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## The Economic Impact of Crime on Companies in Mexico, 2014–2024

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### Abstract

–Criminal activity in Mexico has a significant economic impact on the business sector, characterized by being a multifactorial problem with institutional overtones. This work offers a framework for analyzing this phenomenon from a multidimensional perspective. The literature review revealed that existing studies generally approach the issue from a partial perspective, focusing on the crime-economic performance binomial, ignoring the institutional aspect. The methodology used is based on a review of the literature from the last ten years on crime and its economic effects, identifying relevant variables that characterize the crime phenomenon and its impact on the business sector in Mexico for the period 2014–2024. The work's fundamental contribution is to offer an alternative analysis framework through various indicators related to three essential aspects: the direct economic impacts that companies suffer due to crime, the institutional performance of the justice system in Mexico, and the incidence of crime in companies.

**Keywords:** Business Impact, Crime, Black Figures.

*JEL classification:* D73, K42.

### Introduction

It is estimated that 47.7% of companies in Mexico incurred expenses due to crime, 40.8% of companies adopted at least one protective measure because of crime, and the direct costs associated with crime in Mexico faced by companies exceeded 160,000 million pesos in 2023. (INEGI, 2024). Despite the enormous direct and indirect economic and social impact of crime in Mexico, academia has only limited analysis of this problem. (Arceo, 2022).

The phenomenon of organized crime in Mexico is not new; it has been gaining momentum for at least four decades. Until 20 years ago, it focused primarily on drug trafficking and, to a lesser extent, human trafficking, leaving a large portion of the population "in peace." However, since the government launched a comprehensive campaign against drug cartels in 2007, organized crime has diversified its operations into other complementary illicit activities. These include the collection of "derecho de piso" (floor fees), which involves extorting all types of merchants to allow them to conduct their business, as well as attacks on transportation systems and commercial operations, among other activities, such as kidnapping and forced disappearances. These complementary activities have increased over the last six years as government policy on combating organized crime has undergone a radical shift. From 2018 to 2024, the government implemented the so-called "hugs, not bullets" policy, which was interpreted by organized crime as tacit permission to operate with greater impunity (Khattak et al., 2021). Considering this situation as a framework, this paper attempts to critically analyze the factors that have negatively

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impacted Mexico's social and economic situation.

The main objective of this research work is to propose a framework for analyzing the phenomenon of criminality and its impacts on Mexican companies through three dimensions identified in the existing literature: i) criminal incidence and its perception, ii) economic impacts on companies in Mexico and, iii) institutional performance of the State (Government) in the administration of justice towards companies. This work is composed of four sections: the first describes the problem, the second section presents a review of the literature; the third section describes the analysis methodology used and the characterization of the phenomenon; the fourth section focuses on the analysis and discussion of the results obtained; the final section presents the conclusions.

The most substantial conclusion of this work indicates that the government has fallen short in its performance on most of the indicators analyzed in this study. Therefore, considering the findings presented here could help the government take specific measures to improve its performance on these indicators, thereby seeking to enhance security conditions for the general population and, consequently, mitigate the adverse effects of criminal activity on the business economy.

## Literature Review

Violence and crime affect the economic performance of countries, particularly those considered emerging economies (Diallo, 2018), and it has been estimated that crime has negatively impacted global economic production by up to 12% (Groot y otros, 2022). There is also evidence to suggest that countries facing internal conflicts (such as the phenomenon of combating organized crime in Mexico) suffer a direct impact on their productive capacity (Abadie & Gardeazabal, 2001).

The literature review on the criminal phenomenon in Mexico and its economic impact in recent years revealed two recurring themes:

How does violence, in its different forms and crime in general, affect various factors of the Mexican economy: production, unemployment rate, income, economic growth, displacement, and loss of human capital?

How does the institutional performance of the judicial system directly affect crime, and, therefore, what is the economic impact on Mexican society? Empirical evidence demonstrates the inexorable relationship between crime (particularly violence) and economic growth. Poveda & Martínez (2023) found evidence suggesting that violence (homicide rates) is a powerful detractor of gross domestic product per capita and productive investment; it also has a positive relationship with unemployment, poverty, illiteracy, and excessive concentration of wealth. (Poveda & Martínez, 2023).

According to Arceo (2022), Criminal activity affects economic activity from five different fronts:

- 1 Falling incentives to invest in capital goods due to the high possibility that organized crime will appropriate them.
- 2 Given the fall in life expectancy and loss of human capital, the lack of incentives to invest in human capital is associated with high crime rates.
- 3 Direct experiences of violence and the perception of insecurity affect the health and productivity of the population.

4 Increase in risky activities by youth in a highly insecure environment.

5 Loss of human capital stock is associated with homicides, forced disappearances, and changes in the behavior of the workforce in an environment of insecurity or high violence.

Arceo (2022) argues that academic studies on the impact of crime on economic agents and its quantification are complex, mainly due to the indirect economic effects associated with opportunity costs and the human and capital goods losses resulting from the high incidence of crime in Mexico. The author also argues that quantifying the economic costs of crime is a complex task, given that it is difficult to exclusively attribute a variation in the financial performance of a region to the level of violence or delinquency due to the differences in economic capacities that previously existed in the places being compared.

Enamorado et al. (2014) estimated that from 2005 to 2010, a one-standard-deviation increase in the murder rate per 100,000 inhabitants resulted in a 0.2% decrease in economic growth in Mexico.

Balmori (2016) Juan used a synthetic control technique to isolate the effects of anti-drug military operations in Mexico at the State level on production, productive investment, and consumption. Balmori concludes that military operations against drugs reduced GDP and per capita consumption by 0.5% and productive investment by 0.3% due to a 3.2% reduction in credit granted to companies.

Hernández (2019) found evidence that crime generates externalities that negatively impact the creation of business clusters, which in turn hinder economic linkages. In other words, crime deter businesses by generating negative incentives for companies to locate in regions with significant economic capacities but plagued by crime.

Arceo (2022) makes an effort to estimate the cost of criminality associated with the loss of human capital inherent to murders, disappearances, and forced displacements as a consequence of crime in Mexico. To do so, the author attributes a lost wage flow to each missing/murdered/displaced individual and projects it to 2030 and 2050. According to estimates by Arceo (2022), which are considered underestimated and partial, 1.8 billion pesos would have been lost in 2030, growing to 8.7 billion pesos by 2050.

Atuesta y Paredes (2016) analyzed the effects of violence associated with illegal drug trafficking in Mexico on the displacement of labor and concluded that people who migrated from a less violent State to a more violent one for economic reasons were willing to do so for a 25% salary increase; conversely, people seem to be willing to sacrifice 15% of their salary to live in a less violent State.

In summary, the literature maintains that crime undermines economic capacity directly and indirectly (through its impact on key factors of production, investment, company location, and even business synergies that could have occurred if crime were not so severe in the country).

The literature also suggests that a government capable of implementing an effective public security policy to combat crime would improve economic performance. It identifies impunity and corruption as two enabling elements of crime that are closely related to the credibility and institutional capacity of the State to prevent and combat crime. The problem of insecurity and impunity in Mexico is complex and multidisciplinary (Arceo, 2022), in which the institutional credibility of the justice administration system and the State play a fundamental role (Infante y otros, 2020). Nivette and Eisner (2013) found evidence suggesting that the government's lack of

legitimacy undermines its ability to reduce homicides.

Huebert and Brown (2018) analyzed the relationship between due process (an agent of institutional legitimation) and homicides in multiple countries. The authors conclude that due process legitimizes the State and inspires confidence in citizens, increasing complaints and strengthening the State's capacity to investigate and punish crime. This situation may create a kind of virtuous circle between the State's capacity, its legitimacy in the eyes of citizens, and the actions of citizens (Huebert & Brown, 2018).

Azfar (2005) conducted a cross-study examining the relationship between government efficiency and homicide rates in several countries. The author concludes that increasing government effectiveness reduces homicides and increases institutional credibility.

Ortiz y Vázquez (2021) systematically analyzed the relationship between corruption, impunity, and human rights violations. Their conclusion regarding corruption and impunity is discouraging: the transition to more democratic systems in Latin America has not brought significant improvements in the protection of human rights; only structural patterns have changed, which is evidenced by positioning this region as the second region with the highest rates of perceived corruption, where impunity is seen as one of the leading enablers of corruption and, therefore, of human rights violations.

The literature reviewed suggests that impunity and corruption underlie a state's institutional performance, particularly its ability to protect human rights. Freedom and economic security are specific human rights affected by criminality in Mexico.

The existing literature identifies two areas of opportunity, which this work seeks to fill: studies that focus specifically on the impact of crime on companies in Mexico from 2014 to 2022, the study of the criminal phenomenon as a result of the convergence of crime and its perception, the institutional performance of the State in terms of the administration of justice, and, of course, the economic impacts that crime in Mexico inflicts on the business sector.

## **Methodology**

Based on the literature review and subsequent identification of areas for study regarding the phenomenon of criminality in Mexico and its impact on the business sector, recurring themes are essential for analyzing and characterizing the research problem. Based on the above, official information published by the National Institute of Statistics, Geography, and Informatics (INEGI) through the National Survey of Business Victimization (ENVE) from 2014 to 2024 was used to identify relevant variables for studying this phenomenon.

Once the variables are identified, a statistical analysis over time and a spatial analysis of the phenomenon are carried out; this allows for a comprehensive characterization of the object of study proposed in this research.

## **Characterization of the phenomenon of criminality towards companies in Mexico 2014 – 2024.**

Based on the literature review, we identified three critical areas to evaluate crime and its impact on companies: i) the prevalence of crime in companies and their perception of security, ii) institutional performance of the authorities involved in the justice administration system in Mexico and, iii) economic impact on companies as a result of crime. Based on the above, 16 variables were identified that describe these three areas, subject to an exhaustive statistical

analysis that allowed us to characterize the crime against companies in Mexico. Table 1 summarizes the selected variables and the area they belong to by the literature review carried out:

Dimension	Nomenclature	Description
Crime prevalence and perception of security	Prevporc	Percentage of companies that suffered at least one crime
	Localidadinsegura	Percentage of companies that perceive their neighborhood as unsafe
	Municipiopinseguro	Percentage of companies that perceive their municipality as unsafe
	Entidadinsegura	Percentage of companies that perceive their entity as unsafe
Institutional performance	Corrupción	The average percentage of authorities in the justice system perceived as corrupt by State
	Noefectividad	Average of the sum of the percentages of the justice administration authorities that were rated as little or not effective by State
	Nodenaut	Percentage of crimes that were not reported for reasons attributable to the authorities
	Desconfianza	Average of the sum of the percentages of the authorities in charge of the administration of justice that were rated with little or no confidence by State
	Delitosnoden	Percentage of crimes against companies that were not reported
	Investigados	Percentage of crimes that were reported and for which an investigation process was initiated
	Cnegra	Percentage of crimes that are not investigated
Economic impact of crime	Costodelito	Total cost of crime in money
	Promcostodelito	Average total cost of crime per Economic Unit per State
	Conerogacion	Percentage of economic units with at least one expenditure due to crime
	Conaffectacion	Percentage of economic units that managed changes in their operation due to crime per State
	Medidadeproteccion	Percentage of economic units spent on at least one protection measure

Table 1. Description of the Chosen Variables to Characterize the Phenomenon of Crime Against Companies in Mexico.

Source: Prepared by the authors with information from the National Survey on Victimization of

Companies (INEGI, 2024).

To characterize the phenomenon under study, the variables were analyzed over the period 2014-2024 and in space (the behavior of the variables at the State level in the most recent year available, 2023).

### Crime Against Companies in 2021 at the National Level

It is estimated that 47.7% of companies in Mexico had a financial outlay due to crime or its perception (INEGI, 2024). Likewise, it is estimated that 40.8% of companies adopted at least one protective measure due to crime in the country in 2021 (INEGI, 2024). The direct costs associated with crime faced by companies in Mexico in 2023 exceeded 160,000 million pesos (INEGI, 2024).

The economic impact mentioned above only considers the direct costs reported by companies in 2023. It overlooks the opportunity and indirect costs associated with the adjustments that companies made in response to crime in the country. It is estimated that 36.7% of companies made some operational modification in 2023 in response to crime in the country (INEGI, 2024). The above indicates that crime in Mexico has a significant impact on companies that is difficult to quantify directly, given the unrecoverable loss of efficiency and the opportunity costs associated with redirecting resources to cover expenses related to crime or the perception of crime in the country.

The perception of the immediate environment where companies work in Mexico is also quite pessimistic according to official estimates (INEGI, 2024): 39.2% of companies in Mexico in 2023 perceive the neighborhood where they are located as unsafe; 58.4% perceive their municipality as unsafe and; 69.4% of companies consider the State where they are located to be hazardous. On the other hand, the business community's expectations regarding the crime situation in our country are also pessimistic. In 2023, 77.6% of companies reported that they perceived that crime is the same (56.9%) or increasing (20.7%) in the neighborhood or where the economic unit is located. (INEGI, 2024).

Consistent with the high number of companies that are victims of crime, either directly or indirectly (through the perception of insecurity and the consequent adoption of prevention measures), the reported figures indicate that insecurity and crime are a more significant concern for businesses than aspects with direct repercussions on market demand, including purchasing power, lack of government support, taxes, and government administrative requirements to operate a business (INEGI, 2024). Figure 1 illustrates the levels of concern (perception) among business owners in Mexico for each type of problem.

**Business concerns: México 2024**

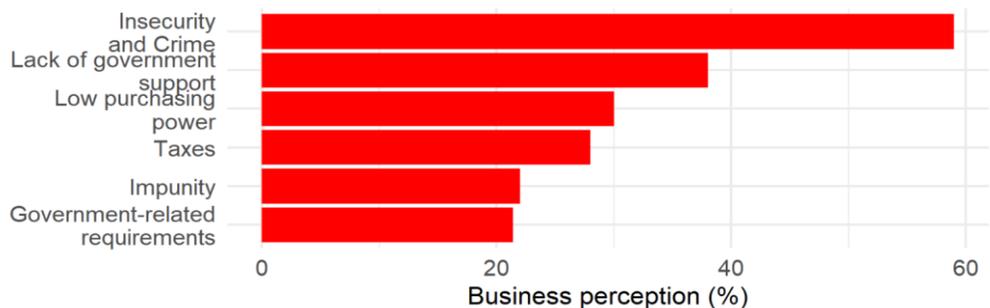


Figure 1. Business Concerns in Relative Terms in Mexico.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

Official figures suggest an inconsistency between the incentives for companies to report crimes and the outcomes achieved through such reporting. 25.5% of companies that reported the crime(s) of which they were victims were motivated to report to have the offender punished; this was the highest percentage of the reasons for which companies reported, surpassing: claim insurance payment (18.9%), the intention to recover their assets (18.3%), avoid liability (17.5%), obtain compensation for damages (8.9%), prove the incident to the owners (5%), other reason (4.8%) and unspecified (1.1%) (INEGI, 2024). The following graph illustrates the above:

### Main reasons for reporting crime by businesses: Mexico 2024

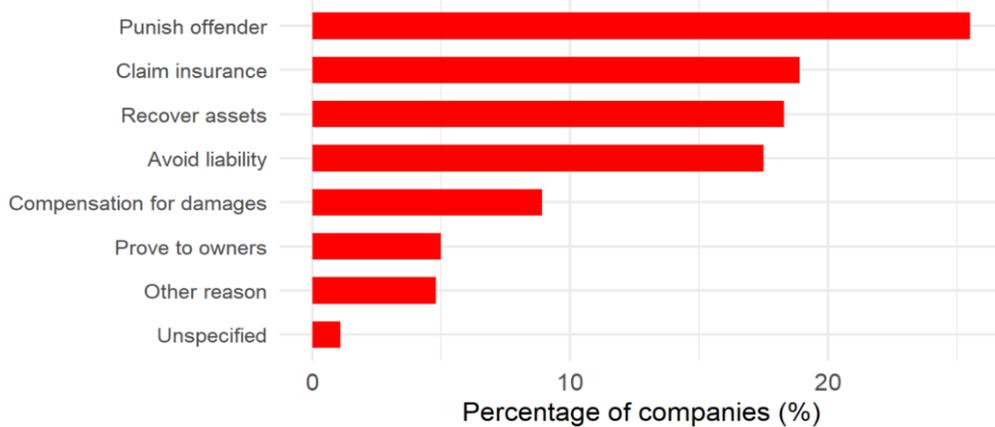


Figure 2. Chart Illustrating The Motivators For Companies in Mexico To Report A Crime They Were Victims Of In 2024.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

The above figures are even more worrying when we look at the results obtained by companies that did report when they were victims of the crime, which is shown in Figure 3:

### Outcome of a Criminal Complaint: Mexico 2024

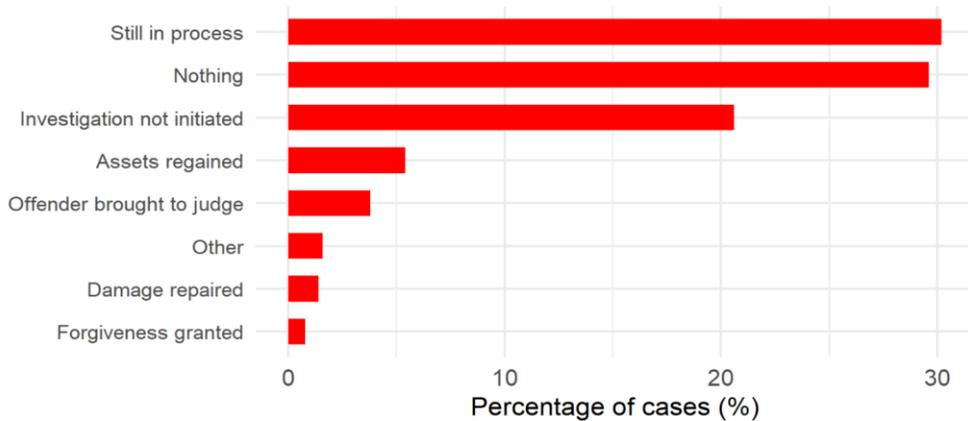


Figure 3. Graph Illustrating the Results Obtained as A Result of the Complaints Made By Companies in Mexico in 2024.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

First of all, we must highlight that according to official estimates (INEGI, 2024), the result of 80.4% of the complaints made by companies that were victims of such crimes were: "nothing", "it is in process", or "an investigation process was not initiated". Likewise, the main motivator for companies to report is the punishment of criminals. However, only 3.8% of the complaints made by companies in 2023 resulted in the criminal being brought before a judge (INEGI, 2024). In this sense, there is a potential incompatibility between the motivators for filing a complaint when companies are victims of a crime and the results obtained once the complaint has been filed. This could explain why most companies decide not to report the crimes for which they are victims, leading to a decline in the institutional authority of judicial authorities.

The notorious impact of crime on business life in Mexico, coupled with the perception of the questionable institutional performance of the authorities responsible for guaranteeing public safety in the country and access to justice, denotes a deep and complicated institutional problem rooted in business perception. We can see this reflected in the official figures reported (INEGI, 2024):

- The unreported figure (crimes not reported or investigated in Mexico) amounted to 90.3% of the crimes companies suffered in 2023.
- It is estimated that 58.9% of unreported crimes in Mexico in 2023 were not reported due to the performance of the authorities responsible for enforcing justice in the country.

In addition to the questionable results of the judicial institutional apparatus to protect business security, acts of corruption are the crimes in Mexico that are least likely to be investigated by the judicial authority: 98.9% of acts of corruption in Mexico were not reported or an investigation process was not initiated in 2023, as can be seen in Figure 4:

### Crimes Not Investigated: Mexico 2024

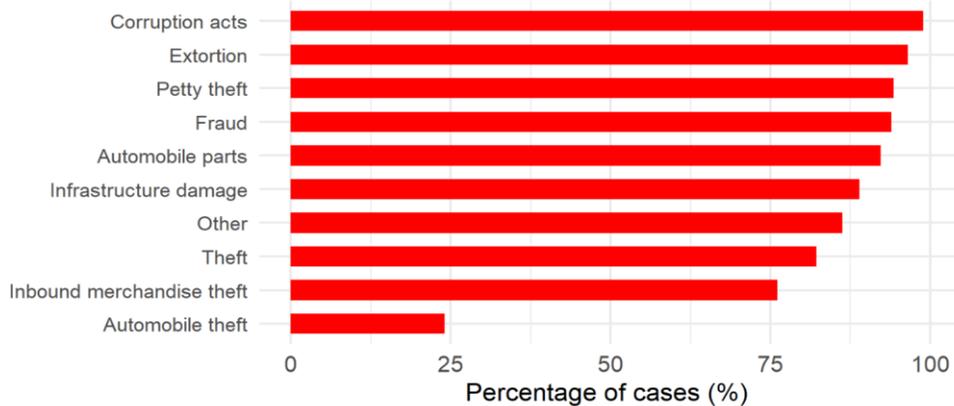


Figure 4. Chart Illustrating Uninvestigated Crimes in Mexico in 2022

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

### Methodology

#### The evolution of the criminality phenomenon towards companies in Mexico: 2014 – 2024.

To analyze the historical evolution of the phenomenon of corporate crime in Mexico (2014–2024), the variables selected from the literature review presented in the first section of this study were examined. The analysis results are also presented by thematic axis according to the taxonomy outlined in the previous sections.

#### Direct economic impact on businesses as a result of crime in Mexico: 2014 – 2024

The impacts on the three areas analyzed in this dimension of the phenomenon indicate that the direct economic impact has been growing over the last decade, showing a brief decline in the three indicators in 2022 (with data from 2021) that was followed by an increase again in 2024 (with data from 2023). The data from the National Business Victimization Survey (INEGI 2014, 2016, 2018, 2020, 2022, and 2024) are presented in percentage terms concerning the entire business sector. It is essential to note that the variables for the total cost of crime and the average cost were excluded from this section due to the differences in scale and the impact of inflation on these indicators. Figure 5 illustrates the evolution of these indicators:

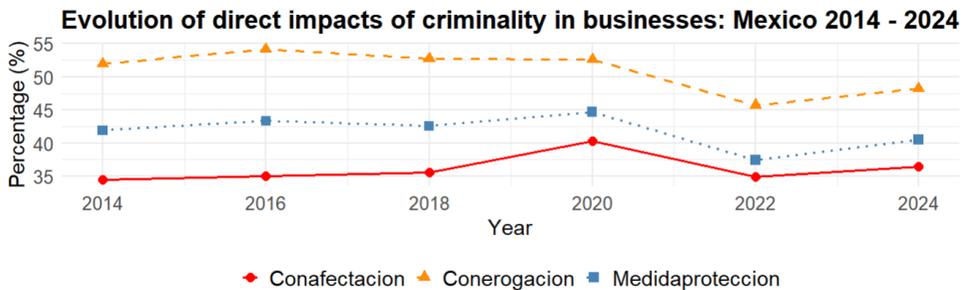


Figure 5. Graph Illustrating the Evolution of Indicators That Measure the Criminal Impact on Companies in Mexico 2014 – 2024

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI 2014 - 2022).

Companies are increasingly affected directly (through spending and the adoption of protective measures) and indirectly (as affected companies make operational modifications to their business models to prevent becoming victims of crime, resulting in a loss of efficiency). Table 2 summarizes the basic statistics on the economic impact suffered by companies during the period 2014-2022, in which it is possible to visualize more clearly the evolution of this phenomenon:

Variable	Mean	Std_Dev	Median	Minimum	Maximum	Skewness	Kurtosis	CI_Lower tail	CI_Upper tail
Conafectacion	37%	3%	36%	34%	43%	1%	3%	35%	39%
Conerogacion	50%	4%	52%	44%	53%	-1%	2%	48%	53%
Medidaproteccion	42%	3%	42%	37%	46%	-1%	3%	39%	44%

Table 2. Descriptive Statistics on the Economic Impact on Companies 2014 – 2022

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI 2014-2024).

On average, 50% of companies in Mexico reported having made expenditures due to crime (regardless of whether they were victims of it or not). The median is above the mean value, indicating that there are extreme values, which, in this case, correspond to the years 2022 (the one with the least impact) and 2016 (the one with the most significant impact). This reinforces the notion that the percentage of companies incurring additional expenses due to crime in Mexico is increasing. It is important to note that the confidence intervals with a 95% confidence level (calculated using bootstrapping given the tiny number of observations available) place the confidence interval between 48% and 53%, so it can be argued that with 95% confidence, the crime phenomenon affected between 48% and 53% of the business fabric during the period 2014 – 2024.

The direct economic impacts show a similar behavior to that of expenditures. On average, for 2014 – 2024, we observe that 37% of companies in Mexico modified their operations due to crime or its perception. We can see that the mean is above the median, and therefore, there are extreme values to the right of the distribution, which, in this case, coincides with the year 2022, corresponding to a 40% increase. We can also say that, with a 95% confidence level, between 35% and 40% of companies in Mexico made some operational modifications in response to crime from 2014 to 2024.

On average, 42% of companies in Mexico were forced to spend on adopting some kind of protection measure due to crime during the period 2014 – 2024. As with the other two indicators, 2022 was the year when the country's most significant number of companies spent on protection measures. We conclude that, with a 95% confidence level, between 39% and 44% of companies incurred additional expenses in response to insecurity.

Based on this analysis, we can affirm that companies are increasingly compelled to invest in protection, make disbursements, and adjust their operating models in response to the criminal phenomenon in Mexico. These additional expenses reduce companies' profit margins, making their production processes more expensive. Consequently, they push the prices of the goods and

services they offer upwards, generating a general loss of well-being in society.

### **Institutional performance of judicial authorities from a business perspective Mexico: 2014 – 2022**

From a business perspective, official estimates regarding the institutional performance of judicial authorities denote a potential loss of credibility and trust in the authorities responsible for preventing, investigating, and punishing criminal activities that affect companies. Figure 6 illustrates the evolution of the selected indicators regarding institutional performance:

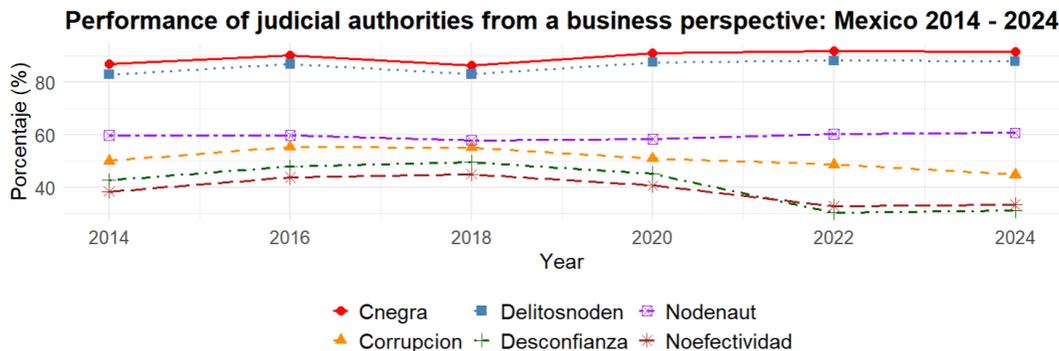


Figure 6.

Chart illustrating the evolution of the indicators that measure the institutional performance of judicial authorities from a business perspective in Mexico from 2014 – 2022.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI 2014 - 2024).

The primary evidence that reinforces the notion that there is a disconnect between the incentive structure for reporting crimes in Mexico (punishing the criminal who committed the crime and recovering the material losses suffered) and the results obtained through the judicial system (number of complaints that progress to investigations, recovery of losses and percentage of criminals who are brought before a judge as a result of their criminal activity), can be seen in Figure 6, which shows that the number of unreported crimes in Mexico has grown steadily since 2018 (with a slight decline during the period 2022 – 2024). The percentage of crimes committed over the last six years, which remain entirely unpunished, is at historically high levels.

The evolution of the percentage of crimes that are reported but not investigated and the rate of unreported crimes have followed a trend consistent with the evolution of the unreported figure (black figure):

- The percentage of unreported crimes went from 83% in 2014 to 88% in 2024.
- The percentage of reported and investigated crimes increased from 2014 to 2018 and decreased from 2018 to 2024. This suggests that as authorities receive complaints and decide not to investigate them, companies stop reporting as their complaints do not progress.

The above seems to go against what is suggested by the behavior of the percentage of companies that reported "that the judicial authorities are little or not at all effective", the percentage of "companies that had little or no trust in the judicial authorities" and the percentage of "authorities

of the judicial system perceived as corrupt". All these indicators increased from 2014 to 2018 and remained largely steady from 2018 to date. So, why did the black figure grow in recent years if companies perceive judicial authorities as less corrupt, more trustworthy, and more effective compared to past years? Although this question requires further analysis, the above can be explained by the very nature of the variables. If companies have fewer interactions with the judicial system because they do not report, the perception that the authorities are less trustworthy, less corrupt, and less effective will also decrease.

On the other hand, the percentage of crimes not reported for reasons attributed to the authorities has remained relatively constant over time. This behavior supports the hypothesis stated in the previous paragraph: The percentage of companies that approached the authorities from 2014 to 2024 and received poor treatment, consequently not reporting, is the most stable trend among the trends. This is reflected in the descriptive statistics presented in Table 3, where we can see that crimes not reported for reasons attributed to the authority show a standard reduction of 1% for the period analyzed. In turn, the confidence interval for this variable is relatively narrow (59%-61% with a 95% confidence level).

Whether institutional performance has varied in recent years or not, the institutional performance indicators of the judicial system show that it has been quite poor throughout the period analyzed:

- On average, 52% of judicial authorities were perceived as corrupt from 2014 to 2024. The confidence interval calculated with 95% confidence suggests that for 2014-2024, there is a 95% probability that between 49% and 56% of judicial authorities are perceived as corrupt by companies in Mexico.
- The perception that the authorities are almost or entirely ineffective was between 37% and 45% during the analyzed period. The mean and median coincide at 42% but have a relatively high standard deviation. The highest perception of ineffectiveness materialized in 2018.
- The percentage of complaints not made due to issues attributed to the authority is, on average, 60% during the analyzed period. Its confidence interval, constructed with a 95% confidence level, ranges between 59% and 61%, and its standard deviation is the lowest among all the variables studied. Its mean and median coincide at 60%. All this indicates that, consistently, the attitude and service offered by the judicial authorities discourages 60% of the complaints by companies.
- It was estimated that, on average, 43% of the judicial authorities have little or no confidence from companies. This is the most volatile variable among the set of variables that make up the institutional performance dimension, with a standard deviation of 9%. The mean and median do not coincide, indicating a value to the left of the distribution that skews the mean downwards (2022-2024). With a 95% confidence level, we can say that between 36% and 49% of the authorities have little to no business confidence, with 2018 being the year with the highest level of distrust.
- The average number of unreported crimes is 86%. The 95% confidence interval ranges between 85% and 88%. 2020 had the highest proportion of unreported crimes reported, followed closely by 2022. In other words, 2020, 2022, and 2024 were historical highs within the period analyzed.
- The proportion of unreported crimes was 80% from 2014 to 2022. The confidence interval places 95% of the values of this variable between 77% and 83%.

- The black figure reached its historical maximum during 2020, followed closely by 2022 and 2024. For 2014–2024, the average black figure is 90%. Its 95% confidence interval ranges from 88% to 91%.

In summary, the institutional performance indicators of the authorities responsible for seeking and guaranteeing justice in Mexico for 2014-2024 indicate a serious efficiency problem. Due to their poor performance, a large proportion of the authorities are perceived as corrupt, inefficient, and unreliable. The black figure, which represents crimes not reported by the authority and crimes reported but not investigated, are found in extremely high percentages, denoting a problem of impunity.

Variable	Mean	Std_Dev	Median	Minimum	Maximum	Skewness	Kurtosis	CI_Lower tail	CI_Upper tail
Cnegra	90%	2%	90%	87%	92%	-1%	2%	88%	91%
Corrupcion	52%	5%	52%	43%	58%	-1%	3%	49%	56%
Delitosnoden	86%	2%	87%	84%	89%	-1%	2%	85%	88%
Desconfianza	43%	9%	46%	31%	52%	0%	2%	36%	49%
Nodenaut	60%	1%	60%	59%	61%	0%	1%	59%	61%
Noefectividad	41%	6%	41%	34%	48%	0%	2%	37%	45%

Table 3.

Descriptive statistics on the institutional performance of judicial authorities from the perspective of the company in Mexico: 2014 – 2022

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI 2014-2022).

### Crime prevalence and perception of insecurity from the perspective of the company in Mexico 2014 – 2022

The four indicators that comprise this dimension of analysis exhibit a similar evolution from 2014 to 2024. The four indicators increased continuously from 2014 to 2018, then marginally decreased from 2020 to 2022 before increasing slightly in 2024. Figure 7 illustrates this evolution:

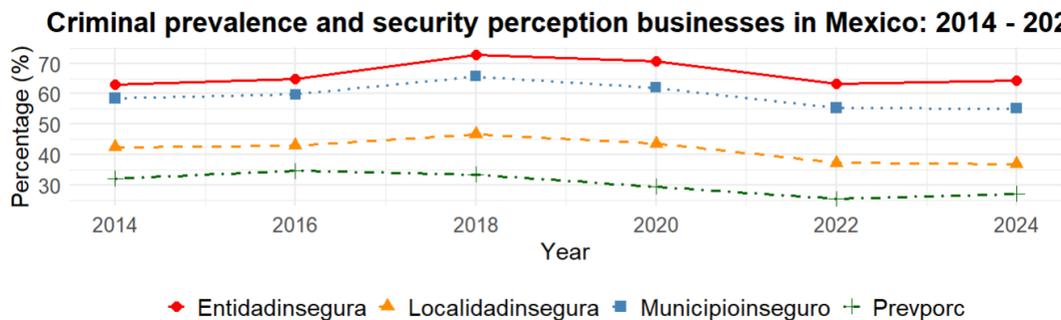


Figure 7.

Graph on the prevalence of crime and the perception of insecurity from the company's perspective in Mexico 2014 – 2024

Source: Prepared by the authors with information from the National Survey on Victimization of

Companies (INEGI, 2014 - 2024).

- Although the values of the four indicators have been reduced in recent years, the prevalence and perception of security figures from the perspective of companies remain at high levels:
- The average crime prevalence was 32%. It is estimated that the crime prevalence rate was between 28% and 34% among the companies that comprise the Mexican business network for the period of 2014 -2022.
- It is interesting to observe how companies perceive the State in which they are located as more risky than the municipality and the town<sup>3</sup>.
- Between 2014 and 2022, 46% of companies considered their locality unsafe, while 65% and 73% perceived their municipality and State as unsafe, respectively.

Variable	Mean	Std_Dev	Median	Minimum	Maximum	Skewness	Kurtosis	CI_Lower tail	CI_Upper tail
Entidadinsegura	72%	4%	70%	69%	79%	1%	2%	70%	75%
Localidadinsegura	45%	5%	47%	39%	51%	0%	2%	42%	48%
Municipioinseguro	64%	4%	64%	58%	71%	0%	2%	61%	67%
Prevporc	31%	4%	32%	25%	35%	0%	2%	27%	34%

Table 4.

Descriptive statistics on crime prevalence and perception of insecurity from the company's perspective in Mexico 2014 – 2024

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI 2014-2024).

### **Spatial analysis of the crime phenomenon from the perspective of companies in Mexico 2024**

In the previous section, we observed that from 2018 to 2024, the proportion of reported and investigated crimes marginally declined. Likewise, in the previous section, two variables were excluded from the analysis due to their original measurement unit and scale (which was not comparable). In the subsequent analysis, the variable "Investigated" was modified by the variable "Not investigated", which is reciprocal to the same variable. In this way, the minimums of all variables have a positive connotation in terms of State crime, and the maximums have a negative connotation, maintaining consistency in the analysis.

Likewise, to make the variables related to the cost of crime and the average cost of crime comparable according to the scale of the other variables, we scaled them from 1 to 100 (the value of 100 will belong to the State with the highest expenditure and the highest average expenditure, respectively).

To conduct a spatial analysis of the crime phenomenon from a business perspective, we focused on the most recent available year (2024, with data from 2023). Table 5 presents the descriptive statistics related to the 16 variables under analysis, and Table 6 and Figures 8 and 9 illustrate which States had the best and worst performance in each variable. We present these elements

<sup>3</sup> INEGI's methodology considers "locality" and "colony" as synonyms used interchangeably throughout this work.

together because their analysis is more straightforward and cleaner when analyzed concatenated.

Variable	Mean	Median	Std_dev	Maximum	Minimum	Skewness	Kurtosis	P value Shapiro	Normality	Cl lower tail	Cl upper tail
Prevporc2024	27.08	27.59	5.44	37.28	17.56	-0.15	2.26	0.34	Yes	25.19	28.91
Delitosnoden2024	87.97	89.05	4.62	97.37	79.46	-0.35	2.27	0.08	Yes	86.34	89.54
Cnegra2024	91.63	92.20	3.65	97.58	83.74	-0.74	2.76	0.04	No	90.37	92.88
Nodenaut2024	60.75	59.47	9.18	81.13	38.61	-0.13	3.05	0.82	Yes	57.71	63.85
Localidadinsegura2024	36.77	36.86	9.72	54.68	17.24	-0.14	2.49	0.67	Yes	33.52	40.13
Municipioinseguro2024	55.06	55.80	15.57	79.52	26.05	-0.45	2.21	0.09	Yes	49.22	60.41
Entidadinsegura2024	64.11	68.68	19.16	90.80	24.47	-0.61	2.32	0.03	No	57.63	70.36
Desconfianza2024	30.92	31.34	5.61	44.84	18.66	-0.07	3.10	0.90	Yes	28.93	32.86
Corrupcion2024	44.80	45.89	6.14	57.36	30.57	-0.38	2.70	0.56	Yes	42.76	46.97
Noefectividad2024	33.25	34.38	6.46	51.78	19.20	0.30	3.70	0.45	Yes	31.07	35.52
Costodelito2024	16.18	8.92	21.02	100.00	1.00	2.51	9.60	0.00	No	9.72	24.16
Promcostodelito2024	47.63	41.86	26.75	100.00	1.00	0.20	2.07	0.26	Yes	38.69	57.02
Conerogacion2024	48.23	49.30	7.76	63.45	31.14	-0.40	2.80	0.60	Yes	45.46	50.66
Conafectacion2024	36.41	35.83	11.32	63.42	17.29	0.38	2.43	0.57	Yes	32.38	40.13
Medidaproteccion2024	40.51	40.02	7.16	52.82	23.53	-0.45	2.69	0.51	Yes	37.96	42.82
Noinvestigados2024	24.07	19.08	13.86	70.22	5.48	1.47	5.20	0.00	No	19.60	29.11

Table 5.

Descriptive statistics on the phenomenon of crime against companies in Mexico 2024.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

Variable	Minimum	Quartile 1	Quartile 2	Quartile 3	Maximum
Localidadinsegura2024	Baja California Sur	Michoacán de Ocampo	Jalisco	Chiapas	Tlaxcala
Prevporc2024	Tamaulipas	Sinaloa	Michoacán de Ocampo	Baja California	Sonora
Conerogacion2024	Guerrero	Chiapas	Nuevo León	Ciudad de México	Querétaro
Medidaproteccion2024	Guerrero	Hidalgo	Chiapas	Guanajuato	Querétaro
Corrupcion2024	Coahuila de Zaragoza	Michoacán de Ocampo	Jalisco	Tabasco	Nuevo León
Desconfianza2024	Nuevo León	Baja California Sur	Ciudad de México	Veracruz de Ignacio de la Llave	Morelos
Noefectividad2024	Nuevo León	Campeche	Chiapas	Veracruz de Ignacio de la Llave	Morelos
Conafectacion2024	Baja California	Coahuila de Zaragoza	Ciudad de México	Oaxaca	Morelos
Delitosnoden2024	Baja California	Ciudad de México	Michoacán de Ocampo	Yucatán	Guerrero
Cnegra2024	Guanajuato	Morelos	Jalisco	Sinaloa	Guerrero
Municipioinseguro2024	Coahuila de Zaragoza	Oaxaca	Ciudad de México	San Luis Potosí	Guanajuato
Promcostodelito2024	Hidalgo	Puebla	Zacatecas	Ciudad de México	Guanajuato
Costodelito2024	Campeche	Aguascalientes	San Luis Potosí	Michoacán de Ocampo	Estado de México
Nodenaut2024	Yucatán	Campeche	Coahuila de Zaragoza	Tlaxcala	Colima
Noinvestigados2024	Guerrero	Sinaloa	Tabasco	Puebla	Coahuila de Zaragoza
Entidadinsegura2024	Yucatán	Hidalgo	Tamaulipas	Quintana Roo	Chiapas

Table 6.

Spatial distribution of crime variables from the company's perspective in Mexico 2022.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

**States with the worst performance in terms of corporate crime in Mexico 2024**

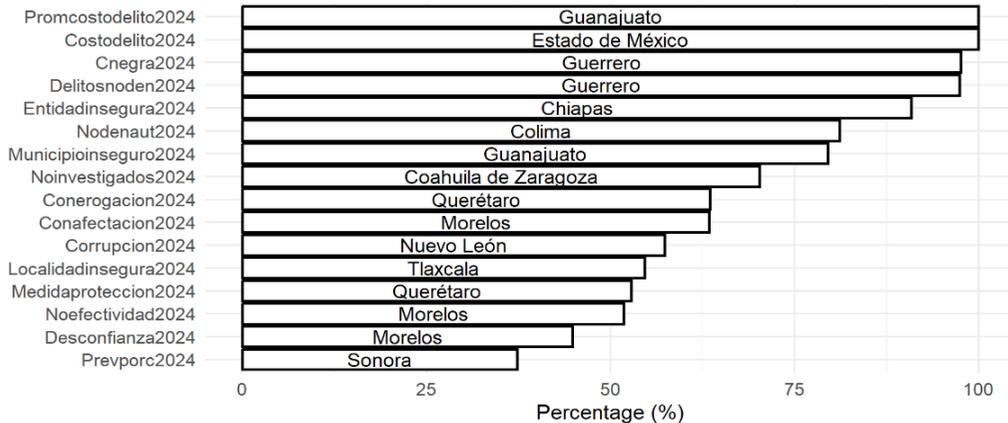


Figure 8.

Chart showing the States with the worst performance in terms of corporate crime in Mexico in 2024.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

**States with the best performance in terms of corporate crime in Mexico 2024**

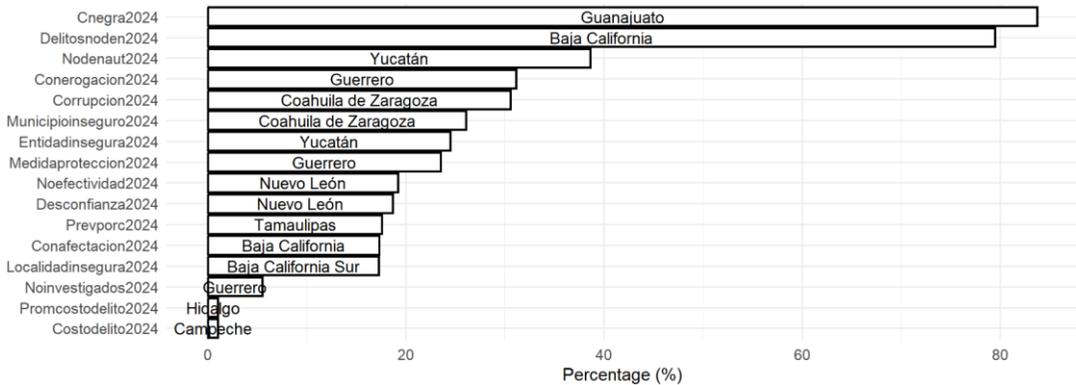


Figure 9.

Chart showing the States with the best performance in terms of corporate crime in Mexico in 2022.

Source: Prepared by the authors with information from the National Survey on Victimization of Companies (INEGI, 2024).

Considering the tables and graphs presented, it is essential to point out the following:

- Only 12 of the 16 variables show a normal distribution.
- The standard deviations across the different variables indicate significant variations in the performance of the States about the different areas through which we analyzed the phenomenon of criminality.

- There was not a single State that was the best performer in more than two variables, according to the 2024 official information. Three different States performed the best in two or more different variables:

- Yucatán had the lowest percentage of companies not reporting crimes they were victims of, reasons attributed to the national level judicial authorities. It also scored the lowest percentage of businesses that perceived their States as unsafe. This situation may indicate that judicial authorities perform well when receiving a criminal complaint, increasing the perception of businesses around safety in their State.

- Baja California performed the best at the country level, with the lowest percentage of businesses that did not report crimes committed against them and the lowest percentage of businesses that suffered some operational impact due to criminal activity. These values suggest that businesses reporting crimes they are victims of to authorities may decrease the operational impacts businesses face due to criminality.

- Neither Yucatán nor Baja California performed the worst regarding all the variables analyzed in this study.

- Guerrero is an interesting case as its performance across multiple variables appears to be contradictive in nature. The State performed the best in three variables and was the worst performer in two other variables.

- Guerrero reported the lowest percentage of companies that made some expenditure due to crime, the lowest percentage of companies that adopted a security measure due to crime, and the lowest percentage of crimes reported to authorities and not investigated at a national level.

- Guerrero reported the highest percentage of crimes not reported to authorities and, consequently, the most prominent dark figure of crime at the national level.

- Guerrero's case is a perfect example of why criminalizing businesses is a complex issue that must be addressed through a comprehensive multidimensional set of indicators.

- No other State presented the best performance in more than two variables.

- In addition to Guerrero, three States performed the worst in two or more variables under analysis.

- Querétaro had the largest percentage of companies that incurred expenses due to crime and the largest percentage of companies that adopted at least one protection measure against criminality. This figure is consistent with the nature of the two variables in which Querétaro performed the worst at the national level: when companies are affected by crime, they are compelled to adopt protection measures.

- Guanajuato scored the worst in the variable that measured companies that perceived their municipality as unsafe and reported the highest average cost per crime committed against businesses nationally. The perception that the State where a business operates is unsafe is associated with the cost of crime to a company.

- Morelos performed the worst in three different variables, with the highest percentage of judicial authorities perceived as untrustworthy and ineffective by businesses and the most significant percentage of companies that reported being affected by crime at the national level. The trust and effectiveness of judicial authorities appear to be intertwined: if an entity is

perceived as ineffective, it is only natural that companies distrust them.

- Both the cases of Yucatan and Morelos suggest that the performance of judicial authorities is directly linked to how unsafe companies perceive their surroundings.

## Conclusions

Characterizing the phenomenon of criminality in Mexico and its impact on the business sector reveals a serious institutional problem: the State's inefficiency in pursuing and punishing crime creates an environment of marked impunity, where companies perceive that the justice administration apparatus in Mexico is plagued by corruption. Consistent with the above, companies decide not to report the crimes they are victims of, even though they face enormous costs due to the crime and the perception of crime in the context in which it occurs. The above could suggest a vicious circle caused by the lack of incentives to report based on the almost non-existent effectiveness of the justice administration system.

The performance in various indicators is heterogeneous throughout the country and over time, indicating that the phenomenon under study is influenced by social, economic, and public policy characteristics at both the State and Federal levels. Likewise, the multidimensional characterization suggests that a State can exhibit good performance in one variable of analysis and, at the same time, poor performance in another variable or dimension. The above suggests that future research will investigate the relationships between the variables that comprise the dimensions and their impact on the business sector in Mexico.

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