of state contexts; this is that a large part of the variation in homicides is explained by characteristics of each entity, which confirms the need for analysis and policies with a territorialized approach.

Building on this, the contrast between the regression of robberies and that of homicides as dependent variables is illustrative. While social deprivation and educational efficiency both show a significant relationship with the incidence of robberies, in the case of homicides these same variables do not reach statistical significance. This suggests that conditions of social vulnerability have a greater impact on crimes with a lower impact, such as property crimes, while others of greater gravity, such as homicides, respond to broader and more complex dynamics. In this sense, the need to distinguish between different types of crime and to design differentiated intervention strategies is reaffirmed.

In terms of public policy, our findings suggest that prevention strategies must be multidimensional. Reducing inequality and poverty remains a central objective, but preliminary findings show that attention to everyday crimes such as robbery and drug dealing is equally crucial. A comprehensive security policy should combine social programs that strengthen the social fabric with targeted control actions that reduce crime density in specific territories. Only in this way it will be possible to confront the cumulative and contributing nature of vulnerability and criminality.

It is important to emphasize that this study is a work in progress. The methodology applied is exploratory in nature and will be adjusted in later stages to build its own index of vulnerability conditions. This effort will allow for a more accurate capture of the multiple social, economic,

and institutional dimensions that shape risk scenarios in Mexico, and, with it, we could offer a more robust framework for understanding the interaction between vulnerability and crime.

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