

The Effect of Legal Reform on Feminicides in Mexico

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Abstract

Feminicides are the gender motivated killings of women. In other words, they are the killing of women *because* they are women. This difference in motive from homicides means that feminicides merit legal distinction, which led all 32 Mexican states to reform their penal codes in order to include feminicide. This paper investigates the evolution of feminicide typifications across states, and evaluates whether states with stronger feminicide laws have been more effective at enforcing justice by having higher prosecution rates for feminicides. Three factors are of particular importance when measuring the strength of feminicide laws: (1) the number of objective criteria used to recognize gender motive; (2) the presence of subjective elements; and (3) the recognition of feminicide laws improved for all three criteria, but many states continue to have laws that are far from ideal. Over the last decade, feminicide prosecution rate fell as a result of an increase in violence throughout the country, even though the number of feminicide prosecutions, suggesting that the decrease in the feminicide prosecution rate would have been greater were it not for the stronger laws. This paper finds that the average improvement in the feminicide laws led to an increase in the feminicide prosecution rate of between 12% and 21%.

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I. Introduction

Feminicide is a term that many people within the United States of America might not be familiar with. In Latin America, however, it is a word ever present on evening news, social media, newspaper covers, and any discussion surrounding social issues. By definition, a feminicide is the killing of a woman *because* she is a woman. This idea of gender-motivated killings of women has gained attention in Latin America relatively recently, and in large part as a result of feminist and activist movements across the region. Over the last decade, all 32 states in Mexico have reformed their legal code to include feminicide as a separate offense from homicide. However, these changes have often differed across states, both in terms of when they have been implemented and on how the crime has been typified. The different elements used to determine gender motive have resulted in some states having stronger feminicide laws than others.¹ Three factors are of particular importance for determining the effectiveness of a feminicide typification: (1) the number of objective criteria that recognize gender motive; (2) the presence of subjective elements; and (3) the recognition of feminicide as an autonomous crime.

This paper investigates the evolution of feminicide typifications across states, and evaluates whether states with stronger feminicide laws have been more effective at enforcing justice by having higher prosecution rates for feminicides. It finds that between 2010 and 2017, the typification of feminicide laws improved for all three criteria. Starting in 2013, the number of feminicide prosecutions increased, but the feminicide prosecution rate actually fell due to an increase in overall violence across the country.

¹ "Law" is used to mean the typification of feminicide as a crime into the state's penal code. Henceforth, the two terms might be used interchangeably.

Despite the decrease in the prosecution rate for feminicides, stronger laws had a positive and significant effect on feminicide prosecutions, for which most of the explanatory power comes from the number objective criteria in a feminicide law that are used to recognize gender motive. This paper finds that the average improvement in states' feminicide laws led to an increase in the feminicide prosecution rate of between 12% and 21%.

The first section of the paper gives a background on feminicide and explains the importance of the issue. It then goes into the background of Mexico's justice systems and discusses the importance of strong feminicide laws. Next is a brief literature review on relevant research. The following section describes the methodology for building the dataset of the feminicide typifications, and for finding a relationship between the strength of feminicide laws and the prosecution rate for feminicides. The last section includes a discussion on the evolution of feminicide laws, the changes in the prosecution rate, and the effect of feminicide laws on prosecution and on feminicides themselves, as well as a robustness check for the results.

II. Background on Feminicide

South African feminist and activist Dianna Russell first used the term *femicide* in a testimony during the first International Tribunal on Crimes Against Women, which took place in Brussels in 1976. Her definition was simple: a *femicide* is the killing of females by males because they are females (Russell, 2011). Since then, the concept of gender-motivated killings has spread around the world, distinctly in Latin America, a region with some of the highest rates of murders with female victims in the world. When translated to Spanish by Mexican scholar Marcela Lagarde, the term changed to

feminicidio (henceforth feminicide) to differentiate it from *femicidio*, which is any homicide of a female, irrespective of motivations.

It is important to note that there are different types of feminicides (Feminicide.net, 2012). One of the most common is intimate feminicide, which is when the perpetrator had or used to have an intimate relationship with the victim, such as husband, ex-husband, boyfriend, or lover. There is also non-intimate feminicide, which is when sexual violence by an unknown perpetrator culminates in the killing of the woman. If the perpetrator was the victim's neighbor, even if there was no relationship, then this would also classify as non-intimate feminicide. A third type is a child feminicide, which is when the victim is a girl under 14 and the perpetrator had some sort of power, responsibility, or trust over the girl. Familiar feminicide is when the perpetrator is a family member. Other types of feminicide include feminicide for prostitution, which is when the victim is involved in sex work; feminicide by connection, which is when another woman gets in the 'line of fire' of a man trying to kill another woman; feminicide by trafficking, which is for cases where the woman was a victim of human trafficking; and transphobic or lesbophobic feminicides, where a woman is killed as a result of her gender identity or sexual orientation. While the list is not complete, it highlights how a feminicide can occur through different contexts and for different reasons. What is key, and what differentiates feminicides from homicides, is that they all consist of gender-motivated crimes, where the woman is being killed *for being a woman*.

The term was popularized within Mexico in the 1990's as a result of the serious gender violence and female killings happening in Ciudad Juarez. At the same time, it was spreading through Latin America, and with it came an increased awareness of the issue as well as efforts from activists and feminist organizations to combat the crime. Since then, the problem has reached the forefront of discussion within Mexico and other Latin American countries. Its mainstream adoption is in large part a result of the *Ni Una Menos* (Spanish for 'not one woman less') movement, a feminist campaign that started in Argentina in 2015 which has since spread to the rest of the region. The movement calls for women's rights and protection against gender violence, and it took *feminicidios*, along with other forms of gender violence, to the top of Argentina's agenda. Since its spread to Mexico, the movement has been characterized by large public protests across the country. This increased awareness, in combination with multiple high-profile feminicide cases and a prevalent violence against women, have made the discussion today more present than ever.

Violence against women continues to be a pressing issue in Mexico. As of 2018, Mexico had the second-most feminicides out of the 18 reporting countries in Latin America, the Caribbean, and Spain behind only Brazil (Gender Equality Observatory, 2019).² Violence in Mexico has increased between 2015 and 2019, and so has the number of feminicides. In 2014, 411 feminicides were recorded, yet by 2019, the number had more than doubled to 943 (SESNSP, 2020). In general, the number of women killed has also increased. On average in 2019, more than 10 women were killed each day, a shocking statistic that has also become one of the most effective slogans in the *Ni Una Más* movement. While this number is for all female killings, including manslaughter, homicide, and feminicide, its increase from the daily average of 6.5 victims in 2015 rose from around 80 per day to almost 115 in 2019. Of the 3,893 killings of women in Mexico in 2019, at least 24.2% were committed for gender motives.

² Brazil and Mexico are the two most populous countries in this sample. As a share of the population, Mexico's feminicide rate is tenth (<u>Gender Equality Observatory</u>, 2019).



Figure 1.1 Rate of Violence Against Women, Total Victims

Source: SESNSP (Feminicide and Homicide Data) and INEGI (Female Homicide)

Note: Female homicide data is for all female killing, including homicides, feminicides, and manslaughter, collected from death certificates. Total homicides includes manslaugher and feminicides, to encompass all killings and comparable to female homicides.

While overall violence against women continues to be high, there has been some progress. First, these movements and social pressure have brought much needed attention to a critical issue. As argued by activists, recognizing and talking about the issue is the first step to bringing about change. These movements have given a platform for activists to voice their demands and to shine a light on the issue. Second, this increased attention has brought about an increase in resources devoted to fighting the problem, with the creation of new government agencies and increases in funding. Third, feminicides has been typified into the legal code. This had been one of the main demands by activists, who called for the implementation of feminicide as a separate criminal offense from homicide. The argument is that since the motives between the two crimes are different, they merit a distinction as separate offenses.

Classifying feminicides as a separate crime means that cases determined to have a gender motive would no longer be seen as just homicides.

This distinction is important, since it recognizes and brings justice to a crime for what it actually is, acknowledging the presence of a gender motive, and bringing increased awareness to the problem. Distinguishing between feminicides and homicides also results in clearer information for statistical purposes and thus increased public trust in the reliability of the data. Furthermore, the necessity to prove gender motive means that the motive of the killing has to be investigated. This is important since each crime merits different solutions, and looking at motive means one can better learn about the causes, leading to more informed policymaking for tackling the issue. While all 32 states and the federal government have already incorporated feminicides to their criminal codes, this has been done to varying degrees of success.

III. Institutional Background

Like the United States, Mexico is a federalist government, meaning that each of the 32 states have their own constitution, laws, criminal justice system, and government. Mexico's official name is the United States of Mexico, meaning that each state governs quasi-independently as in the United States of America. This has been a challenge for getting comprehensive, uniform criminal reform across the entire country. While all states and the federal government have reformed their criminal codes to incorporate feminicides, the reforms have often differed across states. This is not ideal, since having an adequate typification of feminicides is important for correctly classifying cases as feminicides. Recognizing feminicides as different from homicides does not do much good if cases that are actually feminicides are not being classified as such. Thus, how the crime is typified into the criminal code is very important for having an effective reform that results in gender-motivated killings actually being recognized as feminicides. "Good" typifications will also result in increased prosecution for feminicides by having effective criteria for determining and trying a crime as such. Also, sentencing a crime as feminicide could result in more severe punishments for perpetrators. While sentences vary between states, feminicides generally carry heavier punishments than homicides. In Mexico, homicides carry a sentence of between 30 and 60 years, while feminicides carry from 40 to 60, with some cases carrying life sentences and Congress considering increasing the maximum penalty to 65 years (Kennon, 2020). Thus, having adequate typification matters for actually bringing about the intended change.

One of the most important factors for determining whether a state's typification is strong is whether the characteristics for determining gender motive are objective or subjective. The presence of objective qualifiers is necessary to legally determine that a feminicide has been committed. It would be harder to get a conviction for feminicide if the characteristic that the prosecution needed to prove was something subjective and ambiguous like "misogyny" or "hatred of women." Even though these characteristics are causes of feminicides and would technically be showing gender motive, including them in the legal code would not be effective at getting convictions for feminicide. Thus, advocates and policymakers stress the importance of removing subjective elements and including objective criteria that consistently recognizes gender motive without a need for interpretation when categorizing a crime as a feminicide. In 2007, the Mexican federal government reformed its penal code with Article 325 to include feminicides and have objective qualifiers for determining gender motive. Feminicide was typified into the Federal Penal Code as follows, translated to English (SSP, 2012):

Article 325

The crime of feminicide is committed by a person who deprives a woman of life for reasons of gender. It is considered that there are gender reasons when any of the following circumstances occur:

- 1. The victim presents signs of sexual violence of any kind;
- 2. Inflammatory or degrading injuries or mutilations, before or after the deprivation of life or acts of necrophilia, have been inflicted on the victim;
- 3. There are antecedents or data of any type of violence in the family, work or school environment of the perpetrator against the victim;
- 4. There has been a sentimental, emotional or trust relationship between the [perpetrator] and the victim;
- 5. There are data that establish that there were threats related to the criminal act, harassment or injuries of the perpetrator against the victim;
- 6. The victim has been held incommunicado, whatever the time prior to the deprivation of life;
- 7. The victim's body is exposed or displayed in a public place.

Anyone who commits the crime of feminicide will be sentenced to forty to sixty years in prison and a fine of five hundred to one thousand days.³

In addition to the sanctions described in this article, the perpetrator will lose all rights in relation to the victim, including those of a successional nature.

In the event that feminicide is not accredited, the homicide rules will apply.

If judged based on the criteria's objectiveness, it would seem like the typification would be effective at determining gender motive. The problem is that as a federal republic, states have their own criminal codes and can thus classify crimes differently from the federal government. Thus, feminicide is not a crime that is tried at the federal level. To understand why, it is important to understand the structure of the Mexican criminal justice system.

³ In Mexico, fines are defined in terms of days, equaling the daily minimum wage of the place where the crime was committed. The purpose of doing this is to avoid having to reform the law frequently, given that the minimum wage often changes every year and states have different minimum wages. For example, a 500-day fine means the perpetrator has to pay 500 times whatever the minimum daily wage is at the time and place he or she committed the crime.

In Mexico, most crimes and corresponding punishments are outlined in the penal codes. Each of the 32 states has its own penal code which is enforced within the state's territory. While states have broad freedom to determine their own penal codes, their laws must adhere to the general principles outlined by the Mexican Constitution. Crimes are broken down into two categories. Crimes in *Fuero Común* (common law) are those that directly affect people at the individual level, like theft, homicide, or fraud. These crimes are determined by the state's penal codes, and are therefore enforced differently across states. Crimes in *Fuero Federal* (federal law) are those that affect the health, economy, and heritage of the nation. In other words, these are crimes that affect everyone, like drug trafficking, unregistered firearm possession, intellectual property crimes, or environmental crimes. These crimes are outlined in the Federal Penal Code or in individual federal decrees, and are enforced equally across the nation. Feminicide is a crime that falls under *Fuero Comun* since it affects people at the individual level, and so it can be classified and enforced differently across states (Pérez, 2001). While many states adhere to the federal government's classification, many do not. Thus, not all states use all or even the same criteria for determining gender motive, which complicates the assessment of the typification's effectiveness.

There are different ways in which changing the typification would hinder its effectiveness. The first one is by including the presence of subjective criteria. As mentioned, this weakens the typification by making it more challenging to accredit the crime. Another way is by having a feminicide dependent on homicide, meaning that feminicides are seen as a subset of homicides and are thus prosecuted as such. This weakens the law because feminicide is a different crime and should therefore be *autonomous* in the penal code. Separating feminicides from homicides would increase the penalty of the crime and take away the label of "crimes of passion," which normalizes the crime and does not look deeper into the root

causes (Carcedo, 2010). Furthermore, Mexico, like the U.S., has laws protecting individuals from being subjected to a second criminal process for facts already resolved in another ("double jeopardy"). Thus, having feminicide tied to homicide could mean that cases that fail to prove gender motive could not "fall back" to trying the crime as homicide, which could dissuade prosecution from trying cases as feminicides. Third, classifying feminicides as "malicious" weakens the law since a feminicide is in and of itself malicious, and requiring proof of malicious intent makes it harder to convict. This can result in gender-motivated crimes being tried as feminicides but failing to get a conviction by failing to prove malicious intent, or crimes that are feminicides being tried as homicides given the challenge of proving malicious intent. Finally, failing to include all the expressions of gender motive weakens the law by having certain cases of gender-motivated killings not classify as feminicides. Gender motive can be manifested in many ways, so a stronger law will be one that encompasses more circumstances. Therefore, an effective typification for feminicide must be autonomous, objective, expansive, and without subjective qualifiers (OCNF, 2018).

IV. Literature Review

In any discussion about feminicides, it is important to look at the causes of and factors related to the crime, a debate for which there are different theories and which has been studied through different practices. Saccomano (2015) compiles different theories and looks at the factors that each considers important. Perhaps the most common theory and the one most propagated by feminists and activists is that feminicides are the result of structural gender inequality, impunity, and *machismo* culture (Lagarde, 2008). This theory attributes feminicides and overall violence against women to structural systems of oppression against women, more than as the result of isolated incidents or misguided or pathological actions (<u>Carcedo</u>, 2000, p.12). Taking this view more to the extreme, Marcela Lagarde (2008) says that women are viewed by men as usable and disposable, and that these crimes stem from an innate hatred towards women. Under this framework, feminicides are through the most part motivated by a feeling of possession and control over women, which has been passed down and reinforced through patriarchal social systems. Under this view, typifying feminicides is important because it recognizes the society's patriarchal power structure, not individual factors, as the cause that allows men to remain in power and exert violence on women.

Alternatively, socio-ecological theories take a more multidimensional approach and look at individual, societal, cultural, and circumstantial factors when trying to understand the causes of violence against women. Krug et al. (2002) and Heise (1998) use this approach to identify many causes of violence against women. It is important to note that these papers are not looking specifically at feminicides but at violence against women as a whole. However, given that feminicide is the most extreme expression of gender-motivated violence, these factors are important to consider. At the individual level, important factors for perpetrators are witnessing violence as a child, having suffered abuse, the absence of a father growing up, alcohol abuse, a history of family violence, and low income. Factors at the relationship level are male dominance, male control of wealth, and economic instability. Finally, important cultural and social factors are low socioeconomic status, unemployment, sense of ownership over women, machismo, physical punishment, traditional gender norms, and weak community sanctions against domestic violence. More recently, the World Health Organization applied the socio-ecological model directly to feminicides (2012). Their report found additional factors as causes of feminicides, like low female representation in government, low government social spending, prior intimate partner violence, gun ownership, drug and alcohol abuse, and mental health problems.

In her paper, Saccomano (2015) focuses specifically on Latin America and aims to find why feminicide rates continue to be high despite growing regulation on violence against women. She finds that having feminicide as a separate criminal offence is not significant in predicting the rate of femicides. She also found that no particular feature of the typification, like the length of the penalty (no difference even between 25 years and life sentence) or punishment of negligent and discriminatory authorities, was significant in reducing feminicides. Instead, she found that very low levels of rule of law and high levels of corruption (she classifies both factors as measures of impunity) and lack of women representation in decision-making bodies are the most significant factors in explaining variation in femicide trends.

However, her methodology was limited to running a linear regression of all of these variables on the feminicide rate for a very limited and inconsistent sample. For her data, she looked at the feminicide rates of 14 countries in Latin Americas (notably, Mexico was not one of them given a lack of data) between 2000 to 2014. For many of these countries, the data was intermittent, and the years for which each country reported data were not consistent. For example, Uruguay only had a single year of data. There is also the question as to whether this data is comparable, since data collection methods across countries are likely different. Furthermore, there are many factors that are not accounted for, as laws, culture, government, and justice systems are different between these countries. Finally, the analysis does not look at whether the implementation of the law impacted feminicides over time. Instead, it just considers the presence of feminicide law as a binary variable while running OLS. Thus, while this paper offers interesting results, it could be expanded by looking at the effect of the feminicide laws over time, across a more comparable population and with more consistent data.

Since Saccomano's paper, there have been significant advances in the collection of data regarding feminicides within Mexico. Historically, having data on feminicides was a large challenge for multiple reasons, as gender motive was often overlooked and states had different methodologies for collecting data and classifying crimes as feminicides. As a result, data was often lacking if not completely nonexistent, and for the little that did exist, there was not much trust on its reliability and numbers were believed to be extremely underreported. Newspaper sources and NGOs were the first sources to document feminicides and were the only way to gain insight into the numbers surrounding violence against women. In fact, official data on gender violence of any kind, not just feminicides, was pretty much nonexistent before 2002 (Tavera, 2009, p.328). There were advances in data collection for gender violence in subsequent years, but gender-motivated killings continued to be overlooked. Homicide data was later disaggregated by sex, but this did nothing to account for gender motive and thus made feminicides invisible amongst all female homicides. Because of this, back in 2009, Tavera's principal recommendation was to build a statistical system that looked at female homicides through the perspective of gender motive to be able to differentiate between feminicides and homicide.

With its federal typification in 2012, feminicide data started to be collected. However, it was only in 2018 that the National Institute of Statistics and Geography (INEGI), which is a centralized and autonomous agency of the Mexican Government and the main data collection body in the country, developed a methodology for collecting and unifying feminicide data for statistical purposes (CNPJ, 2018). Through this new methodology, many of the previous challenges on the reliability of data were addressed, since it created a consistent system for classifying feminicides across states, and it did so through the perspective of gender motive. Furthermore, while it was implemented in 2018, data was retroactively changed going back to 2015 in accordance with this new methodology.

V. Methodology and Data

This paper looks at the evolution of states' laws across time, and whether states with stronger feminicide laws enforce justice more effectively than those with weaker laws. The effectiveness of the laws is analyzed in terms of the prosecution rate for feminicides. For this, I use OLS, fixed effects, and random effects regressions to look at how the strength of the feminicide typification is related to the share of female killings that were being investigated as feminicides. The dependent variable looks at the number of opened prosecutions investigating a feminicide. The independent variable is a score based on the strength of the state's feminicide laws.

As mentioned, while typifying feminicides into their penal codes, states often differed in their approaches, resulting in significant differences regarding what is considered a feminicide and how to prove it. Therefore, the strength and scope of the laws varies across states, depending on whether they included important elements like feminicide being recognized as an autonomous crime, or whether subjective or objective elements determined the presence of gender motive. Furthermore, states often reformed typifications, often more than once, resulting in the strength of the laws varying across time, even within a single state. Thus, the independent variable of interest looks at the typification of feminicide in the states' penal codes, which is what is used to prosecute criminal cases. For this independent variable, I use a *score* variable, on a scale between -2 and 2, which is based on whether the

state's feminicide typification considers (1) the number of objective criteria to determine gender motive; (2) the presence of subjective elements to determine gender motive; and (3) feminicide being recognized as an autonomous crime.

1. Model Specification

The available data is at the state-year level, which allows for the use of either fixed effects or random effects to control for the often-unobservable characteristics of individual states. Feminicide typification data, which is used for the *score* variable, is available from 2010 to 2017. To allow my model to capture the effect of implementations or reforms that were done late in the year, coupled with the delay laws usually have before going into effect and the inherent slow pace of criminal prosecution, the score variable is lagged by one year. Criminal prosecution data, on the other hand, is available for feminicides from 2013 to 2018. The lag allows me to build a sample from 2013 to 2018. Finally, I include non-linear time trends to account for year fixed effects, as well as socioeconomic and state indexes. There are a total of four models, since OLS is estimated both with and without population weights.

OLS: prosecution $rate_{i,t} = \beta_0 + \beta_1 score_{i,t-1} + \beta_i year_i + state indexes + controls + \varepsilon_{i,t}$

FE: prosecution $rate_{i,t} = \beta_0 + \beta_1 score_{i,t-1} + \beta_i year_i + controls + \alpha_i + v_{i,t}$

RE: prosecution $rate_{i,t} = \beta_0 + \beta_1 score_{i,t-1} + \beta_i year_i + state indexes + controls + \alpha_i + v_{i,t}$

where t = 2013 - 2018 *and* i = state

The reason to include a fixed effect model is to capture the time-invariant unobservable characteristics of each state that might be having an impact on my dependent and independent variables. This is something that we fail to account for in OLS, even with state-level characteristics. Running a fixed effects regression is not costless, however. While unbiased, the model is unable to include variables that do not change over time; notably, most states' feminicide typification scores changed only once or twice over the given time period, if at all, which could lead to high standard errors. Moreover, some time-invariant state characteristics are important enough to include in the model themselves. Thus, the random effects model is a good "middle man" that accounts for state fixed effects while also allowing time-variant variables without inflating standard errors. The problem is that coefficients in the random effects model are not unbiased and at best only ever consistent, and not even that if the state fixed effects are related to the included independent variables. Given that each model has benefits and drawbacks, results from all three models are presented in the interest of comprehensiveness.

2. Prosecution Rate

The crime and prosecution data for this investigation comes from the National Institute of Statistics and Geography (INEGI).⁴ All data collected and analyzed is at the state level with yearly frequency. The dependent variable is the prosecution rate: the ratio of ongoing feminicide prosecutions relative to total female killings. The reason why the denominator is female killings instead of total feminicides is because feminicides are a subset of female killings, and dependent on how the crimes are

⁴ The prosecution data specifically comes from a yearly census called "Censo Nacional de Gobierno, Seguridad Pública y Sistema Penitenciario Estatales."

classified in the prosecutorial process; if the denominator was the number of total feminicides, the numerator would be highly correlated to the denominator.

This relationship between feminicides and female killings comes with the implicit assumption that the underlying rate of gender-motivated killings relative to all killings of women is constant across time and states. Therefore, what differs in the prosecution rates is how the cases are prosecuted. If there was some way to see that the share of female gender-motivated killings was actually increasing as a share of all women killed, we would have a problem since this assumption would be violated and changes to the prosecution rate would no longer necessarily be the result of the law. This is thus not a trivial assumption to make. To complicate things more, the prosecution ratio is a latent variable, meaning it is impossible to know if this assumption is being broken. Given this, it is important to control for factors that *could* change the share of gender-motivated killings. For example, if cartels suddenly started targeting women to send a message and incite fear, this behavior would change the share of feminicides, breaking the assumption. This concern motivates controlling for factors like overall violence. Other important factors are socioeconomic and demographic indicators, factors outlined in the socioecological model as contributing to gender-motivated killings.

It is important to note that the data for the number of feminicides and for feminicide prosecutions come comes from two different sources, meaning that a crime can be recorded as a feminicide without being prosecuted as such. Data for the number of feminicides comes from SESNSP, which developed a methodology specifically for statistical purposes that aids in the consistent classification of feminicides across states. This methodology is independent from the states' justice systems, which means that SESNSP does not rely on a state to prosecute a case as a feminicide for it to be classified as feminicide.⁵ On the other hand, the data for feminicide prosecutions comes from the states reporting their prosecutions to INEGI. Feminicide prosecution data therefore does not necessarily consider all the crimes that *are* feminicides, only those that are prosecuted as feminicides. This means that the prosecution *rate* truly measures how effective a state is at recognizing gender motive, and not how many gender motivated crimes are actually committed.

This dependent variable aims to capture how many cases are being tried as feminicide cases relative to total violence against women. Given the dispute as to what cases are classified as feminicide and how the data is possibly underrepresenting the actual number of feminicides, using total female killings is a more unbiased measure of violence against women. It is important to note that the female killings data comes from death certificates, not from cases determined to be homicides. Thus, both feminicides, homicides, and manslaughter of women are included in this number, making it the most comprehensive measure of violence against women. My hypothesis is that stronger laws are associated with increases in prosecution for feminicide, seen as a higher feminicide prosecution rate. Even in states that suffer more severely from violence against women, I expect to find that effective laws would increase the numerator as well and thus result in a higher prosecution rate. Stronger laws could also decrease the denominator, meaning strong laws deter from killing women in the first place. This alternative seems unlikely since it is hard to believe criminals consider the strength of the justice system when committing a violent crime, especially given Mexico's high impunity. This hypothesis will also be tested, but the main hypothesis remains that effective feminicide laws increase the numerator.

⁵ More information on SESNSP's methodology can be found here: <u>https://www.gob.mx/cms/uploads/</u> <u>attachment/file/310369/Lineamientos_registro_feminicidio_CNPJ_aprobada_5MZO2018.pdf</u>

Another important assumption is that the data is reliable. Each state reported its prosecution data, and the collection methods often vary across states. There are observations where the number of reported prosecutions is zero for some states. The problem is that we do not know if the zero data point is because the prosecution determined that there were no crimes that exhibited gender motive, or as a result of poor data collection, or because of weak feminicide laws that made it difficult to charge a suspect with feminicide. The meaning of the zeros matters, yet it is impossible to know the reason behind them, raising the question of how to deal with observations that have a prosecution rate of zero.

Prosecution ratio	2013	2014	2015	2016	2017	2018	Total
Zero	8	7	7	6	4	3	35
Non-Zero	15	21	23	24	27	28	138
Total Observations	23	28	30	30	31	31	173
		Dro	opping state	es			
Zero	4	3	3	2	1	1	14
Non-Zero	15	21	23	24	25	25	133
Total Observations	19	24	26	26	26	26	147

Table 2.0 Number of States with Zero Open Feminicide Prosecutions

Source: INEGI Prosecution Data

Note: Dropped states are Aguascalientes, Baja California Sur, Chihuahua, Nayarit, Tamaulipas, Tlaxcala

Looking at the data, most states seem to have pretty consistent and reliable data. Sometimes a state might be missing a year of data or there might be one year where the prosecution rate is zero. In these cases, it seems more likely that the zero is not due to unreliable data but because zero cases were actually prosecuted as feminicides. Table 2.0 shows that the number of states with zero feminicide prosecution is decreasing over time, matching the trend toward stronger feminicide laws, which provides more evidence for believing that states with a prosecution rate of zero are just not prosecuting cases as feminicides. However, states like Aguascalientes, Baja California Sur, Chihuahua, Nayarit, Tamaulipas, and Tlaxcala have most, if not all, of their observations as zeros. This probably suggests unreliable data since it seems hard to believe that in over six years no crime was ever investigated as having gender motive. However, these states also have some of the weakest feminicide laws in the country, so it could be that the law is so weakly defined that no cases are ever prosecuted as feminicides. To address uncertainty, I run all the regressions twice, once using my entire sample and once dropping these 6 states. The results can be found in Appendix 3 and Appendix 4.⁶

3. Score of Feminicide Typification

Building the *score* variable to measure the strength of the law is more challenging given the particularities of each state's penal code. As mentioned, there are different factors that can strengthen or weaken the typification and thus reduce its effectiveness at measuring and trying feminicides appropriately. I have constructed the score to have a range of -2 to 2, based on three variables: the number of objective criteria present in the feminicide typification, the presence of subjective criteria, and whether or not the typification outlines feminicide as an autonomous crime not dependent on homicide.

The values for the three variables making up the score come from a 2017 ONCF report that analyzes the states' laws and assesses them on their ability to determine gender motive. This report included an evaluation of each state's feminicide typification as of 2017, and how it had evolved since

⁶ The results turned out to be very similar between the two, with the complete sample having higher coefficients. This is to be expected, since dropping these states dropped a lot of zeros in the dependent variable, thus losing variation in the data. The feminicide typification score (the key independent variable) also lost variation since these dropped states had some of the lowest scores in the country.

its first implementation. Thus, it was possible to get information both on the current state of the typification and on previous years. This report did not include these evaluations numerically, which required me to build a dataset translating the report's findings as numbers.⁷

If the report mentioned that a typification had subjective elements, it was recorded as a binary value, and similarly if it was not autonomous. The report either listed the objective criteria present in a state's typification or noted which were missing, which allowed the number of objective criteria to be inferred. Any time a state reformed its typification, the changes were discussed, allowing me to record any change to these three variables. For years where the law was not reformed, the values from the previous years were carried over given that the same typification continued to be enforced. Finally, for the years before a state typified feminicide for the first time, the values for these variables, and thus for the score, were recorded as missing. *Score* is therefore defined as follows:

$$score = \frac{Number \ of \ Objective \ Criteria}{4} - (subjective) - (not \ autonomous)$$

The first factor contributing to the state's score is the number of objective criteria, because it establishes the different ways gender motive can be present. The OCNF outlines the following eight objective elements to determine gender motive that a strong law should include:

- 1. Presence of sexual violence of any type;
- 2. Defamation of body, injuries, or mutilation;
- 3. History of violence, threats, or harassment by perpetrator;
- 4. Personal, parental, or intimate relationship between perpetrator and victim;
- 5. Power or trusting relationship between perpetrator and victim, like teacher or boss;
- 6. Victim held incommunicado (kidnapped, trafficking);

⁷ The dataset used can be found in Appendix I.

- 7. Public exhibition of the body;
- 8. Defenseless victim (child, pregnant, disabled, or other reasons).

For every objective criterion a state had, it gets 0.25 points added to its score. States with the most comprehensive typifications that include all eight objective criteria get two points added to their score. Likewise, states with four criteria receive 1 point, and states with none receive 0. It could be argued that not every objective element should receive an equal score since some objective elements are present more frequently across feminicides. However, determining what weight to attribute to each criterion would be very challenging and as subjective as weighing each equally. Plus, each criterion is a different way through which gender motive can be manifested, so if the goal is to make the law as expansive in its recognition of gender motive, there should not be a distinction between these qualifiers. Finally, the ONCF report that analyzed the state's laws and that I used to determine these scores did not make a distinction between criteria, so equally weighting them is consistent with their methods.

On the other hand, both the presence of subjective criteria and failing to establish feminicide as an autonomous crime weaken the strength of the typification. Having these characteristics should be reflected negatively on a state's score, and so both have the effect of decreasing a state's score by 1. While arguments can be made questioning why both characteristics should receive the same weight, both have the same negative effect. One of the factors fails to consider certain types of gender motivated killings as feminicides, while the other does not recognize the distinction that gender-motivated crimes merit. In either case, both result in fewer crimes being prosecuted as feminicides when they should be, simply as consequence of the way the crime was typified. Thus, it makes sense for both to lower the score by an equal factor. The two are not mutually exclusive, however, so a state's score can be penalized for having both of these characteristics.

This scoring methods mean that, hypothetically, the state with the best-possible typification of feminicide would be one that has all eight objective criteria, no subjective elements, and determines the feminicide classification autonomously from homicide, earning the maximum score of 2. Likewise, the worst states with the lowest score of -2 are those where the typification includes no objective criteria to determine gender motive, only subjective elements, and where feminicide is not recognized as an autonomous crime. A score of zero simply means that taken together, the values for the three variables that make up the score cancel each other out.

The virtue of this scoring system is that it is a simple index that combines all of the factors contributing to the strength of the laws. Using a consistent set of relevant criteria offers a way to quantify the strength of these laws and compare them across states and time, despite typifications often looking very different from each other. However, it is important not to judge a law's effectiveness based simply on the numerical value of the score. Zero does not mean 'neutral,' and positive does not mean 'good.' For example, a score of 1 is not necessarily "good" since a state could have this score and have one of the two negative criteria. The only laws that are for sure "good" are those with a score of 2 since they could not be any better, and perhaps also those with a score above 1.25 since they do not have either of the negative elements. It is thus better to use the score to compare a state's law against other states and across time, which is where the strength of the score, I also run every regression with these three criteria as separate independent variables, to ensure that the results do not depend on the exact scoring formula.

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4. Controls and Violence Data

Additional state level data for feminicide and homicide rates was collected from the Secretariat of Public Security (SESNSP). Homicide rate data goes back to 1990 and includes homicide as well as manslaughter.⁸ Data for the socioeconomic indicators used in the regression as controls are also obtained from INEGI, including data on female employment, total unemployment, and share of population per income quartile. These variables are also at the state level with yearly frequency. Indices from the World Justice Project that measure states' adherence to the rule of law are also included as controls (specifically for the factors of criminal justice, order and security, fundamental rights, and lack of corruption).⁹ These indices are only for 2017, so while not ideal because they do not change over time, they serve to control for relevant time-invariant differences across states without needing to rely on the fixed effects model with its noted downsides. While these are not useful for the fixed effects model, they help control for state characteristics in the OLS and random effects models.

VI. Results

1. Evolution of Feminicide Laws Across Time

Table 2.1 shows a clear evolution in the typification of feminicides in Mexico. At the start of the decade, few states recognized feminicide as crime and had it typified into their penal codes. By 2013,

⁸ In Mexico, two agencies officially collect data on homicides. INEGI looks at death certificates coming from the health system, while SESNSP uses the justice system. The differences between the numbers are sometimes not insignificant, and each has pros and cons. While INEGI allows filters by gender, SESNSP breaks it down by homicide, manslaughter, and feminicides. Given the nature of the topic, the numbers by SESNSP are more appropriate, but it will still be explicitly noted what source is being used.

⁹ The indexes are built using survey data administered to urban and rural citizens; attorneys and experts in criminal law, civil law, labor law, and public health; and information produced by other institutions.

every state did, but many of the typifications were far from perfect. Due to this, many states ended up reforming their typifications. As of the release of the ONCF report in 2017, there have been a total of 39 reforms across all states, with only eight states never reforming and continuing with the first typification they implemented. During the first few years, there were states across the entire score spectrum, with scores ranging from -2 to 2. Furthermore, not every reform resulted in improvements to the law. The scores of Yucatan, Coahuila, and Tabasco increase in their first reform, but actually fall when they reform for a second time. Also, some states never see their scores significantly improve despite reforming. Both Baja California Sur and Guanajuato reformed their typifications, yet they continue to have some of the worst feminicide laws of the country.

Veracruz is the only state that typified feminicide in an appropriate way from the start, including all eight objective criteria, no subjective elements, and recognizing feminicide as an autonomous crime. As of 2017, Colima and Veracruz were the only two states with a score of 2, exhibiting the strongest feminicide typifications in the country. An additional ten states have strong laws, with only one objective criterion missing, and four more score in next at 1.5. This adds up to only 16 states having seemingly adequate laws, exactly half of all the states in the country. In terms of population, about twothirds of Mexicans live in states with scores above 1.5, meaning that it is often the more populous states that are implementing the stronger laws (Figure 2.2).

Unfortunately, many states continue to lack strong feminicide typifications. Over half of the states are well away from the ideal benchmark of two, which is what they should be aiming for. From Table 2.3, we see that even in 2017, the average score was 1.02, with over one-third of states having subjective elements and almost 16% failing to recognize feminicides as an autonomous crime. It is

especially frustrating, given the challenges of reforming the penal code through the legislative process, to see that states like Tabasco, Yucatan and Campeche used to have strong laws, and yet their later reforms took many steps back in what had been solid typifications.



Table 2.1 Strength of State's Feminicide Typification Across Time

Source: Author's calculations, using Informe Implmentación del Tipo Penal de Feminicidio En Mexico, 2014 – 2017, (Observatorio Ciudadano Nacional del Feminicidio)

Note: Score goes from -2 to 2, and determined (1) number of objective criteria to accredit feminicide (2) presence of subjective criteria (3) whether feminicides are not autonomous from homicides. There are 8 objective criteria, each contributing +0.25 to score. If the law has (2) or (3), the score decreases by -1 for each criterion.

Unfortunately, many states continue to lack strong feminicide typifications. Over half of the states are well away from the ideal benchmark of two, which is what they should be aiming for. From Table 2.3, we see that even in 2017, the average score was 1.02, with over one-third of states having subjective elements and almost 16% failing to recognize feminicides as an autonomous crime. It is especially frustrating, given the challenges of reforming the penal code through the legislative process, to see that states like Tabasco, Yucatan and Campeche used to have strong laws, and yet their later reforms took many steps back in what had been solid typifications.



Figure 2.2 Share of Population in States with Given Score, 2010 – 2017

Source: Author's calculations, using Informe Implementación del Tipo Penal del Feminicidio en Mexico, 2014 - 2017 (Observatorio Ciudadano Nacional del Feminicidio)

Note: Size of bubble indicates share of population living in a state with a given score

Year	States with feminicide typification	Average score	Average number of objective criteria	Share with subjective criteria	Share were feminicide not autonomous	Share with no subjective & autonomous
2010	1	-1.25	3.00	100%	100%	
2011	11	0.14	4.55	45.5%	54.5%	0.0%
2012	25	0.46	4.72	44.0%	28.0%	0.0%
2013	30	0.48	4.87	40.0%	33.3%	46.7%
2014	32	0.58	5.06	37.5%	31.3%	46.9%
2015	32	0.64	5.44	40.6%	31.3%	46.9%
2016	32	0.84	5.75	31.3%	28.1%	56.3%
2017	32	1.02	6.19	37.5%	15.6%	56.3%
Weight	ed Average	0.65	5.32	38.5%	29.7%	41.0%

Table 2.3 Evolution of Feminicide Typification Scores Across Time

Number of Obs. = 195

Source: Author's calculations, using *Informe Implmentación del Tipo Penal de Feminicidio En Mexico*, 2014 – 2017 (Observatorio Ciudadano Nacional del Feminicidio)

However, most of the country has been shifting towards adopting stronger laws. In 2012, a single state had typified feminicide, and poorly at that, yet by 2014 all 32 states had done so. Fourteen states that reformed their laws have their latest typification as their strongest. As seen in Table 2.3, the average score has consistently increased each year, and the share of states with subjective elements and not autonomous typifications continues to decrease. Every year, more Mexicans live in states with better feminicide laws. On average, 41% of states both recognize feminicide as autonomous and do not have subjective elements. In 2016, this number increased to 54%. Having states without subjective elements and with feminicide as an autonomous crime is of particular importance because these are the two criteria that weaken laws the most. While having more objective criteria is certainly important, states

generally *do* have some: 5.32 criteria on average. Even in the early years, states were averaging over 4.5 objective characteristics, and in 2017 it was over 6.

While states should continue to include more objective criteria to consider all the diverse ways gender motive can be present, states often do include the more "traditional" criteria and perhaps the ones that are most often present in gender motivated killings, such as sexual violence, defamation or injuries, intimate partner violence, and past aggressions. Out of the 68 total typifications that have ever been implemented, these four are the most frequently included criteria (Table 2.4). Thus, having subjective elements and not being autonomous might be what hold back these existing criteria from being enforced. The elements to recognize gender motive are there, but these two negative factors might prevent the objective criteria from working effectively.



Table 2.4 Number of Times Objective Criteria Included on State Typifications

Source: Author's calculations, using Informe Implmentación del Tipo Penal de Feminicidio En Mexico, 2014 – 2017 (Observatorio Ciudadano Nacional del Feminicidio)

2. Feminicide Prosecution

It is well known that impunity is a big problem in Mexico. On average, fewer than 30% of all homicide cases even get prosecuted (Table 3.1). The share of feminicides that are prosecuted is larger than the share of total homicides, but it is still low at under 70%. It is important to note that these numbers are for prosecutions that are opened, not necessarily concluded. Only a fraction of opened cases ever gets concluded, and while the number of concluded feminicide prosecutions has been rising every year, it remains incredibly low. In 2018, out of 893 feminicides that took place that year, 526 prosecutions were opened, and only 155 prosecutions were concluded.¹⁰

Given the nature judicial processes, these prosecutions might take months or even years to be concluded, so it is likely that the concluded prosecutions observed in a given year are actually for crimes that happened in previous years. In any case, as seen in Figure 3.2, the number of prosecutions that are ever concluded is only a fraction of all opened prosecutions, which are also only a fraction of all the total crimes committed. This amounts to only a very, very small number of feminicides ever being prosecuted to completion and seeing justice actually served.

	Share of homicide	Share of female	Share of	Share of
	with women victims	homicides that are	feminicides in open	homicides in
Year	with women victims	feminicides	prosecution	open prosecution
2015	11.48%	17.25%	73.48%	36.46%
2016	11.45%	21.51%	62.15%	26.48%
2017	10.69%	21.63%	73.18%	26.50%
2018	10.23%	23.80%	58.90%	24.70%
2019	10.62%	24.22%	-	-
2020	-	-	-	-

Table 3.1 Share of Homicides and Feminicides Prosecuted per Year

Source: SESNSP (Feminicide Data) and INEGI (Homicide & Prosecution Data)

Note: Term "Female Homicide" is used to mean number of women killed. While feminicide is a separate crime than homicide, the data for female homicides also includes feminicides

¹⁰ The opened prosecutions are not necessarily for feminicides from that same year.

Perhaps more worrying is that the share of women killed every year for gender reasons has been rising, yet fewer of these cases are ever prosecuted. In 2015, 15% of all women killed were considered feminicides, and 73% of these cases were prosecuted. In 2018, the last year for which prosecution data is available, the number of gender-motivated killings rose to almost one in four, yet the number of these that were prosecuted dropped to under 60%. This problem is not exclusive to feminicides, since the share of homicides being investigated also dropped during this same time period. The share of homicides in open prosecution, which was already incredibly low at about 36% in 2015, was around one-third lower in 2019 at under 25%. It is thus hard to know if the decrease in prosecution for feminicides is inherent to that crime or part of a countrywide issue where fewer total crimes are being prosecuted, especially since the *number* of feminicide prosecutions has actually increased.

Concluded Cases Female Killings Feminicides Open Cases

Figure 3.2 Feminicide Prosecution Cases, 2015 – 2018

Source: INEGI (Censo Nacional de Impartición de Justicia Estatal, and Female Homicide Data)

Note: Open and concluded cases are for feminicides. Concluded cases are recorded based on when prosecution finishes, so the data for a given year is not necessarily from feminicides that occured that year, since crimes might take time to be prosecuted and concluded.

Given the decrease in homicide prosecutions and the increase in overall violence in the country, it is possible that the decrease in feminicide prosecution is more likely a result of a "saturated" justice system whose efforts to increase feminicide prosecution are being outpaced by a steeper increase in overall violence. This would also explain why the number of female homicides is rising but the share relative to all homicides is decreasing, as the overall increase in violence has more strongly impacted men. In any case, what remains very clear is that Mexico's problem of impunity is one that affects both men and women across both feminicides and homicide, and that the problem is even more critical today than it was before given that even less crimes are being prosecuted, let alone sentenced.

Because of this downward trend, it can be hard to see the effect that the states' typifications are having on the number of prosecuted feminicides. To start, it is not encouraging to see that despite the feminicide typifications improving, the share of feminicides that are being prosecuted has decreased (Table 3.1). However, it is important to separate the effect of states' laws from the overall downwards trend in prosecutions. This motivates the regression models, which attempt to isolate the effect of the feminicide laws while controlling for time trends and additional state characteristics.

3. The Effect of Feminicide Typification on Feminicide Prosecution

Table 4.1 shows four abridged OLS regressions of feminicide prosecution rate on the state's feminicide typification score.¹¹ The goal is to be able to isolate the effect of the states' feminicide laws on the prosecution rate for feminicides. As mentioned before, the is at the state-year level and the

¹¹ For the complete regression models using OLS, FE and RE, see Appendixes 3 (full sample) and 4 (dropping states with multiple zeros).

feminicide score is lagged by one year. One model uses the feminicide typification score as the independent variable, and another uses the disaggregated score. I run both of these models on two different samples, one which uses the complete dataset and another that drops the six states with multiple zeros. The two samples are needed because it impossible to know whether the observed zeros are actually a result of zero feminicide prosecutions or of unreliable data.

	Full S	ample	Dropping States with Multiple Zeroes			
Feminicide Prosecution Rate	(1)	(2)	(3)	(4)		
Score	0.0290**		0.0194			
(1 Year Lag)	(0.0130)		(0.112)			
Num. Obj. Criteria		0.0292***		0.0289***		
(1 Year Lag)		(0.00013)		(0.0044)		
Subjective Criteria		0.0350		0.0821		
(1 Year Lag)		(0.397)		(0.204)		
Not Autonomous		0.0286		-0.0139		
(1 Year Lag)		(0.416)		(0.772)		
2014	-0.0195	-0.0255	-0.0102	-0.0158		
	(0.664)	(0.567)	(0.833)	(0.754)		
2015	-0.0510	-0.0710	-0.0339	-0.0488		
	(0.261)	(0.109)	(0.499)	(0.338)		
2016	-0.0258	-0.0550	-0.00125	-0.0203		
	(0.629)	(0.268)	(0.983)	(0.720)		
2017	0.0366	0.0114	0.0698	0.0621		
	(0.463)	(0.822)	(0.214)	(0.321)		
2018	0.0413	0.00984	0.0739	0.0618		
	(0.489)	(0.868)	(2.323)	(2.076)		
Homicide Rate	-0.0040***	-0.0041***	-0.0028***	-0.0032***		
	(5.52e-07)	(8.87e-08)	(0.0011)	(0.00089)		
Constant	-0.214	-0.215	-0.412	-0.495		
	(0.593)	(0.590)	(0.354)	(0.286)		
Observations	173	173	147	147		
R-squared	0.266	0.305	0.277	0.311		

Table 4.1 Abridged OLS Regressions of Feminicide Laws' Score on Feminicide Prosecution Rate

Robust p-values in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Author's Calculations

Note: OLS regressions are run with population weights

Models (1) and (3) have a positive coefficient for the score variable, meaning that an increase in the strength of the feminicide laws is associated with an increase in prosecutions for feminicides. Only the coefficient in the first model is actually significant, but the coefficient in model (3) is *almost* significant at a p-value of 0.11. Models (2) and (4), which use a disaggregated score, have positive and highly significant coefficients for the number of objective criteria, and insignificant coefficients for the subjective and not autonomous variables. Furthermore, the coefficients when using the full sample are on average larger than when dropping the six states. This is expected given that we dropped many states with zero prosecutions and with some of the worst feminicide typifications in the country.¹²

The significance and magnitude of the coefficients suggest that despite the decrease in prosecution rate over this time period, states that have stronger laws are on average seeing a higher share of feminicides being prosecuted. On average, a one-point increase in a state's score is associated with a 0.029 increase to the prosecution rate. From Appendix 2, we see that the average prosecution rate is 0.19, so increasing the score by one point actually increases the prosecution rate by about 15%.¹³ Interestingly, when breaking down the score to its three components, the Figure 4.1 suggests that all of the explanatory power of the score comes from the number of objective criteria that recognize gender motive. On average, adding one more objective criterion to a state's law is associated with an increase of 0.029 to the prosecution rate, which represents an increase of about 15%. This is the same magnitude as the score's

¹² Consistent with the literature, we see that variables like homicide rate, female employment, high socioeconomic status, low levels of corruption and strong penal justice systems all have positive and significant effects on feminicide prosecutions.

¹³ These results are for when using the full sample. When using the sample that drops the six states, the coefficient for score is 0.019, which represents a 10% increase to prosecution.

coefficient in model (1). Furthermore, the coefficients for *subjective criteria* and *not autonomous* are not statistically significantly different from zero in either model, while the number of objective criteria is significant in both samples. This is a surprising result, since we would expect that not being autonomous and having subjective elements would negatively affect the prosecution rate. This suggests that having more objective criteria to recognize gender motive is perhaps the most important element of a strong feminicide law, as it is the factor that carries all of the explanatory power for increasing prosecutions.

Signing the causality for these estimates is tricky. We would like to think that the stronger laws allow the prosecution to do a better job at recognizing gender motive, resulting in correctly prosecuting these crimes as feminicides. Furthermore, if the prosecution is more certain that the law appropriately recognizes gender motive and does not have elements that could hinder a conviction, it could be more likely to prosecute a crime as a feminicide than as a homicide because it has a high chance of success. However, there could also be reverse causality. States that have a higher prosecution rate because they are more concerned with prosecuting feminicides could also care more that their laws are well defined. On the other hand, states without this priority of prosecuting more cases as feminicides might also not prioritize having strong laws.

However, in the early years of the decade when states were typifying feminicide for the first time, there was less understanding of what an effective law looked like. When first attempting to typify feminicides, states often classified these crimes as "motivated by gender" or "resulting from misogyny." While these clauses are in theory are correct, they actually end up weakening the law since they are subjective and lack objective criteria to identify gender motive. Thus, it was easier for states to make mistakes in the typifications, and it is credible to believe that these mistakes happened almost randomly. Table 2.1 shows how state's laws were still volatile during the first half of the decade. As time went on and states gained a better understanding of what elements weakened or strengthened laws, the laws started to improve. In Appendix 5, when breaking up the samples into the early phase (2013-2015) and the late phase (2016-2018), the coefficients for objective criteria in the late phase are of larger magnitude than those in the early phase.¹⁴ This suggests that the stronger laws seen in the late phase, once states had a greater understanding of what constituted a strong law, did have a greater impact on prosecutions than those in the early years. This supports the hypothesis of an initial randomness in scores followed by an eventual improvement, which gives more confidence to the causal interpretation of the coefficients, suggesting that stronger laws do tend to increase the prosecution rate.

Surprisingly, the time trend showing a decrease in feminicide prosecutions is not observed in any of the models. All of the year fixed effects are statistically insignificantly different from zero. Given that prosecution rates were very clearly decreasing, not just for feminicides but also for homicides, this result seems counterintuitive. What seems to be happening is that the homicide rate is picking up this negative effect on prosecution. We see that the four models have a negative and highly significant coefficient for homicide rate. This provides further evidence for the theory that justice departments are saturated and that the increase in overall violence is the culprit for the decrease in the feminicide prosecution rate. Despite prosecuting more feminicide cases over time, aided by stronger feminicide laws, states have been unable to keep up with the drastic increase in violence, causing the feminicide prosecution *rate* to drop.

¹⁴ The coefficient for *score* has a greater magnitude and is more statistically significant in the early phase. This can be explained by the increased variation in the scores during this period.

In conclusion, stronger state laws do seem to be having a positive impact on the prosecution of feminicides. Furthermore, while it has only been in recent years that states have increased the number of objective criteria, this feature of the law does seem to have a positive effect on prosecutions. Appendix 6 shows that the states that reformed their laws saw an average improvement to their scores of around 1.38 points, measured from the weakest version of the law to the most recent. Based on the magnitude of the coefficients, the regression results suggest that the states' feminicide law reforms had the average effect of increasing prosecution by between 12% and 21%. Yet the prosecution rate for feminicides has decreased over this period, which implies that were it not for the stronger laws, the prosecution rate would have decreased even more. Furthermore, while also recently reducing the subjective and nonautonomous characteristics of their laws, states have not seen these changes have a positive impact on prosecutions, at least not in a detectable way. In any case, in the near future when these stronger laws have been around for longer, we should see more effective prosecution efforts. However, this will depend on the ability of the state justice systems to effectively deal with whatever number of violent crimes that they are faced with.

4. Robustness and Model Specification

As mentioned before, in addition to OLS, I ran the regressions using fixed effects and random effects to check for robustness in my results (Appendix 3). The coefficients for score and objective criteria in the random effects models are slightly lower than those of OLS, yet only the latter are significant. While slightly surprising that score is no longer significant, objective criteria remains significant, suggesting that the higher standard errors in the random effects model are less of a problem for objective criteria. Furthermore, both score and objective criteria become insignificant in the fixed effects models. The loss of significance is to be expected, especially for the fixed effects models, given that the low variation in the *score* data was bound to lead to high standard errors. Despite the loss of significance, the coefficients remain of similar magnitude between OLS, fixed effects, and random effects.

Given the difference in coefficients between the random effects and fixed effects models, I ran a Hausman test to try to determine which of the two models is more appropriate. As mentioned before, it is easy for the assumption that makes random effects work to break down, and this test helps us determine if it has. If the state fixed effects are correlated with the independent variables, the assumption breaks and the true coefficients of the two models would not be equal. If this was the case, the test would show a low p-value, leading me to reject the assumption that the random effects model is appropriate.

As seen in Appendix 7, the Hausman test rejects the assumption that random effects are suitable in three out of the four cases, with random effects only being appropriate when using the breakdown of the score in the sample with the dropped states. The results of the test suggest that fixed effects is preferred over random effects since random effects yields inconsistent estimators. However, the Hausman test compares all of the coefficients between the fixed effects and random effects models. Given that the significant coefficients of the independent variables of interest are similar between both models (and for OLS), it is likely that the Hausman test is highlighting problems for other independent variables and not for *score*.

Furthermore, there were good reasons for why fixed effects was not be the best model, given the low variation in the independent variable and inability to use state indexes. This, combined with the fact that the coefficients of interest are similar across the three models, suggests that the use of a random effects model might not be inappropriate like the Hausman test suggest, especially when considering the discrepancies in the four test results from Table 5.1. Therefore, while the test is helpful for questioning whether the assumptions of the model hold, other factors suggest that the previously drawn conclusions probably remain appropriate: the similarities between the significant coefficients of the variables of interest in OLS, random effects, and fixed, the significant disadvantages that the fixed effects model offers, and the fact that the test accepts the use of random effects for one model.

5. The Effect of Feminicide Typification on Feminicides

A final question remains on whether stronger feminicide laws have an effect on the number of feminicides committed. Ideally, strong laws would not only increase the number of feminicides that are being prosecuted, but also dissuade from the crimes being committed in the first place. Table 5.1 shows two abridged regressions where the scores of the feminicide laws are regressed on the rate of female killings (the number of females killed in a state per 100,000 people).¹⁵

Not surprisingly, the score coefficient far from being significantly different from zero, suggesting that stronger laws do not act as a deterrent for the perpetrators of feminicides. Interestingly, when using the deconstructed score in Model (2), the coefficient for subjective criteria is negative and significant. The story for why this would be is unclear, and it is hard to see this as anything other than a random result, especially given how high the p-value is for the aggregated score variable in Model (1). However,

¹⁵ The models for the regressions are the same as those in Section 5.3, but the denominator of the original *feminicide prosecution rate* variable is now the dependent variable. Also, since this number is a subset of all the total killings in Mexico, the *homicide* variable is dropped to avoid collinearity. Finally, the regressions are ran using only the full sample since there is no need to drop the six states given that the zeros were for prosecutions.

it is an interesting result nonetheless, and motivation to conduct further research into the effect of criminal laws on violence in Mexico.

Female Killings	(1)	(2)
Score	-0.00726	
(1 Year Lag)	(0.927)	
Num. Obj. Criteria		-0.0643
(1 Year Lag)		(0.329)
Subjective Criteria		-0.585*
(1 Year Lag)		(0.0624)
Not Autonomous		0.367
(1 Year Lag)		(0.213)
2014	-0.299	-0.298
	(0.388)	(0.359)
2015	-0.589*	-0.605*
	(0.0736)	(0.0578)
2016	-0.469	-0.499
	(0.197)	(0.165)
2017	-0.205	-0.311
	(0.607)	(0.434)
2018	-0.0368	-0.105
	(0.930)	(0.811)
Constant		-0.0643
		(0.329)
Observations	178	178
R-squared	0.310	0.333

Table 5.1 Abridged OLS Regressions of Feminicide Laws' Score on Feminicide Rate

Robust p-values in parentheses

Source: Author's Calculations

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Note: OLS regressions are run with population weights on the full sample of states, from 2013-2018.

In conclusion, the results suggest that the improvements in feminicide laws have so far not had any significant effect on decreasing the violence inflicted on women. This is of no surprise given how high Mexico's impunity problem is, as strong laws can arguably do very little to prevent crime if the

institutions responsible for enforcing the rule of law are failing to do so. Impunity has been and continues to be a serious problem in Mexico, one that requires action perhaps more urgently more than ever given the decrease in the share of crimes that are prosecuted, both for feminicides and for homicides.

VII. Conclusion

Over the last decade, feminicides have come to the forefront of the social discussion in Mexico. Violence against women of all forms remains a large problem in the country, and while much remains to be done, there has been some long overdue change in how feminicides are seen, both socially and legally. With all 32 states and the federal government recognizing feminicides and typifying the crime into their legal codes, there has been a change in the last decade regarding how gender-motivated killings are legally addressed. The effort to legally recognize gender motivated crimes, in combination with the different ways states have gone about typifying feminicides, has resulted in Mexico being an interesting natural experiment into whether the strength of feminicide laws has an effect on the legal proceedings of the crime. More specifically, it raises the question as to whether stronger laws have a positive effect on the prosecution rate for feminicides.

Trying to answer this question first required determining consistent criteria through which to evaluate a feminicide typification. The factors that were decided upon for measuring the strength of feminicide laws were (1) the number of objective criteria that recognizing gender motive; (2) the presence of subjective elements; and (3) the recognition of feminicide as an autonomous crime. Scoring feminicide laws from different states and years showed that on average, the laws have gotten better across all three criteria, but many states continue to have laws that are far from ideal. Despite these stronger laws, however, the prosecution rate for feminicide has been decreasing. This is a trend that is not unique to feminicides, and the fact that the number of feminicide prosecutions has actually gone up suggests there is a saturation in the state justice systems that have made them unable to keep up with a countrywide increase in violence. When trying to draw out the effect of the state laws on prosecutions, the regression models showed that the stronger feminicide laws (especially a greater number of objective criteria) do seem to have a significant positive effect on the feminicide prosecution rate, suggesting that the decrease in the prosecution rate would have been much greater were it not for the improvement to the feminicide laws. The models also suggest that the average improvement in the feminicide laws that came as a result of reforms increased feminicide prosecutions by between 13% and 24%.

The implications for the short term are clear. Given the positive effect of strong laws on prosecutions, it is of great importance for the states that continue to have subpar laws to reform them in order to achieve strong typifications. However, arguably the biggest challenge states face is reducing impunity. The low prosecution rate and even lower share of cases that get concluded continues to be a pressing issue, one that is not unique to feminicides and is actually even more serious for total homicides. Thus, the medium-term goal for states should be to strengthen the justice system in order to raise the prosecution rate, improve the problem of impunity, and reduce the oversaturation resulting from the increase in violence. Even if the prosecution rate is low, the trend should be that it at least increases over time, not falls as it has in recent years. Thus, states need to reverse this negative trend in prosecutions and eventually reach the point of prosecuting all criminal offenses – for feminicides, homicides and every other serious crime.

Finally, the long-term goal should be that states no longer even need to serve justice for feminicides. Part of this goal is addressing and eliminating the factors that lead to gender motivated crimes in the first place. Yet just as important is having the combination of well-defined feminicide laws and a strong justice system to act as a deterrent from committing these crimes at all.

Appendix 1: State Feminicide Typification Data

Built using *Informe Implmentación del Tipo Penal de Feminicidio En Mexico*, 2014 – 2017 (Observatorio Ciudadano Nacional del Feminicidio)

State	Year	Reform	Subjective	Not Autonomous	Number Objective	Sexual Violence	Defamation/ Injuries	Past Aggressions	Personal Relationship	Power Relationship	Missing	Public Exhibition	Defenseless
AGU	2013	0	0	1	3	1	1	0	0	0	1	0	0
BCN	2012	0	1	0	2	1	0	1	0	0	0	0	0
BCN	2015	1	1	0	8	1	1	1	1	1	1	1	1
BCS	2014	0	0	1	6	1	1	1	1	0	1	1	0
BCS	2015	1	1	1	6	1	1	1	1	0	1	1	0
CAM	2012	0	0	0	7	1	1	1	1	1	1	1	0
CAM	2017	1	1	0	5	1	1	1	1	0	1	0	0
CHP	2012	0	0	0	7	1	1	1	1	1	1	1	0
CHH	2011	0	0	1	0	0	0	0	0	0	0	0	0
CHH	2017	1	1	0	3	1	1	1	0	0	0	0	0
CMX	2012	0	0	0	6	1	1	1	0	0	1	1	1
COA	2012	0	0	0	8	1	1	1	1	1	1	1	1
COA	2017	1	1	0	6	1	1	1	1	1	0	0	1
COL	2011	0	0	0	7	1	1	1	1	1	1	1	0
COL	2014	1	0	0	6	1	1	1	1	0	1	1	0
COL	2015	2	0	0	8	1	1	1	1	1	1	1	1
DUR	2011	0	0	1	5	1	1	1	0	0	1	1	0
DUR	2017	1	1	0	7	1	1	1	1	1	1	1	0
GUA	2011	0	1	1	4	1	1	0	1	0	1	0	0
GUA	2013	1	1	1	6	1	1	1	1	0	1	1	0
GUA	2014	2	1	1	6	1	1	1	1	0	1	1	0
GRO	2010	0	1	1	3	1	0	0	1	0	0	0	1
GRO	2012	1	1	0	4	1	1	0	1	0	0	0	1
GRO	2014	2	0	0	7	1	1	1	1	1	1	1	0
HID	2013	0	0	0	7	1	1	1	1	1	1	1	0
JAL	2012	0	1	0	2	0	1	0	1	0	0	0	0
JAL	2017	1	0	0	6	1	1	1	1	1	1	0	0
MEX	2011	0	1	1	0	0	0	0	0	0	0	0	0
MEX	2014	1	0	0	7	1	1	1	1	1	1	1	0
MEX	2016	2	0	0	7	1	1	1	1	1	1	1	0
MIC	2014	0	1	1	5	1	1	1	1	0	0	1	0
MIC	2017	1	1	1	5	1	1	1	1	0	0	1	0
MOR	2011	0	0	0	7	1	1	1	1	1	1	1	0
MOR	2014	1	0	0	7	1	1	1	1	1	1	1	0
NAY	2012	0	1	1	0	0	0	0	0	0	0	0	0
NAY	2016	1	1	0	4	1	1	0	0	0	1	1	0
NLE	2013	0	1	1	3	1	1	1	0	0	0	0	0
NLE	2017	1	0	0	7	1	1	1	1	1	1	1	0

				(0									
State	Year	Reform	dubjective	Not Autonomous	Number Objective	Sexual Violence	Defamation/ njuries	2ast Aggressions	Personal Relationship	² ower Relationship	Missing	Public Exhibition	Defenseless
OAX	2012	0	0	0	5	1	1	1	1	0	0	1	0
PUE	2012	0	1	0	2	1	1	0	0	0	0	0	0
PUE	2015	1	1	0	4	0	1	1	0	0	1	1	0
PUE	2015	2	1	0	4	0	1	1	0	0	1	1	0
PUE	2016	3	0	0	6	0	1	1	1	1	1	1	0
QUE	2013	0	0	0	5	1	1	1	0	0	1	1	0
QUE	2015	1	0	0	7	1	1	1	1	1	1	1	0
ROO	2012	0	1	1	4	1	1	1	0	0	0	1	0
ROO	2017	1	1	0	6	1	1	1	1	0	1	1	0
SLP	2011	0	1	1	6	1	1	1	0	0	1	1	1
SLP	2012	1	1	0	8	1	1	1	1	1	1	1	1
SLP	2016	2	0	0	7	1	1	1	1	1	1	1	0
SIN	2012	0	0	0	7	1	1	1	1	0	1	1	1
SON	2013	0	0	0	7	1	1	1	1	0	1	1	1
TAB	2012	0	0	0	7	1	1	1	1	1	1	1	0
TAB	2012	1	0	1	7	1	1	1	1	1	1	1	0
TAB	2017	2	0	1	7	1	1	1	1	1	1	1	0
TAM	2011	0	1	0	3	1	1	1	0	0	0	0	0
TAM	2016	1	0	0	7	1	1	1	1	1	1	1	0
TLA	2012	0	1	0	4	1	1	1	0	0	0	1	0
TLA	2013	1	1	1	5	1	1	1	1	1	0	0	0
TLA	2014	2	1	0	4	1	1	1	0	0	0	1	0
VER	2011	0	0	0	8	1	1	1	1	1	1	1	1
VER	2015	1	0	0	8	1	1	1	1	1	1	1	1
VER	2017	2	0	0	8	1	1	1	1	1	1	1	1
YUC	2012	0	0	0	6	1	1	1	1	0	1	1	0
YUC	2014	1	1	0	3	1	1	1	0	0	0	0	0
YUC	2017	2	1	0	6	1	1	1	1	0	1	1	0
ZAC	2012	0	0	0	5	1	1	1	1	0	0	1	0
ZAC	2016	1	0	0	6	1	1	1	1	1	0	1	0

	Full	Sample	Dropping Multipl	States with le Zeroes
	Mean	Std. Dev.	Mean	Std. Dev.
Feminicide Prosecution Rate	0.186	0.209	0.216	0.212
Score	0.712	1.149	0.910	1.067
Num. Obj. Criteria	5.462	2.128	5.844	1.846
Subjective Criteria	0.399	0.491	0.333	0.473
Not Autonomous	0.254	0.437	0.218	0.414
Lack of Corruption	35.757	4.439	35.714	4.714
Fundamental Rights	49.688	2.850	49.619	3.046
Order and Safety	36.988	14.032	36.673	15.069
Penal Justice	37.335	4.822	37.259	5.150
Homicide Rate	23.842	20.170	22.769	19.409
Unemployment Rate	0.017	0.006	0.017	0.006
Female Employment	0.161	0.022	0.159	0.023
% High SE Status	0.083	0.054	0.082	0.055
% High-Med SE Status	0.186	0.108	0.182	0.110
% Med-Low SE Status	0.523	0.523	0.507	0.107
% Low SE Rate	0.208	173.000	0.229	0.183
Number of Obs.]	173	1	47

Appendix 2: Summary Statistics of Regression Variables

Source: Author's Calculations

	O	LS	0	LS	Fixed I	Effects	Random Effects		
			(Pop V	Veight)	(Pop W	Veight)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Score	0.0510***		0.0290**		-0.00982		0.0217		
(1 Year Lag)	(3.70e-05)		(0.0130)		(0.610)		(0.341)		
Num. Obj.		0.0346***		0.0292***		0.0157		0.0261**	
Criteria		(3.69e-05)		(0.000133)		(0.484)		(0.0131)	
(1 Year Lag)		0.00		0.0050		0.00//		0.0505	
Subjective Criteria		0.00//3		0.0350		0.0846		0.0501	
(1 Tear Lag)		(0.848)		(0.39/)		(0.414)		(0.440)	
(1 Veer Leg)		-0.001000		0.0286		(0.762)		-0.010/	
(1 Teat Lag)	0.0212	(0.9//)	0.0105	(0.416)	0.020/	(0.760)	0.0127	(0./89)	
2014	-0.0213	-0.0291	-0.0195	-0.0255	0.0394	0.0312	-0.0126	-0.019/	
2015	(0.658)	(0.541)	(0.664)	(0.567)	(0.388)	(0.493)	(0.720)	(0.5/3)	
2015	-0.0492	-0.0643	-0.0510	-0.0/10	-0.00963	-0.0152	-0.0335	-0.0405	
2014	(0.320)	(0.188)	(0.261)	(0.109)	(0.865)	(0./91)	(0.359)	(0.263)	
2016	-0.0241	-0.0518	-0.0258	-0.0550	-0.0105	-0.0161	-0.00686	-0.0217	
2017	(0.657)	(0.325)	(0.629)	(0.268)	(0.866)	(0./94)	(0.898)	(0.663)	
2017	0.0621	0.0380	0.0366	0.0114	0.0644	0.0696	0.08/4	0.0776	
2010	(0.253)	(0.494)	(0.463)	(0.822)	(0.403)	(0.402)	(0.191)	(0.230)	
2018	0.0852	(0.052)	0.0415	0.00984	(0.551)	0.0595	(0.219)	0.0923	
т 1 С	(0.198)	(0.403)	(0.489)	(0.868)	(0.562)	(0.540)	(0.218)	(0.2/1)	
Lack of	(0.003/3)	0.00455	0.00282	-0.000263			0.00/00	0.00644	
Contuption	(0.502)	(0.426)	(0.628)	(0.964)			(0.447)	(0.480)	
Fundamental	0.000864	-0.000331	(0.000432)	-0.00164			(0.00120	0.0009/3	
Rights	(0.918)	(0.968)	(0.962)	(0.859)			(0.920)	(0.936)	
Order and Safety	0.00143	0.00160	0.000891	0.00116			0.00184	0.001//	
	(0.3/1)	(0.308)	(0.614)	(0.501)			(0.225)	(0.186)	
Penal Justice	0.0035/	0.00322	(0.00//9)	0.00851			0.00252	0.00300	
11 · · 1 D	(0.586)	(0.629)	(0.2/2)	(0.231)	0.00/1**	0.00///*	(0.830)	(0./9/)	
Homicide Kate	-0.0038	-0.0039	-0.0040	-0.0041	-0.0041	-0.0046	-0.003/***	-0.0039	
TT 1 .	(3.16e-08)	(5.59e-09)	(5.52e-07)	(8.8/e-08)	(0.0395)	(0.0550)	(0.000446)	(0.000110)	
Rate	-0.929	-2.05/	-1.3/3	-2.016	-5.464	-3.964	-0.31/	0.318	
T atc	(0.720)	(0.484)	(0.651)	(0.562)	(0.368)	(0.5/ <i>7)</i>	(0.936)	(0.934)	
Female Employment Rate	1./02	1.752	1.095	1.452	11.3/	10.2/	2./84	2.324	
	(0.1000)	(0.0691)	(0.284)	(0.146)	(0.00603)	(0.00899)	(0.0555)	(0.08/8)	
% High SE Status	-0.561	-0.760	-0.65/	-0.562	-5.161	-5.165	-1.41/	-1.374	
0/ II:-1 M. J	(0.233)	(0.105)	(0.235)	(0.282)	(0.0725)	(0.0681)	(0.122)	(0.0852)	
% rign-Medium	(0.2/3)	(0.0(01))	(0.352)	(0.107)	2.3/2	2.751	(0.110)	(0.0405)	
	(0.210)	(0.0691)	(0.142)	(0.107)	(0.0146)	(0.01/0)	(0.110)	(0.0405)	
% Medium-Low	-0.245	-0.252	-0.248	-0.283	1./60	1.846	-0.545	-0.350	
SE Status	(0.0941)	(0.0/39)	(0.101)	(0.0494)	(U.U541) 2 4/5***	(0.0654)	(0.162)	(0.114)	
Constant	-0.267	-0.388	-0.214	-0.215	-2.445	-2.490	-0.4/6	-0.334	
Observation of the	(0.4//)	(0.314)	(U.373) 172	(0.590)	(0.00813)	(0.0180)	(0.295)	(0.225)	
Observations	1/3	1/3	1/3	1/3	1/3	1/5	1/3	1/3	
K-squared	0.295	0.326	0.266	0.305	0.211	0.223			

Appendix 3: Regression Models (No Dropped States)

 Robust p-value in parentheses
 *** p<0.01, ** p<0.05, * p<0.1</td>

Dropping States	0	LS	0	LS	Fixed I	Effects	Randon	n Effects
	(1)	(2)	(Pop V (3)	Veight) (4)	(Pop W (5)	(6)	(7)	(8)
Score	0.0317**	()	0.0194	()	-0.0187	,	0.0109	
(1 Year Lag)	(0.0351)		(0.112)		(0.378)		(0.644)	
Num. Obj.		0.0376***		0.0289***		0.0151		0.0297*
Criteria		(0.000611)		(0.00443)		(0.561)		(0.0588)
(1 Year Lag)		(0.000011)		(0.00445)		(0.901)		(0.0900)
Subjective Criteria		0.0783		0.0821		0.129		0.100
(I Tear Lag)		(0.205)		(0.204)		(0.277)		(0.266)
Not Autonomous		-0.0381		-0.0139		0.000451		-0.01/3
(1 Icai Lag)	0.000/7	(0.432)	0.0102	(0.//2)	0.072((0.997)	0.00/05	(0./30)
2014	-0.0094/	-0.0199	-0.0102	-0.0158	0.0/26	0.0683	-0.00485	-0.0110
2015	(0.8/3)	(0./2/)	(0.833)	(0./54)	(0.141)	(0.14/)	(0.906)	(0./8/)
2015	-0.0243	-0.035/	-0.0339	-0.0488	0.0214	(0.722)	-0.0193	-0.0229
2017	(0.6//)	(0.538)	(0.499)	(0.558)	(0.694)	(0./33)	(0.640)	(0.5/8)
2016	(0.8(0))	-0.00960	-0.00125	-0.0203	(0.7(0))	(0.805)	0.0165	(0.00684
2017	(0.860)	(0.8/4)	(0.985)	(0./20)	(0./69)	(0.805)	(0./90)	(0.907)
2017	(0.08(0))	0.0958	0.0698	(0.221)	(0.09/2)	(0.21.0)	(0.11)	(0.105)
2019	(0.0869)	(0.137)	(0.214)	(0.521)	(0.220)	(0.216)	(0.109)	(0.105)
2018	0.146°	0.120	(0.0/39)	0.0618	0.0/96	(0.091/	0.15/	0.145
L l f	(0.0597)	(0.108)	(0.257)	(0.385)	(0.406)	(0.3/9)	(0.132)	(0.13/)
Corruption	(0.0102)	0.00886	(0.00/58)	0.00400			0.0128	(0.172)
Colluption	(0.0925)	(0.154)	(0.236)	(0.532)			(0.151)	(0.1/3)
Fundamental	-0.00306	-0.00348	-0.00301	-0.00395			-0.00434	-0.00428
Rights	(0./20)	(0.687)	(0./45)	(0.6//)			(0./21)	(0./49)
Order and Safety	$(0.0032)^{*}$	(0.00340°)	0.0029/	(0.120)			(0.00340^{11})	(0.00360^{**})
D 11	(0.0/25)	(0.0640)	(0.141)	(0.129)			(0.0291)	(0.015/)
Penal Justice	-0.000142	0.00106	0.00505	(0.2(7))			0.000883	0.0011/
II.::1 D.	(0.983)	(0.8/4)	(0.486)	(0.36/)	0.00/2**	0.00/2*	(0.940)	(0.921)
Homicide Kate	-0.0035	-0.0035	-0.0028	-0.0032	-0.0043	-0.0045	-0.0039	-0.0041
Unomployment	(1.16e-05)	(3.91e-06)	(0.00112)	(0.000892)	(0.0414)	(0.0560)	(0.000618)	(0.000603)
R ate	4.915	6./35	5.865 (0.222)	5.83/	-5.656	-2.649	5.555 (0.45.4)	6.184
Formalo	(0.0/3/)	(0.110)	(0.225)	(0.248)	(0.408) 15 72***	(0./51)	(0.454)	(0.213)
Female Fmployment Rate	2.816	2.936	(0.122)	2.151	(0.000228)	(7.7(05))	4.465	4.378
	(0.02/5)	(0.0165)	(0.152)	(0.0614)	(0.000228)	(/./6e-05)	(0.00529)	(0.00216)
% righ SE Status	-1.210	-1.551	-0.851	-0.829	-6.682	-6.925	-1.774	-2.154
% High Madium	(0.0420)	(0.0265)	(0.131)	(0.154)	(0.041/)	(0.0348)	(0.0389)	(0.0199)
SE Status	(0.0875)	(0.0905)	0.556	(0.252)	2.810	5.141 (0.0150)	(0.625)	(0.04(8))
0/ M 1: J	(0.08/5)	(0.0905)	(0.149)	(0.265)	(0.015/)	(0.0150)	(0.06/1)	(0.0468)
% Medium-Low	-0.19/	-0.21/	-0.218	-0.2/6	1.611	1.6/6	-0.249	-0.2/3
SE Status	(0.235)	(0.160)	(0.1//)	(0.0/55)	(0.0/80) 2.057***	(0.109)	(0.408)	(0.2/8)
Constant	-0.311	-0./08	-0.412	-0.475	-2.75/	-3.075	-0./42	-0.740
Observetions	(0.243)	(0.118)	(0.334)	(U.286) 147	(0.00343)	(0.00875) 147	(0.120)	(0.0501)
Deservations	14/	14/	14/	14/	14/	14/	14/	14/
K-squared	0.303	0.344	0.2//	0.311	0.255	0.2/7		

Appendix 4: Regression Models (Aguascalientes, Baja California Sur, Chihuahua, Nayarit, Tamaulipas, Tlaxcala Dropped)

 Robust p-value in parentheses
 *** p<0.01, ** p<0.05, * p<0.1</td>

		Full Sa	mple		Dropping States with Multiple Zeros				
Phase	Early (20	13-2015)	Late (20	16-2018)	Early (20	13-2015)	Late (20)	16-2018)	
Feminicide Prosecution Rate	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Score	0.0601***		0.0143		0.056***		0.00237		
(1 Year Lag)	(0.000128)		(0.416)		(0.0014)		(0.901)		
Num. Obj. Criteria		0.0224**		0.0395***		0.0184		0.0367**	
(1 Year Lag)		(0.0120)		(0.00812)		(0.142)		(0.049)	
Subjective Criteria		-0.0766*		0.106		-0.104		0.160*	
(1 Year Lag)		(0.0600)		(0.111)		(0.171)		(0.057)	
Not Autonomous		0.0248		9.10e-05		0.0416		-0.0672	
(1 Year Lag)		(0.564)		(0.999)		(0.501)		(0.319)	
2014	-0.0290	-0.0291			-0.0247	-0.0258			
	(0.448)	(0.401)			(0.561)	(0.503)			
2015	-0.0736	-0.0813*			-0.0657	-0.0832			
	(0.121)	(0.0817)			(0.231)	(0.134)			
2017			0.0755*	0.0902**			0.0834*	0.105**	
			(0.0558)	(0.0353)			(0.0513)	(0.023)	
2018			0.0833*	0.0827			0.0911*	0.103*	
			(0.0991)	(0.115)			(0.0834)	(0.067)	
Lack of Corruption	-0.00753	-0.00698	0.0138*	0.00937	-0.00465	-0.0060	0.0186**	0.0150*	
	(0.292)	(0.343)	(0.0928)	(0.233)	(0.603)	(0.493)	(0.0338)	(0.072)	
Fundamental Rights	-0.00505	-0.00856	0.00375	-0.000762	-0.00542	-0.009	-0.00180	-0.00618	
	(0.564)	(0.354)	(0.785)	(0.955)	(0.555)	(0.356)	(0.894)	(0.652)	
Order and Safety	-0.00190	-0.00202	0.00190	0.00179	-0.00087	-0.0019	0.00442	0.00377	
	(0.238)	(0.178)	(0.481)	(0.454)	(0.691)	(0.425)	(0.130)	(0.142)	
Penal Justice	0.0126	0.0112	0.00364	0.00766	0.0102	0.0105	0.00110	0.00614	
	(0.115)	(0.176)	(0.730)	(0.464)	(0.243)	(0.241)	(0.917)	(0.557)	
Homicide Rate	-0.0035***	-0.0037***	-0.005***	-0.006***	-0.0026*	-0.0031*	-0.004***	-0.005***	
	(0.000506)	(0.000791)	(8.7e-05)	(1.77e-05)	(0.0696)	(0.0552)	(0.00775)	(0.004)	
Unemployment Rate	-1.971	-4.836	0.691	0.253	0.847	-6.421	6.708*	9.679*	
	(0.658)	(0.291)	(0.849)	(0.959)	(0.890)	(0.462)	(0.0662)	(0.0978)	
Female Emp. Rate	-0.832	-0.185	2.579*	3.086**	-0.700	-0.239	3.645**	4.065**	
	(0.423)	(0.872)	(0.0941)	(0.0381)	(0.563)	(0.851)	(0.0315)	(0.0109)	
% High SE Status	0.111	0.167	-1.120	-1.232*	-0.0658	0.190	-1.184	-1.422*	
	(0.871)	(0.806)	(0.120)	(0.0736)	(0.936)	(0.810)	(0.120)	(0.0612)	
% High-Med SE Status	0.0790	0.156	0.438	0.501*	0.102	0.243	0.393	0.348	
	(0.791)	(0.605)	(0.148)	(0.0822)	(0.754)	(0.510)	(0.200)	(0.214)	
% Medium SE Status	-0.123	-0.129	-0.336	-0.432**	-0.116	-0.0892	-0.261	-0.396*	
	(0.565)	(0.537)	(0.127)	(0.0354)	(0.636)	(0.705)	(0.275)	(0.0752)	
Constant	0.566	0.663*	-0.844	-0.885	0.449	0.695	-1.025*	-1.107*	
	(0.107)	(0.0576)	(0.140)	(0.112)	(0.275)	(0.146)	(0.0857)	(0.0508)	
Observations	81	81	92	92	69	69	78	78	
R-squared	0.371	0.408	0.352	0.412	0.326	0.361	0.412	0.470	
Robust p-value in parenth	neses	*** p<0.01, **	* p<0.05, * p<	0.1					

Appendix 5: Regression of Feminicide Prosecution Rate on Feminicide Score, by Phase

Source: Author's Calculations

Note: OLS regressions are run with population weights

State	Lowest Score	Latest Score	Score Change
AGU	-0.25	-0.25	0.00
BCN	-0.50	1.00	1.50
BCS	-0.50	-0.50	0.00
CAM	0.25	0.25	0.00
CHH	-1.00	-0.25	0.75
CHP	1.75	1.75	0.00
CMX	1.50	1.50	0.00
COA	0.50	0.50	0.00
COL	1.50	2.00	0.50
DUR	0.25	0.75	0.50
GRO	-1.25	1.75	3.00
GUA	-1.00	-0.50	0.50
HID	1.75	1.75	0.00
JAL	-0.50	1.50	2.00
MEX	-2.00	1.75	3.75
MIC	-0.75	-0.75	0.00
MOR	1.75	1.75	0.00
NAY	-2.00	0.00	2.00
NLE	-1.25	1.75	3.00
OAX	1.25	1.25	0.00
PUE	-0.50	1.50	2.00
QUE	1.25	1.75	0.50
ROO	-1.00	0.50	1.50
SIN	1.75	1.75	0.00
SLP	-0.50	1.75	2.25
SON	1.75	1.75	0.00
TAB	0.75	0.75	0.00
TAM	-0.25	1.75	2.00
TLA	-0.75	0.00	0.75
VER	2.00	2.00	0.00
YUC	-0.25	0.50	0.75
ZAC	1.25	1.50	0.25
Average	0.16	1.02	0.86
Average if Change $\neq 0$	1.53		

Appendix 6: Changes to the State's Feminicide Typification Scores

Source: Author's calculations, using *Informe Implmentación del Tipo Penal de Feminicidio En Mexico, 2014 – 2017* (Observatorio Ciudadano Nacional del Feminicidio)

	Full Sample		Dropping States	
	RE Score	RE Score Breakdown	RE Score	RE Score Breakdown
P Value	0. 028	0.018	0.041	0.089

Appendix 7: P-Values for Hausman Test

Source: Author's Calculations

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