# What Explains the Variation in the Homicide Rate in Mexico? On Cartels, Social Cohesion, and Extreme Violence

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Since the start of the War on Drugs in 2006, Mexico has been living for years in a continuous state of high and extreme violence, that counts to date hundreds of thousands of deaths by homicides, massacres, and disappearances. Much of the literature has overtly focused on institutions and specific security policies to understand this puzzle. In this paper, I argue that high homicide rates happen in states that have some economic dynamism but low social cohesion, which leads to an increase in cartel recruitment and, therefore, to the rise in victims and perpetrators of violence. To prove this theory, in this paper, I execute multiple regressions with the homicide rate as a dependent variable. I divide my analysis into two sections: the relationship between a group of indicators of social cohesion and violence and the relationship between some structural variables and violence. Among my social cohesion variables, I found a negative relationship between the percentage of the population that speaks an indigenous language (my main variable of interest) and violence, a positive relationship between schooling years and violence, and no relationship between the presence of common land and violence. Also, among my structural variables, I found a negative relationship between poverty and violence, a positive relationship between economic activity and violence, and no relationship between distance to the US border and violence.

Keywords: Violence, Cartels, Mexico, Crime, Development, Latin America.

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## Introduction

Since the start of the War on Drugs in 2006, Mexico has been living for years in a continuous state of high and extreme violence, due to the proliferation and radicalization of criminal organizations, that counts to date thousands of killings, disappearances, and forced displacements. Much of the literature that addresses the topic is based on understanding the rise of violence due to the contentious policy of the period that goes from 2006 to 2012 (Ríos 2013; Magaloni, Calderón, Robles, & Díaz-Cayeros 2015; Philips 2015; Flores-Macías 2018). In a parallel explanation, scholars have been interested in the transition of democracy and institutions as independent variables of violence (Snyder & Durán Martínez 2009; Ríos 2013; Trejo & Ley 2018). These explanations are compelling, but they explain only the rise of violence between 2006 and 2018, not the persistence of extreme violence during the period that goes from 2018 to 2024, when the policy shifted radically, and the regime followed a process of centralization and autocratization (Sánchez-Talanquer & Greene 2021). The question, then, is still puzzling: What explains the spatial variation in the homicide rate at the subnational level in countries that face a strong presence of organized crime?

In this paper I argue that we need to look, *not at the state, but at the bottom*, more at crime youth recruitment, at the dynamics of cartel activity, and the drivers of violence, due to structural conditions. My main hypothesis is that high homicide rates happen in urban settlements that have *some economic dynamism but low social cohesion*, which leads to an increase in cartel recruitment and, therefore, to an increase in victims and perpetrators of violence.

To understand systemized violence, Mexico is an emblematic case. Today the country has 12 of the cities with the highest homicide rates in the world, and Latin America, as a whole, is the most violent region in the world (Chioda 2017; World Population Review 2024). The Mexican case is, also, interesting because the violence shows variation in space and time: only some states have high homicide rates and the geography of violence has evolved with time (there has been a decrease in homicide rates in some states and an increase in others).

To test my theory, in this paper, I will execute multiple regressions with the homicide rate as a dependent variable. I will divide my analysis into two sections. In the first section, I will analyze the relationship between a group of indicators of social cohesion and violence and, in the second section, I will analyze the relationship between some structural variables and violence. The decision on which to use would depend on the availability of the independent variable (if there is information just at the state level or if there is information at the municipal level). My social cohesion variables of interest are the percentage of the population that speaks an indigenous language, schooling years, and the presence of common land; my structural variables of interest where the poverty rates, distance to the US borders, and an indicator of economic activity. My state dataset for the homicide rate covers the period from 2006 to 2022 (16 years), with information on Mexico's 32 states per year (n=544); my municipal database for the homicide rate has information for more than two thousand observations. My main variable of interest in social cohesion is the percentage of the population that speaks an indigenous language, assuming that (in Mexico) in states with more Indigenous presence, there is usually more collectivism, cultural identity, and social cohesion. I found a negative relationship between the percentage of the population that speaks an indigenous language (my main variable of interest) and violence, a positive relationship between schooling years and violence, and no relationship between the presence of common land and violence. Also, I found a negative relationship between economic activity and violence. I found no relationship between distance to the US border and violence.

We must understand the main drivers and effects of this violence since it impacts all of society: it permanently generates victims (Gallagher 2022), creates economic loss (it scares domestic and foreign investment), raises distrust in the relationship between citizens and the state (Flores-Macías & Sánchez-Talanquer 2020; Aguilar, Cornejo, & Monsiváis-Carrillo 2025), expands fear in everyday activities (Cordova 2019), and promotes forced displacements. It also affects, mainly, the younger generations, producing a pernicious cycle. When there is an expansion of the crime underworld, young citizens form poor backgrounds that could participate with energy in the formal economy, fostering peaceful production, trade, investment, and employment, may decide to enter criminal organizations, where their energy will be used in criminal activities that will imply risk for their lives, menaces for the economy, and threats for society and the state, hindering opportunities for all the community

and future generation—who due to a constant decline in the formal economy may also join criminal organizations, and so on.

In this sense, this paper will make contributions to different literatures and conversations that address topics like crime, state capacity, institutional weakness, corruption, and inequality. In specific, since its main focus is on the demand side, on criminal activities, not in institutional activities, it will generate knowledge for the literatures on cartels, violence, crime organizations, and development, proposing new insights on criminal expansion and proliferation.

The structure of the paper is the following. In the first part I will present the theory, expanding the rationalization of social cohesion. After the theory section, I will present the data analysis for all the models in the social cohesion section and in structural variables sections and then, briefly, the results. Lastly, to strengthen the theoretical claims, I will present four state cases studies that show variation in the dependent variable and the independent variable to illustrate the theory. I will explore in the following cases: Chihuahua (a state that remain violent and has regions with low social cohesion); Guanajuato (that has showed an important increase of violence and that has regions with low social cohesion); Hidalgo (a not-rich state with low violence, but high social cohesion), and Yucatán (a rich state, with low violence, and high social cohesion).

## Theory

The relevant actors in my theory are criminals, and I am looking for a specific context where they appear and create organizations that expand and compete in crime markets (Duran-Martinez 2015). In Mexico, crime markets are comprehended mainly by the drug trafficking market (for Mexico and the United States), but also by the extorsion, kidnapping, fuel theft, human trafficking, and money laundering markets, among others. Cartels (usually) don't want to replace the state, just consolidate their power in the existing political and economic system, which includes this crime markets (Blazquez & Le Cour Grandmaison 2021).

The main tool that these organizations use to expand their power and consolidate their position in the crime markets is their capacity to kill (execute) their competitors or police officers, bureaucrats, politicians, businessmen, or citizens. In Mexico, the main victims and the main perpetrators of homicides are male, young, uneducated, poor Mexicans (INEGI 2020). In 2022, cartels were one of Mexico's top ten employers, employing more than 150,000 individuals (Prieto-Curiel, Campedelli, & Hope 2023). Cartels fight with each other and the balance of these disputes depends, therefore, on manpower, quantity, recruitment, training, troops, and resources. In other words, cartels need a context where some economic conditions that favor margination permit male recruitment and the creation of criminals and organizations. Without troops, there is no war. But also the crime markets should be attractive.

The political economy conditions that permit crime organization aggrandizement or multiplication, for this theory, are determined by context. There is evidence that in contexts with low opportunities youth transition from school and precarious low-skilled employment towards criminal employment (Zepeda Gil 2024); moreover, childhood constant exposure to criminality favors subsequent following of a criminal path (Sviatschi 2022).

In this sense, poverty is usually held as the common explanatory variable for crime: people enter the crime scene to survive because they don't have anything to eat. However, after analyzing the Mexican case, I think that this explanation is not enough. The cost of participating and competing in the crime markets is too high (because some competitors are so powerful) and the results of crime are too violent. So, something more is needed. An intense fissure of the social tissue of society; a strong sentiment of margination.

My main hypothesis is that high homicide rates happen in urban settlements that have some economic dynamism but that also enforce *anomie* (disconnection from the social), margination, materialism, individualism, competition, unhappiness, resentment, and inequality. My intuition is that in states (or cities) where there is more social cohesion, traditions (Magaloni, Diaz-Cayeros, & Ruiz 2019), collectivism, or social capital (Putman 1993; Putman 2000), the process of recruitment is more difficult, despite poverty. By "social cohesion" I mean the strength of the social bonds in a given society, a bond that depends on identity and shared values and, mainly, by the recurrence of shared social activities (trade, fairs, parties, events), that create trust, cooperation, reciprocities, and coordination.

I envision three scenarios of organizational development in a context *with low social cohesion*.

When there are attractive crime markets, but no organization holds the monopoly on them (Durán-Martínez 2015), criminals have more incentives to create small and medium organizations to compete for the domination of the markets; the violence, here, comes from

fights between different organizations; since many competitors are appearing, the political and criminal equilibriums are unstable and endlessly changing; market power is ephemeral and uncertainty is the rule; organizations operate with perpetual anxiety, and react with extreme violence to survive; in this context we will see above average violence.

When the crime market is attractive and is controlled by one big organization, criminals will have fewer incentives to create small and medium organizations and compete for the domination of the market, because the risk of being erased by the dominating organization is too high; in this context, most of the violence will come from the dominating organization as an exercise of coercion and punishment on other criminals, bureaucrats, journalists, or small crime organizations that want to contest its market power (in a similar dynamic of what we can see in any authoritarian regime [Svolik 2012]); criminals will have, therefore, more incentives to find a place in the dominant organization or to outsource some tasks in the crime markets; criminal governance, therefore, does not imply a context with low violence, but with average violence.

In contexts where the crime markets are not attractive, the incentives to create and expand organizations to compete will be low; some homicide will come from fights between cartels, common crime, or civil disputes; there will be not much uncertainty; these are contexts with below-average violence.

To test social cohesion, I will use the percentage of the population that speaks an indigenous language as my main independent variable. With this I don't imply that the Indigenous population is less violent: I posit that (in Mexico) in settings where there is Indigenous presence and heritage, there is more cohesion, cultural personality, traditions, a sense of belonging, collective institutions, social networks, and norms of policing. Therefore, this variable (I suggest) should be a pointer of social cohesion. The other two social cohesion variables that I will test are schooling years and the presence of common land.

Then, I will test the impact of some structural variables. To test the relationship between violence and economic activity, I will use the Quarterly Indicator of State Economic Activity. The main idea is that economic activity and wealth attract crime. Crime world gives an adventure and a path of development (even if the cost is death at a young age). It is a quick route for social mobility. This need for power and ambition is usually found in urban settlements. For this theory to work, there should be some economic incentives, some resources, or treasures to fight for. Where there is economic dynamism, also, the drug market is more attractive, since there are consumers or potential consumers. The difference in violence between two places with economic dynamism would depend on the marginalization of those places (that favors recruitment and criminal organization creation and reproduction) and the contrast in social cohesion.

Finally, I will test poverty (a variable that I don't think is sufficient to explain, on its own, crime, but it is necessary to complement the analysis) and distance to the US border.

#### Figure 1. 2 x 2 Hypothesis

	Wealthy state	Poor state
High social cohesion	Low violence	Low violence
Low social cohesion	High violence	Average violence

## **Data and Methods**

#### Dependent variable

To understand violence, I will execute multiple regressions with the homicide rate as a dependent variable. For some model, I will use the state homicide rate; to achieve statistical power, I will run the analysis in a dataset covers the period from 2006 to 2022 (16 years), with information on Mexico's 32 states per year (number of observations=544). For other models, I will use the municipality homicide rate. The decision on which to use would depend on the availability of the independent variable (if there is information just at the state level or if there is information at the municipal level). My unit of analysis is citizens.

In Mexico, two public entities register homicides: the Executive Secretariat of the National Public Security System (SESNSP), which uses the investigation files of the prosecutors' offices, and the National Institute of Statistics and Geography (INEGI), which uses the death certificates. In Mexico, the homicide rate never represents the total of homicides (because nearly 90% of crimes and homicides are not denounced). Still, it is a useful indicator to compare from state to state and to analyze its evolution over time. To calculate the homicide rate per 100,000 citizens, I will use this standard formula:

[Total homicides in a state or municipality/Total population in that state or

#### municipality]\*100,000

For this project, I will use the total homicide data from INEGI, because INEGI's data presents variables like age, education, and affiliation to a health public system, among others. For the data on the total population of the states, I will use the data from the census of INEGI. The

census is executed every five years, so I will assume that the population of a given state was similar in the five years after the census (I will use the data for 2005 to calculate the homicide rate of 2005, 2006, 2007, 2008, and 2009, and so on).

Figure 1 shows the behavior or the national homicide rate from 2006 to 2022, Figure 2 shows the variation within states of the homicide rate from 2006 to 2022, and Figure 3 and Figure 4 map the variation of the state homicide rate in 2012 and in 2022.





Source: INEGI.

Figure 3.



Source: INEGI.





Source: INEGI.

Figure 5. Homicide Rate 2022



Source: INEGI.

#### Social cohesion independent variables

I will divide my analysis into two sections. In the first section, I will analyze the relationship between a group of indicators of social cohesion and violence, and in the second section, I will analyze the relationship between some structural variables and violence.

The first independent variable that I will analyze in the section on social cohesion is the percentage of the population that speaks an indigenous language. The source of this data is, again, the census of INEGI, and, as well, it provides information every five years. I hypothesize that in states where there is more presence of indigenous population, they usually have more traditions, collective institutions, a cultural identity shown in food, textiles, and music, and (therefore) more social cohesion, which hinders male criminal recruitment and (therefore) violence.

To justify this proxy for social cohesion, the information gathered by INEGI's National Survey on Time Use (ENUT) 2014 is useful. For example, in the 2014 edition in the variable "Work for the community such as tequio, faena, mano vuelta, mayordomía, patron saint festivities, planting trees, cleaning streets, rivers, markets, etc." in the module "Participation rate of indigenous and non-indigenous language speakers aged 12 and over-performing unpaid community support and volunteer work, and average hours per week spent by type of activity by gender", the participation of indigenous speakers (79.7% vs. 52.8%). Also, people who speak an indigenous language spend more time with their families than people who do not speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%). Also, people who speak an indigenous language (87.9% vs. 81.9%).

help the people in their homes than people who do not speak an indigenous language (6.4% vs. 1.6%; 6% vs. 1.9%). Moreover, when localities are smaller (from 1 to 9,999 inhabitants), the participation in communal activities is higher than in big communities (more than 10,000 inhabitants) (72.3% vs. 36.4%).

The model is the following:

#### homicide = B1\*indigenous + noise

Where "homicide" is the state homicide rate and "indigenous" is the average schooling years of every state.

INEGI's National Survey on Time Use (ENUT) offers excellent information on social cohesion, but its coverage for the 2002, 2009, and 2014 editions is national. Only one edition (2019) provides information by state. So, therefore, I cannot run any model with statistical power. Consequently, I will rely on other variables of social cohesion.

The second independent variable that I will analyze in the section on social cohesion is the average of schooling years by state. I will use the data from the census of INEGI. The census is executed every five years, so I will assume that the schooling years of a given state were similar in the five years after the census (I will use the data for 2005 to calculate the homicide rate of 2005, 2006, 2007, 2008, and 2009, and so on).

School attendance is a social activity per excellence. It has an impact on development, citizen building, and the economy. When school attendance is higher, more students are in the school, and not, vulnerable, in the streets; when school attendance is lower, marginalization can be intensified and the young can become victims of youth recruitment. I expect a negative relationship between schooling years and violence.

The model is the following:

homicide = 
$$B1$$
\*escolar + noise

Where "homicide" is the state homicide rate and "escolar" is the average schooling years of every state.

The third independent variable that I will analyze in the section of social cohesion is the presence of communal land in one municipality. I will use the data provided by the National Agrarian Registry (RAN for its Spanish acronym). I expect a negative relationship between the presence of communal land and the homicide rate.

The model is the following:

homicide = B1\*ran + noise

Where "homicide" is the municipal homicide rate and "ran" is the dichotomous variable that states "1" (presence of common land) and "0" (no presence of common land).

#### Structural independent variables

For the structural variables, first I will test the relationship between the poverty rate by municipalities in 2020, the distance to the nearest zone of the US border for each municipality, and the homicide rate of each municipality. A common intuition is that crime

grows in underdeveloped or poor regions; here I want to test if this is certain for Mexico. With the second variable, what I would like to check is how attractive the municipalities near the US border are for criminal organizations. The natural hypothesis is that the closer the municipalities are to the border, the more attractive they will be, and therefore the more they will be contested by the cartels, that is, there will be more violence in them, due to the importance of the border as a region of access to the demand for drugs in the U.S. market.

For the poverty rate, I use the data provided by the Mexican National Council for the Evaluation of Social Development Policy (CONEVAL) for 2020. The vector of information on the distance of each municipality to the nearest region of the US border was created by the Scholars' Lab's Geographic Information Science (GIS) support group, housed at the University of Virginia's Shannon Library.

The model is the following:

homicide = B1\*poverty + B2\*us\_border + noise

Where "homicide" is the muncipality homicide rate, "poverty" is the municipality poverty rate, and "us\_border" is the of distance of each municipality to the nearest region of the US border.

Then, I will test the relationship between the state homicide rate and state economic activity. The independent variable that I will use is the annual result of the Quarterly Indicator of State Economic Activity (ITAE), an indicator created to measure state economic activity. INEGI offers information on this indicator for every year for every state from 2006 to 2022. I expect a positive relationship between ITAE and the state homicide rate: markets attract crime. I use these two economic performance indicators because, in Mexico, poverty rates and the ITAE do not have a clear relationship, as we can see in Figure 3.







The model is the following:

homicide = 
$$B1*ITAE + noise$$

Where "homicide" is the state homicide rate and "ITAE" is the Quarterly Indicator of State Economic Activity.

# Results

Social cohesion variables

### Table 1.

	Dependent variable:
	homicide
indigenous	-0.529*** (0.121)
Constant	26.145*** (1.240)
Observations R2 Adjusted R2 Residual Std. Error F Statistic	544 0.034 0.032 22.979 (df = 542) 19.064*** (df = 1; 542)
Note:	*p<0.1; **p<0.05; ***p<0.01

According to the first social cohesion model, there is a statistically significant negative relationship between the percentage of the population that speaks an indigenous language and the homicide rate. A unit of this independent variable reduces the homicide rate by 0.529. In other words: where there is more indigenous population, we should expect less violence.

This result supports the hypothesis.

#### Table 2.

	Dependent variable:
	homicide
escolar	3.564*** (0.841)
Constant	-8.017 (7.351)
Observations R2 Adjusted R2 Residual Std. Error F Statistic	544 0.032 0.030 23.002 (df = 542) 17.968*** (df = 1; 542)
Note:	*p<0.1; **p<0.05; ***p<0.01

According to the second social cohesion model, there is a statistically significant positive relationship between the percentage of the average of schooling years and the homicide rate. A unit of this independent variable increases the homicide rate by 3.564. In other words: where there is more school attendance, we should expect more violence.

This result does not support the hypothesis.

# Table 3.

	Dependent variable:
	homicide
ran	1.140 (1.197)
Constant	0.150 (1.166)
Observations R2 Adjusted R2 Residual Std. Error F Statistic	1,748 0.001 -0.0001 11.060 (df = 1746) 0.906 (df = 1; 1746)
Note:	*p<0.1; **p<0.05; ***p<0.01

Lastly, according to this third social cohesion model, there is no statistically significant relationship between the communal land presence in one state and the homicide rate.

This result does not support the hypothesis.

#### Structural variables

#### Table 4.

Regression Results: Hom	icide Rate in Mexican Municipalities	
	Dependent variable:	
	Homicide Rate	
Poverty Rate	-0.064*** (0.014)	
Distance to U.S. Border	-0.00000 (0.00000)	
Constant	5.470*** (0.894)	
Observations R2 Adjusted R2	1,748 0.017 0.016	
Note:	*p<0.1; **p<0.05; ***p<0.01	

According to this model, there is a statistically significant negative relationship between the poverty rate and the homicide rate. A unit of this independent variable reduces the homicide rate by 0.064. In other words: where there is more poverty, there is less violence.

Also, there is not a statistically significant relationship between the distance to the US border and the homicide rate. The homicide rate is extended in the Mexican territory; it is not a phenomenon of the Mexico/US border.

These results support the hypothesis.

#### Table 5.

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	Dependent variable:
	homicide
itae	0.173** (0.079)
Constant	7.071 (7.316)
Observations R2 Adjusted R2 Residual Std. Error F Statistic	544 0.009 0.007 23.278 (df = 542) 4.746** (df = 1; 542)
Note:	*p<0.1; **p<0.05; ***p<0.01

According to this model, there is a statistically significant positive relationship between the Quarterly Indicator of State Economic Activity and the homicide rate. A unit of this independent variable increases the homicide rate by 0.173. In other words: economic activity attracts violence.

This result supports the hypothesis.

### **Cases studies**

In the following paragraphs I present four case studies, with variation in the dependent variable and my main independent variable.

First case: Chihuahua (remain violent, regions with low social cohesion)



Figure 7.

Source: INEGI.

Located on the border with the US, next to Texas and New Mexico, Chihuahua is (in extension) the largest state in Mexico. In terms of population, its main cities are Ciudad Juárez (1.5 million inhabitants) and Chihuahua (925,762 inhabitants), the capital; the rest of the cities are small, with just over 100,000 inhabitants or less. One characteristic of Chihuahua, in contrast to other Mexican states, is that there is a lot of distance between cities. Its geography is marked by mountains, canyons, forests, and deserts. The main activities of Chihuahua are manufacturing and commerce. It has one of the lowest poverty rates (17.6% vs. national 36.3%). The percentage of the population that speaks an indigenous language is below average (3.1% vs. the national 6%).

Chihuahua was one of the states more affected by the implementation of the "The War on Drugs" contentious policies by President Felipe Calderon in 2006. These policies comprehended a direct confrontation between cartels and the Federal Government police and the military divisions, in a context where local, state, and federal institutions were porous by corruption, and the demand for drugs by the US remained constant. State violence and the arrest of drug lords lead to cartel division and radicalization, and the start of the spiral of violence (a break of the political equilibrium). This happened, among other cities, in border cities such as Tijuana, Matamoros, and Ciudad Juárez, the Chihuahua border city. In 2020, the homicide rate in Ciudad Juárez was one of the highest in the world; executions and massacres were daily events.

Since then, there has been a gradual improvement in violence homicides, disappearances, and criminal governance; nevertheless, they are still common (as we can see in Figure 5). In the south of the state Chihuahua also intersects with a region known as "El Triángulo Dorado" (The Golden Triangle), which extends to some parts of Sinaloa and Durango, and is known for being an important region of production of marijuana and opium, controlled by the Cartel of Sinaloa.

Second case: Guanajuato (increasing violence, regions with low social cohesion)



#### Figure 8.

Source: INEGI.

Guanajuato is a state located in the region called "El Bajío", in the center of Mexico. This region is comprehended by states that developed during the colonial period (1520-1810) as important economic centers due to the mining sector. Guanajuato is known, as the rest of "El Bajío", as a conservative region, where traditions, manners, and cultural standards matter. The historical vote has been in favor of the National Action Party (PAN, for its Spanish acronym), one of Mexico's oldest conservative parties. It is one of the states with the highest percentage of catholic population (90.8% vs. the national 78%). The Capital of the city is Guanajuato, which is known, mainly by national tourists, for its beauty, traditions, uniqueness, and colonial aesthetic. It hosts one of the most important cultural events in the country: the Cervantino International Festival. Nevertheless, with a population of 194,500 inhabitants, Guanajuato is not one of the biggest cities in the state. The biggest cities are Leon (1,721,215), Irapuato (592,953), Celaya (521,169), and Salamanca (273,417), all important cities of manufacturing and commerce, marked by inequality. San Miguel de Allende, also in

Guanajuato, is a current location for American tourists. Guanajuato has an average poverty rate (33% vs. national 36.3%) and the percentage of the population that speaks an indigenous language is below average (0.2% vs. the national 6%).

Guanajuato, in contrast to Chihuahua, was not directly affected by The War on Drugs. Guanajuato is a key point for hydrocarbon transportation and production, housing the Salamanca refinery, which is the second most important in production in the country. In the last years, two cartels have been fighting for the right to still gasoline (what in Mexico is called "huachicoleo"), and the extortion, criminal, and drug production and trafficking markets of the state.

The two cartels are the Jalisco Nueva Generación cartel (CJNG), one of the strongest cartels in the country, that is expanding from Jalisco, the state on the west border of Guanajuato, and the Santa Rosa de Lima cartel, the local cartel. The actual scenario in the state is of total war.

#### *Third case: Hidalgo (low violence, poor, high social cohesion)*





Source: INEGI.

Hidalgo is a small state near the center of Mexico. It is known for its mining past. Its economy is based today on industry and agriculture. In contrast to other states, an important part of the population lives in rural areas (57% urban and 43% rural vs. the national 79% and 21%). The percentage of inhabitants that speak an indigenous language is higher than the national average (12% vs. the national 6%). The poverty rate is similar to the average poverty rate (41% vs. the national 36.3%). All its main cities have low populations: Pachuca (297,000), Tulancingo, and Tizayuca.

Hidalgo is one of the safest states in Mexico. It is not a region or market in dispute by big cartels. It is not an important zone of drug production and transportation. And the government has invested in the last years in law enforcement. Both the cities and the rural communities have high social cohesion.





Source: INEGI.

Yucatán is a state in the southeastern part of Mexico. It is, like other states, a rich state with prominent levels of inequality. The percentage of the population that speaks an indigenous language is high (23.7% vs. the national 6%). The indigenous culture of the Yucatan peninsula is Mayan. It has an average poverty rate (38.3% vs. national 36.3%).

Merida, the capital, was one of the first cities in post-Conquest-Mexico; it was inaugurated in 1542. In all the history of Yucatán, there has been a class struggle between the white elite and the Mayan working class. During the Porfirio Díaz dictatorship, Yucatan flourished with its "haciendas" (plantations with force or semi-force systems), producing goods like henequen, sugar, and corn. Merida is known for its opulent architecture, developed since that era. And Yucatan is known also, next to Oaxaca, as having one of the greatest, and more unique, cooking traditions and cultures in Mexico. Yucatan has always been seen as self-sufficient. During the twentieth century, Merida industrialized, generating local businesses with national fame (sodas, bakeries, candies, meat). And, although inequality and racism are perennial, Yucatan society has strong, conservative, traditions, and works like a hermetic unit that discriminates against immigrants and preserves its interests, way of living, and institutions. In other words, Yucatán has strong, and constantly reinforcing social cohesion. Its port in Progreso is one of the most important ports in the country.

In institutions, Yucatan is an outlier. Even though institutions in Yucatan have been historically elite-biased, it has most citizens trust in police and justice institutions, and the government in general in the country. It is the safest state. According to INEGI, 76% of Mexicans live in fear of crime in their cities and 72% of Yucatan citizens believe that their state is safe.

### Conclusion

The question of the drivers of Mexico's contemporary violence has been one of the most important puzzles in its recent history. In a previous moment of the literature, scholars posited theories based on institutions and specific security policies; in the last years, since violence persists, we have seen a nascent literature that tries to explain the phenomenon due to the social conditions that permit crime expansion, the multiplication of cartels and crime organizations. This paper is introduced in this conversation proposing a theory based on the influence of social cohesion. For example: in places where there is high economic activity, but low social cohesion, I advanced, we can expect high homicide rates; in places where there is high economic activity, but high social cohesion, we can expect less violence.

To prove this theory, I executed multiple single and multivariate regressions with the homicide rate as a dependent variable. My social cohesion variables of interest were the percentage of the population that speaks an indigenous language, schooling years, and the presence of common land; my structural variables of interest were the poverty rates, distance to the US borders, and an indicator of economic activity.

Some of the results of my analysis support the theory, and some don't. My main variable of interest in this work was the percentage of the population that speaks an indigenous language. This, I argue, is a pointer to the possible presence of collectivism, cultural identity, and social cohesion in a region. The results of the regression model confirm the theory: that in places with more indigenous populations, we can expect less violence. On another hand, the models of the other two social cohesion variables yielded different results. Schooling years were associated positively with more violence. The lecture that I make of this result is that violence

appears in spaces where there is a market to fight for, some wealth; in these spaces, we can expect usually higher schooling years. So, therefore, schooling years do not hinder violence. Third, there was a null result in the relationship between the presence of common land and violence.

In terms of the structural variables, they all support my theory. There is a negative relationship between the poverty rate and violence: poverty, by itself, does not explain the peaks in the homicide rate; there is something else; and else: poverty hinders violence. On the other hand, there is a positive relationship between economic activity, economic dynamism, wealth creation, and violence in the period analyzed. Finally, the lecture that I give to the null result in the variable of the distance to the US border is that there are other variables (economic variables, social variables, political variables, crime variables) that explain the spatial variation in the homicide rate.

To further understand this phenomenon, we need more efforts on the causes and effects and inequality, the role of (absence) in the state in this process, and the determinants of social cohesion—and better measuring. We need, as well, a better understanding of the different poverty traps and zones of margination (mainly in cities) that can be forged, which foster distrust, unhappiness, and antisocial sentiments, and permit crime expansion. There is also an area opportunity to develop knowledge, with qualitative tools, on crime trajectories.

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