The Militarization of Public Security and Violence: A Study of the Mexican Case

by

Brandon Sibilia

Dr. Jeffrey Staton
Adviser

Department of Political Science

Dr. Kyle Beardsley

Committee Member

Dr. Kristen Frenzel

Committee Member

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Brandon Sibilia

Dr. Jeffrey Staton

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Abstract

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Previous studies have analyzed the effects of militarization on levels of violence in regards to the drug war in Mexico, but they have been forced to adopt qualitative approaches due to data constraints. With the recent release of newly refined data, however, scholarship is able to employ empirical analyses when studying this relationship. The paper presented here is one of the first studies to quantitatively analyze the effects of militarization on levels of violence in Mexico. Even though I am unable to solve the problem of endogeneity, as greater violence may result in the use of the military to confront domestic security threats, I can still suggest possible correlations between troop deployments and drug trafficking related homicides. Generally speaking, the relationship between troop deployments and homicides is strongly and positively correlated, suggesting that militarization can lead to greater levels of violence. More specifically, the use of the military to confront drug cartels can possibly increase the amount of drug cartel member deaths and fatalities of persons of authority. On the contrary, it appears that militarization may not result in heightened fatalities caused by violent confrontations. Instead, the geographic location of the state might be a more significant causal factor, as border states tend to have higher amounts of violent confrontation deaths than non-border states. Finally, the results suggest that economic conditions do not have a significant impact on levels of violence.

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CHAPTER I

INTRODUCTION

In December 2006, Felipe Calderón, a member of the PAN (National Action Party), entered into office as the President of Mexico. That same month he deployed 6,700 military troops into his home state of Michoacán, thus initiating his strategy of combatting drug trafficking with militarization. Over the following three years, around 45,000 troops were deployed in a total of nine Mexican states. Even though there are police at multiple levels in Mexico, including municipal, state, and federal, why did Calderón elect to use the military as the key force to combat drug cartels?

Various reasons can provide an overall answer to this question. First, history demonstrates the military's continued involvement in domestic affairs, as this institution has had a role in policing duties and missions ever since the 1910 Mexican Revolution (Moloeznik 2009, 65). Second, the structure of the armed forces, including its lack of civilian control, grants the institution great autonomy, and its responsibilities further augment its domestic involvement, as the military "may participate in civilian activities to protect public safety" (Suprema Corte 1996). Third, due to a failure to establish concrete rules, deplorable working conditions, and a low pay scale, the police contain numerous institutional challenges that prevent professionalism and generate ineffectiveness (Azaola 2009). Lastly, as a result of the police's ineffectiveness, the citizenry does not trust law enforcement officials to correctly perform their duties, but Mexicans do perceive the armed forces to be a trustworthy institution (Moloeznik 2009, 67-69). Therefore, Calderón had reason to believe that the military would perform more capably and effectively

compared to the police in providing public security. Also, the President most likely felt pressure from the citizenry to utilize a trustworthy institution in the public sector.

During the militarization of public security, another puzzling phenomenon occurred—levels of violence increased dramatically. Before Calderón entered into office, homicide rates remained relatively stable during Vicente Fox's Presidency from 2000 to 2006. Furthermore, a decade before that, Mexico's national homicide rate dropped by nearly half between 1993 and 2001 (Bailey and Flores Macías 2007). This trend changed, however, during the first half of Calderón's term, which coincided with the use of the military to confront the drug cartels. For example, in 2008, homicide rates doubled compared to 2007 in five different Mexican states: Baja California, Chihuahua, Durango, Guerrero, and Sinaloa (González 2009; Hernández-Bringas and Narro-Robles 2010; Kellner and Pipitone 2010). Spikes in homicides also occurred in other states. Therefore, there appears to be a correlation between troop deployments and homicides—as troops were deployed in different states, the amount of homicides also increased. Was militarization the cause of heightened violence? More generally, does the use of military forces to handle domestic security threats lead to greater levels of violence?

In order to answer these questions, I explore the relationship between militarization and violence in all Mexican states. More specifically, I analyze the deployment of military forces to handle the domestic security threat of drug cartels from December 2006 to December 2009, as well as the number of homicides during that time period. Recent scholarship suggests two causal theories that explain this phenomenon. One theory argues that even though the military has been successful in capturing or killing prominent drug cartel members, it has also fragmented them into smaller groups, which increased cartel competition and promoted more widespread violence (Bailey and Taylor 2009). The other theory proposes that drug cartels have felt threatened by the

strong military presence and sudden disruption of the status quo, thus they decided to confront the government through the use of force in order to maintain their current status of power (Bailey and Taylor 2009). Unfortunately, due to a lack of data, scholars have been unable to quantitatively investigate these causal theories, and instead needed to rely on qualitative measures and case studies. With new datasets, however, provided by both the Mexican government and the *Justice in Mexico Project*, it is now possible to conduct quantitative tests of these theories. As a result, scholarship can now utilize more rigorous testing in order to further strengthen the validity of prior studies. This is one of the first studies to use the newly formed datasets as a means of analyzing previous literature.

When quantitatively analyzing the relationship between militarization and violence, it is important to account for a concern related to causation. Even though this study measures the effects of troop deployments on homicides, it may very well be the case increases in homicides result in the deployment of the military. This problem of endogeneity, if left unsolved, can skew empirical results and lead to incorrect conclusions. Therefore, in an attempt to solve this problem, I employ two instrumental variables: the partisanship of Mexican governors and state population size. Unfortunately, after completing the instrumental variables regressions with a two-stage least squares estimator, it appears that the chosen instruments are weak and do not solve the endogeneity problem. Still, this was an initial effort at providing a solution, and hopefully leads to further research on the issue.

Since causation remains in question, I am unable to draw any concise conclusions regarding the empirical results, yet suggestions can be made to illustrate the possibility of existing relationships. Generally speaking, the relationship between troop deployments and homicides is strongly and positively correlated, suggesting that militarization can lead to greater

levels of violence. More specifically, the use of the military to confront drug cartels can possibly increase the amount of drug cartel member deaths and fatalities of persons of authority. On the contrary, it appears that militarization may not result in heightened fatalities caused by violent confrontations. Instead, the geographic location of the state might be a more significant causal factor, as border states tend to have higher amounts of violent confrontation fatalities than non-border states. Finally, the results suggest that economic conditions do not have a significant impact on levels of violence.

Below is a brief summary of what will be discussed in this study. Chapter II will describe the history of drug policy in Mexico. It lays out how drugs were handled in the past and highlights why the change in 2006 was so different from what had occurred previously. Chapter III provides an in-depth explanation as to why the military was used in the Mexican case. Chapter IV outlines relevant theories of violence and their empirical implications. Chapter V discusses the effects of militarization. It will begin by outlining the research design, then go on to analyze the results from the instrumental variables regressions and OLS regressions. Chapter VI utilizes a case study of Chihuahua to help further illustrate the relationship between militarization and violence. Lastly, Chapter VII concludes this study by reiterating the central findings, providing ideas for future studies, and examining possible policy implications.

CHAPTER II

HISTORY OF DRUG POLICY IN MEXICO

The presence of drug cartels is not a recent surprise in Mexico. Instead, cartels have existed within the country for decades, continuously trying to find the best possible means of increasing their finances while striving to manage a relationship of coexistence with the government. Similarly, the government has utilized different strategies to deal with the issue of drug cartels. This chapter outlines the history of drug policy in Mexico in order to explain the changing relationship between drug cartels and the government. Furthermore, it makes a clear distinction between the strategies implemented previously by the state and the tactics it employs today. Also, the chapter provides an in-depth definition of drug cartels as well as the possible interactions that can occur between them and the government.

2.1   Defining Drug Cartels

According to Bailey and Taylor (2009), drug cartels are a form of organized crime because they commit repeat actions over time by multiple actors whose objectives are illegal. Apart from a general definition, they can be more specifically defined by three key characteristics: the length of commitment by group members, the presence of hierarchical networks, and the importance of territory (Bailey and Taylor 2009).

Overall, the majority of members maintain a long-term commitment with the cartel. Typically, those that do so hope to gain financial stability, increased protection, and an extended network of contacts (Bailey and Taylor 2009, 6). Moreover, these types of members may want to eliminate rivals, either economically or politically (Bailey and Taylor 2009, 6). To

demonstrate their commitment and loyalty to the group, members may leave written notes on the dead bodies of rival members, stating their support for the cartel's cause. Also, members may retrieve the bodies of fallen comrades from graveyards as an act of loyalty towards fellow members (Grayson 2011, 190).

Still, there is a small percentage of drug cartel members characterized by short-term commitments. They do not share the same goals, nor do they demonstrate similar acts of loyalty compared to members that maintain a long-term commitment. Typically, those that lack long-term commitments join drug cartels in order to advance their personal objectives, which include augmenting their power and status within the drug trafficking business, as well as amassing a financial fortune. Therefore, these types of members remain in drug cartels for short periods of time, and upon exiting, may either join more powerful cartels or start their own organization. In doing so, they both alienate former contacts and create new ones. Also, they put themselves at greater risk of being captured by law enforcement officials because of their higher status and of being killed due to their former cartel's desire to enact revenge. Finally, members focused on their personal goals do not demonstrate acts of loyalty towards the group. They will probably not openly state their support for the cartel's cause nor will they risk undertaking costly actions.

Another key characteristic of drug cartels, the presence of hierarchical networks, is typically constant throughout all drug cartels, unlike the previously discussed aspect. Almost all drug cartels have a presence of hierarchical networks; a drug lord runs each cartel and they have a designated staff of loyal cohorts that work underneath them. This characteristic can be demonstrated more succinctly through a couple of examples.

The Beltrán-Levya cartel maintains a hierarchical network. Arturo Beltrán served as the drug lord and overall leader of the cartel until his death, upon which the man who was second in

command, Héctor Beltrán, took control (Grigoriadis and Cuddehe 2011, 58). A man named Edgar Valdez, or "La Barbie", was the manager of the enforcement wing for this cartel, alluding to the fact that hierarchical networks exist not only at the very top of drug cartels, but also within their various factions (Grigoriadis and Cuddehe 2011, 57). Similarly, the Sinaloa cartel also has a main drug lord, Joaquín Gúzman Loera, or "El Chapo", as well as someone who serves as second in command, Ismael Zambada García, or "El Mayo" (Grayson 2011, 86). The leader of the Juarez cartel is a man named Vicente Carrillo Fuentes (Beittel 2011, 9). Jose Antonio Acosta Hernandez, or "El Diego", led its enforcement wing, La Línea, until his arrest in July 2011 (Beittel 2011, 9).

Aside from the length of commitment by members and the presence of hierarchical networks, the third characteristic of Mexican drug cartels is the importance of territory. The control of territory, or turf, by drug cartels stands as an integral component for their survival and success. If cartels control a particular area, then they can also maintain trafficking corridors known as plazas, or the major transition points for drugs from Mexico to the United States (Jones 2008, 7). These areas are the most vital to market share, thus, similar to legal enterprises, drug cartels attempt to monopolize them (Jones 2008, 8). In other words, cartels will have the greatest amount of success smuggling drugs when they control a territory with a highly sought after plaza. For example, Ciudad Juarez, in the state of Chihuahua, has one of the best smuggling routes in Mexico because of its close proximity to El Paso, Texas. A turf war erupted between the Juarez and Sinaloa cartels in Ciudad Juarez because each side wanted to gain sole control of the city (Beittel 2011, 9). Violence serves as a means to obtain and maintain territory and the plazas within them; violent acts occur frequently in highly sought after areas because, if controlled, they can greatly increase the power and wealth of a drug cartel.

Apart from increasing the cartel's level of success, controlling territory can also improve the chances of survival for a particular group. Once cartels establish themselves in a certain area, they can increase their strength by recruiting new members or creating corrupt relationships with local businesses or law enforcement officers. Through the addition of new members, the cartel will be able to enhance its enforcement wing, increase the level of protection for fellow members, and possibly sell a greater amount of drugs. Connections with local businesses can provide cartels another means of financial exchange and a source of valuable information. Similarly, by paying off police officers, cartels can gain information about rival groups and increase their protection from other officers and government officials. Overall, if a drug cartel controls a particular area, it can also control a number of actors within that area. As a result, it can better solidify its chances of survival by creating a network of contacts throughout the community.

2.2   Types of Exchange Between the State and Drug Cartels

There are considerable amounts of exchange between the state and drug cartels. Each side utilizes certain tactics to achieve their objectives. According to Bailey and Taylor (2009), the main objective of the state regarding public security is to maintain the public impression of the proper provision of public order. Adversely, the main objective of drug cartels is to preserve their illicit operations. When dealing with drug cartels, tactics that the state can employ to achieve its objective include coexistence, disruption, or elimination (Bailey and Taylor 2009). When dealing with the state, tactics that drug cartels can use are evasion, corruption, and confrontation (Bailey and Taylor 2009). A more in-depth analysis of the interplay between these two groups will provide a better understanding of each side's actions and intentions.

In its relationship with cartels, if the state wishes to maintain the impression of public order, it must take into account the strength of its institutions, its ability to provide public goods associated with public security, and the possible costs of a particular action. If the state has weak institutions and an inability to provide public security, then it may decide to coexist with the drug cartels. It can either choose to not take action and allow the drug cartels to work behind the scenes, or it can decide to form corrupt relationships with the illicit groups to eliminate motives for aggression. Similarly, when interacting with the state, drug cartels need to take into account possible costs and rewards of particular actions. Since their main goal is the continuation of their illicit activities, cartels may decide to form corrupt relationships with the state in order to eliminate potential obstacles that can stand in the way of their success. In doing so, they can still distribute narcotic supplies both within and outside the country, and use monetary payments in exchange for protection and easy access to smuggling routes.

The tactics of disruption by the state and evasion by drug cartels are not used very often, but it is important to briefly take note of them. The goal of disruption is not necessarily to eliminate the illicit activity and its participants, but to transform the actions of the group or move those actions to a different location (Bailey and Taylor 2009, 10). For example, in order to deter violence related to the drug trade, the state may decide to increase the number and strength of its police forces. Completely eliminating cartel activity may be impossible or too costly, thus it may be best to make it more difficult for them to function. Evasion is the least costly strategy for drug cartels, provided it is successful (Bailey and Taylor 2009, 10). It is almost impossible, however, for cartels to successfully evade the state due to law enforcement and other public security institutions. As a result, drug cartels rarely utilize the evasion tactic.

On the contrary, the tactics of elimination by the state and confrontation by drug cartels are more extreme strategies that involve increased costs but also greater rewards. For example, if the state attempts to eliminate drug cartels, either through the utilization of the police or the military, it will lose financial assets, material resources, and possibly human life. Still, the state will enhance public security and eliminate a domestic threat through the implementation of this strategy. The strategy of confrontation will typically only be used in response to the government's tactics of elimination. Through confrontation, drug cartels will bear the costs of making themselves more visible, thus increasing the possibility of member deaths and group degradation. On the other hand, if they succeed with this strategy, the cartels will be able to maintain control of their territories and continue their illicit activities.

Though these definitions and categorizations provide a clearer understanding of drug cartels, it is worth noting a few caveats. First, when describing the tactics of the state and drug cartels, this model assumes that they are both unified actors, rather than compilations of smaller, opportunistic groups. As a result, it may be the case that certain groups within the state will choose to confront the drug cartels, while other groups will coexist with the cartels. Similarly, while some cartels may confront the state, others will solely depend on their corrupt relationships. Second, drawing from the previous assumption, this model suggests that only one tactic occurs at a given time. It is most likely, however, that both the state and drug cartels utilize more than one type of exchange at any given time. Third, these categorizations assume that the state and drug cartels are completely separate groups, yet cartels may perform illicit actions with the state apparatus (Bailey and Taylor 2009, 11). Furthermore, it may be possible for drug cartel members to achieve positions in state offices.

Even with these caveats, it is critical to have an overall understanding of drug cartels and their interactions with the state. The next section will discuss the history of drug policy in Mexico and apply the possible interactions between these two groups to those cases.

2.3   History of Drug Policy in Mexico

As previously mentioned at the beginning of this chapter, drug cartels have existed in Mexico for decades. In the first stages of their operations, cartels primarily served as the link for the transportation of drugs between South American countries and the United States. Once they received shipments from other countries, members of the cartels would then smuggle those drugs across the border. As time passed, however, the cartels became more self-sufficient and produced their own drugs. In turn, they became more focused on selling drugs than transporting them, and thus acted as more of a manufacturer than a retailer.

The PRI (Institutional Revolutionary Party) was the first political party to confront the issue of drug trafficking. For more than 70 years, this party controlled numerous aspects of Mexican government, including a stranglehold over Mexico's most prominent institution, the executive branch. Though the PRI utilized different means to maintain its supremacy, it primarily depended on patronage politics and corruption. In many areas throughout the country, especially rural areas, PRI members provided material incentives or financial aid to citizens at different levels of the social hierarchy in exchange for political support. Also, members of the ruling party practiced many corrupt acts, such as adjusting election results in their favor or accepting monetary payments as an incentive to overlook criminality.

The government used this strategy of patronage politics and corruption when dealing with the drug cartels. These tactics of coexistence stood as the best way for the PRI to maintain a congenial relationship with the stronger and more influential drug cartels, and thus sustain the

party's supremacy over Mexican politics. For example, governors or their representatives provided protection to criminal organizations from other groups and allocated areas to them for the production, storage, and shipment of narcotics (Grayson 2011, 29). In return, the cartels utilized tactics of corruption in order to continue their drug trafficking businesses without interruption. Drug dealers showed deference to public figures, appeared with governors at their children's weddings, and helped the PRI vilify opponents by linking them to drug trafficking (Grayson 2011, 29). Also, drug lords provided monetary payments of $250,000 or more to representatives of the federal government in exchange for the special services they received (Grayson 2011, 29). Furthermore, cartels paid off police officers and relied on corruption within police forces to facilitate their illegal activities; the PRI did little to disrupt this relationship (Bailey and Godson 2000; Bailey and Chabat 2002). Overall, even though the PRI was not pleased to know that drug cartels operated within their country, they were willing to overlook the illicit acts of criminal organizations in exchange for monetary and political payments, all in order to maintain their superiority and limit conflict.

This relationship of reciprocity lasted until the year 2000, when the PRI lost its stranglehold over the executive branch. In that year, Vicente Fox, a member of the PAN, was elected president of Mexico. Instead of acting in collusion with the drug cartels, Fox adopted a harder stance towards the cartels by revamping the criminal investigation agency and encouraging authorities to stop the cartels (Grayson 2011, 67, 139). In spite of this new strategy of disruption, the status quo did not change, as drug cartels were still able to pay off politicians and police officers in exchange for the continuation of their criminal acts. The next president elected to office, however, did take drastic action against the drug cartels, thus greatly disturbing the status quo.

Felipe Calderón, also a member of the PAN, assumed the office of the Presidency in December of 2006. From the beginning of his term, Calderón, through the militarization of public security, utilized the tactic of confrontation towards the drug cartels in hopes of reducing or eliminating their existence. The rewards of fighting the cartels with the military, including a reestablishment of the image of public security, achieving social peace, and creating greater respect and popularity for the PAN, outweighed the possible costs of deploying them, such as increased violence and a diminished quality of democracy.

In choosing this strategy, the relationship between the state and drug cartels changed. When the PRI was in power, the party served as a referee for the cartels, regulating, controlling, and containing the drug trade, while also colluding to protect those groups and resolving conflicts between them (Meyer, Youngers, and Bewley-Taylor 2007). When the PAN took control and used the military for domestic security, however, the cartels lost some of their corrupt relationships with police officers and government officials. Furthermore, they lost access to certain drug smuggling routes and needed to find different ways to transport their supplies. Therefore, the drug cartels were not pleased with this new type of exchange. Their goals of selling and transporting narcotics, controlling territory, maintaining group unity, and essentially surviving were now threatened by the state's new strategy. In order to maintain the status quo, they chose to confront the government with force. Though the costs of publicly revealing their illicit activities and the possibility of group fractionalization remained high with the tactic of confrontation, the reward of maintaining their businesses through force was even greater.

In conclusion, drug cartels were able to operate with little interruption before 2006. During this time period, they established a reciprocal relationship with the state based on corruption. Once public security was militarized at the start of Calderón's Presidency, however,

the status quo was threatened, thus producing a forcible reaction by the cartels. The next chapter will discuss possible reasons why Calderón selected the military to confront the drug trafficking problem.

CHAPTER III

THE MEXICAN MILITARY

Mexico stands as one of the few countries that uses the military to handle domestic security threats. Many other countries do not employ this tactic, as they are more likely to depend on the police than the armed forces. Interestingly enough, Mexico does have an ample police force, with units at the municipal, state, and federal levels. With that being said, why does the Mexican state depend on the military, instead of the police, to deal with issues related to public security? Does mass opinion support the militarization of public security? This chapter will not only answer these questions, but will also look at a brief history of the Mexican military, as well as its basic structure and responsibilities.

3.1   History of the Mexican Military

To begin answering questions related to the military's present status, it is necessary to take a brief look at the past. The Mexican military was born out of the Mexican Revolution, as groups of rebellious landowners and peasants were able to defeat the federal army. The victory of the revolution, however, was short lived as different revolutionary movements began to fight each other in hopes of gaining political power over the country. Infighting carried on for almost two decades, before General Plutarco Elías Calles developed and implemented his plan for political stability, which included the extraction of the military as an institution from politics (Rocha 2005, 197). This decision had two long lasting effects: it helped prevent the possibility of political intervention by the armed forces, but at the same time it granted them a great amount of autonomy.

For about the next fifty years the military served as a source of stability and support for the political regime (Rocha 2005, 198). Without any real external threats to security, the military had been oriented to handling domestic problems. Nothing drastically changed within the military until around the 1980s, when the internal development of the armed forces moved towards making its personnel substantially more professional (Rocha 2005, 198). This effort, which continues today, strives to build up its ranks through a combination of professional experience and educational requirements (Rocha 2005, 198). Overall, the professionalization of the military increases the legitimacy of the institution as a whole, as well as strengthening the knowledge and skills of its individual members. As a result, the relationship based on trust and loyalty between the state and military becomes even greater, which is why Mexico's armed forces lead the way in providing leadership for law enforcement (Rocha 2005, 198).

3.2   Structure and Responsibilities of the Armed Forces

The interesting structure of the armed forces further demonstrates its autonomy and professionalism. To begin, Mexico's defense sector comprises two cabinet-level ministries: the Ministry of National Defense (SEDENA, which includes the army and the air force), and the Ministry of the Navy (SEMAR). Neither of these two ministries contain a single civilian official, meaning that men in military uniform establish policy for this sector, without any intermediary political power. Therefore, the armed forces interweave both the political and military spheres. Furthermore, without the involvement of civilian authorities in defense matters, the military has substantial autonomy.

Interactions occur frequently between the President and the military officials who lead the two departments. Every newly elected President can freely select the individuals who will head each of the two ministries (Rocha 2005, 200). As a result, the actors can maintain open

networks of communication from the very beginning. These open networks continue throughout the chief executive's term, as any decision made by the armed forces, no matter how controversial, must be discussed with the President before being implemented (Rocha 2005, 200). The majority of these decisions are made regardless of their legal backing, thus exemplifying the powerful influence that the military maintains (Rocha 2005, 200). Overall, these interactions help foster a sense of trust and loyalty between the two parties.

SEDENA establishes the responsibilities and expectations of the military, displaying not only the institution's autonomy, but also its interesting agenda. Generally speaking, although national defense stands as an important issue, the military's agenda appears to focus on a range of domestic missions (Moloeznik 2009, 73). The Operation and Development Plan, SEDENA's main planning document, suggests that the military's primary mission is to "respond to issues arising from [a] domestic situation, [thus] contributing to the development and well-being of Mexican society" (SEDENA 2001, 4). Among the wide array of domestic concerns, combatting drug trafficking rises to the top. As the Operation and Development Plan assigns soldiers to these missions, the army now publicly acknowledges its role and responsibility in fighting the drug cartels (SEDENA 2001, 35; Rocha 2005, 209-210).

The Supreme Court and the National Public Security Council also describe the domestic responsibilities of the military. A 1996 Supreme Court decision established that the armed forces "may participate in civilian activities to protect public safety, in support of civilian authorities" (Suprema Corte 1996). Therefore, roles normally pertaining to civilian personnel were now being handed over to military personnel. The National Public Security Council, a coordinating body within the National Public Security System, also advocated for a more influential domestic role of the military. Beginning in 1996, the government invited top military

officials to join the National Public Security Council, thus granting them a direct role in making public safety policy (Moloeznik 2009, 79).

Overall, when examining the structure and responsibilities of the armed forces, it becomes clear that they have a great amount of autonomy and an agenda directed towards handling domestic concerns.

3.3   Causes of Militarization

Many underlying causes explain the militarization of public security in Mexico. A few of which have already been touched upon in the previous sections. Throughout the military's history, it has been oriented to handling domestic problems. Furthermore, due to its enhanced professionalization and special relationship with the President, the executive branch has depended on the military to address domestic issues. Other institutions as well, including the Supreme Court and the National Public Security Council, recognize the military as an integral part of maintaining public security. Due to the armed forces autonomy, it can function and make decisions without political intervention, which also increases its involvement within the state. Other causes for the militarization of public security not yet discussed include institutional problems for the police, the public's discontent with the police, and their trust in the military.

As previously mentioned, the police formed corrupt relationships with drug cartels during the reign of the PRI (Bailey and Godson 2000; Bailey and Chabat 2002). Even when the PAN took power from the PRI, police actions did not change, as they still maintained their corrupt ties with drug cartels (Donnelly and Shirk 2009, 21; Beittel 2011, 4; Grayson 2011, 57-58). Azaola (2009) believes that the police's history of corruption can be explained by institutional challenges that prevent police professionalism. Generally speaking, the law enforcement system is absent of clearly delineated rules, expectations, or rewards, which result in assumed

understandings and a lack of accountability. Furthermore, deplorable working conditions, a patronage-fueled promotion structure, and a low pay scale also lead to high volumes of corruption. In order for this institution to function properly, these issues need to be resolved. Even though Calderón is in the process of reforming the police, the military will remain as the central force for handling public security until that reform process is complete.

The high amount of corruption within the police has resulted in great discontent amongst the Mexican citizenry. According to Moloeznik (2009), the public believes that two-thirds of police officers are very likely to accept a bribe (68). Apart from bribery, the Mexican people have also become very dissatisfied with the violations of basic human rights committed by police officers (Moloeznik 2009, 67). As a result, there is lack of trust in the police. Seventy-five percent of crimes go unreported in Mexico due to the public's lack of confidence in the police and the justice sector (Donnelly and Shirk 2009, 2). With the aforementioned information, it is not surprising that over half of the Mexican population feels unsafe (Moloeznik 2009, 67). The militarization of public security has occurred, in part, to augment the feeling of safety amongst the population and acknowledge public sentiment.

Additionally, the militarization of public security has occurred due to the widespread perception that the armed forces are the only institution capable of instilling trust in the Mexican population (Moloeznik 2009, 69). According to a 2004 Ipsos Bisma poll, the army ranked among the most trusted public-sector institutions in Mexico (Moloeznik 2009, 69). Furthermore, the majority of Mexican society displays appreciation for its military, tends to favor forcible solutions, and feels that the armed forces should be combating drug trafficking ((Moloeznik 2009, 71). Therefore, society accepts the role of the military and favors its use in the public security sector over the police.

3.4   Summary

In sum, various factors, including the history of the military, its autonomous structure and prescribed responsibilities, a lack of competency in the police, and the public's trust in the armed forces all influenced the decision to militarize public security. The military has maintained a history of continued involvement in domestic matters and the citizenry trusts in its capabilities and effectiveness. As a result, Calderón utilized the military because of society's demands as well as the perception of success derived from past cases. Furthermore, due to the institution's autonomy, the military may have advised the President to employ its services in confronting the drug cartels. Finally, since the police were failing to perform correctly and maintain order, the military was chosen as a replacement. It was one of the best options for Calderón to succeed in providing security for the greatest amount of citizens. After analyzing the Mexican military, the next chapter will provide a literature review of other theories related to militarization and violence.

CHAPTER IV

THEORIES OF VIOLENCE

Scholarship has produced numerous theoretical arguments that speak to the effects of the military's enhanced role in domestic security, as well as explanations of violence that are connected to public order policy. This chapter summarizes those central theories. After doing so, I will discuss the empirical implications related to these arguments and propose the hypotheses that will be tested in this study. Finally, I outline the problems of estimating the effect of militarization on violence, since it may be the case that increases in violence actually causes militarization.

4.1   What effects does the military's enhanced role produce?

Certain scholars have studied the effects of the military's enhanced role in domestic security. One section of scholarship focuses on how militarization may impact civil liberties and human rights. For example, Moloeznik (2009) argues that assigning the military to missions beyond its nature results in a significant increase of complaints filed for alleged basic rights violations due to the questionable actions employed to combat domestic violence. Therefore, the public's perception of democracy diminishes. Similarly, Mares (2003) believes that the use of the military in an internally oriented drug war is problematic for any democracy because of the freedoms, such as privacy and comfort, which individuals must relinquish. Once again, the quality of democracy diminishes as a result.

Aside from militarization's effects on civil liberties and human rights, other studies have examined the military's impact on the social embeddedness of other groups. Díaz-Cayeros et al.

(2011), for example, find, through their study on the prevalence of drug gang activity, that dependence on the military to handle domestic concerns might not affect the social embeddedness that protects drug gangs and other criminal organizations. Therefore, it is possible that militarization does not affect the overall status of armed non-state actors.

4.2   The Use of Violence

A violent response to the militarization of public security is not solely characteristic of Mexican drug cartels, as other groups have also tended to use violence in certain situations. Various groups can act violently in different ways and for different reasons, thus it is important to first make a distinction between two types of violence: indiscriminate and selective. According to Kalyvas (2006), both selective and indiscriminate violence are instrumental forms of violence aiming to generate collaboration via deterrence (142). The difference between the two, however, can be determined by the level at which guilt, and hence targeting, is decided. Selective violence intends to ascertain individual guilt, whereas indiscriminate violence strives to create guilt by association (142). As a result, selective violence entails "personalized targeting, whereas indiscriminate violence implies collective targeting (Kalyvas 2006, 142). The type of violence utilized by a particular group depends on their personal goals.

For example, groups that desire the support of the local population or control over a particular region may use selective violence (Kalyvas 2006). Furthermore, groups dependent on the population's local resources may also utilize selective violence (Weinstein 2007). Overall, these actions aim to encourage the part of the population not under the violent group's control to support their cause. Indiscriminate violence can also generate support from the local population. Lyall (2009) proposes that indiscriminate force, perhaps through the fear it generates, can influence a population to side with the group that perpetuates the violence because it can deter

people from collaborating with the rival actor. Kalyvas (2006) states that indiscriminate violence can deter a population from supporting another group by collectively sanctioning suspected collaborators and those related to them.

Other studies have applied the use of violence to explain the actions of drug cartels. Wilkinson (2009) presents four reasons why some countries inhabited by drug cartels have high amounts of violence, yet other countries also inhabited by drug cartels have low levels of violence. First, countries with a larger youth population have higher amounts of violence because that segment of society is primarily unemployed. As a result, drug cartels have a greater population from which to recruit, creating more competition, and thus increased violence. Second, countries located closer to the final destination of the drugs have more at stake, hence may become more violent due to cartels protecting their territory. Third, countries with greater rule of law can arrest, prosecute, and punish those involved in the illegal drug trade, which most likely reduces levels of violence. Finally, countries with better developed institutions that protect societal norms and values will also have more control over narcotics, helping reduce drug related violence.

Expanding on the above ideas, Williams (2010) provides scholarship with other reasons why drug cartels use acts of violence. Since cartels act outside of the law, they do not receive protection or support from the government. In order to deal with security problems, they take the law into their own hands and use violence to enact revenge or correct a wrongdoing. Violence can also be utilized to maintain discipline within a cartel and competence with other cartels. This way, they can enforce cooperation within their organization and display a level of confidence and power towards rival cartels. Lastly, cartels may use violence in order to protect and promote their own market as well as the supply of drugs they manage.

4.3   The Mexican Case

Having provided an overview of existing studies and relevant theories, I can now present

the main argument of this paper. Once Calderón entered into office in December 2006, he

adopted a very tough stance towards the drug cartels, specifically by employing military troops

to attack the country's drug problems. After this new policy was implemented and troops were

deployed in certain states, homicide rates began to increase. Among other scholars, Hernández-

Bringas and Narro-Robles (2010) demonstrate that once the Mexican military presence increased

in 2007, homicide rates doubled in 2008 in states that received military troops. Furthermore,

homicide rates continued to spiral higher in 2009 (Beittel 2011, 3). Drawing from the above

correlation, I have developed a general empirical prediction, which states that *the use of the*

military to handle domestic security threats will result in higher amounts of violence. Moreover,

my first hypothesis draws from Hernández-Bringas and Narro-Robles findings:

> **H1:** *States where military troops were deployed will have higher levels of violence,*
>
> *whereas states that did not receive deployments will have lower amounts of violence.*

Although there is no sole explanation for this sudden surge in violence, Bailey and Taylor

(2009) have proposed two main reasons why this phenomenon occurred. One theory deals with

the "kingpin strategy" of the government. The goal of this strategy is to take down numerous top

and mid level leaders in all major drug trafficking organizations, either through arrests or killings

in operations to detain them (Beittel 2011, 15). This has been somewhat successful, as important

leaders such as Jaime "El Hummer" González Durán of Los Zetas was arrested in November

2008 and Arturo Beltrán of the Beltrán-Levaya cartel was killed in December 2009 (Grayson

2011, 89; Grigoriadis and Cuddehe 2011, 58). Even with this success, as the military

"decapitated" certain drug cartels by arresting or killing important drug lords, it also fragmented

them into smaller groups, which increased cartel competition and promoted more widespread violence (Bailey and Taylor 2009). Intrigued by the possibility of obtaining their own financial riches, drug dealers chose to create their own smaller cartels. For example, Los Zetas, who were aligned with the Gulf cartel, split from them and became fully independent in 2009 (Beittel 2011, 14). Due to this fractionalization and the increase in cartel competition, turf wars ensued, with different groups trying to gain control over territory. Turf wars caused an increase in violence amongst drug cartels, hence resulting in a spike in the number of drug cartel member fatalities. Therefore, my second hypothesis states:

H2: *The use of the military to confront the drug cartels will result in more*

drug cartel member homicides.

Apart from the fragmentation of drug cartels, the other theory focuses on the threat to the status quo. The status quo was formed when the PRI chose to coexist with the drug cartels during their reign of power. High amounts of cartel violence did not exist for decades because the party served as a referee for the cartels, regulating, controlling, and containing the drug trade, while also colluding to protect those groups and resolving conflicts between them (Meyer, Youngers, and Bewley-Taylor 2007). When the PRI began to lose its political power, however, culminating in the 2000 Presidential Election, there was diminished control over the cartels and a change in government strategy. Instead of coexisting with the drug cartels, the PAN chose to face them head-on and disrupt the status quo by utilizing the military for public security. This threatened the corrupt relationships that cartels had created with police officers and government officials, obstructed smuggling routes, and eliminated important cartel leaders. In response, drug cartels confronted the government through the use of force. Through confrontation, they hope to demonstrate their dissatisfaction with the change in the status quo and their unwillingness to

relinquish their current power status. Confrontation can include the use of force against government officials, policemen, military troops, and even civilians, all in order to demonstrate their resolve. My third hypothesis, which is directly associated with this theory, proposes:

H3: *The use of the military to confront the drug cartels will result in more*

deaths of persons of authority.

Drawing from the previous theory, drug cartels would be expected to become involved in more violent confrontations with the military. For example, 200 government commandos were sent to Arturo Beltrán's condo in order to apprehend him in December 2009 (Grigoriadis and Cuddehe 2011, 58). Instead of surrendering, Beltrán and his men tried to fight them off, but only survived a couple of hours until the condo was raided and the cartel leader was shot repeatedly (Grigoriadis and Cuddehe 2011, 58). These violent confrontations can occur during a government raid of a cartel stronghold, during routine street patrols, or when trying to neutralize drug related activities (PDLR 2011). The military attempts to eliminate drug cartels and their activities, while members of the cartels fight back in order to protect their drugs and their livelihoods.

Violent confrontations have also occurred more frequently between drug cartels. The first theory demonstrates that turf wars have increased since troops were deployed. Aside from turf wars, confrontations may happen amongst cartels due to acts of revenge, denouncements, dissatisfaction with alliances, and response to treason (PDLR 2011). These confrontations can also occur within cartels, as different groups attempt to reinforce discipline or signal alliances (PDLR 2011). Overall, it is evident that violent confrontations increased once the government implemented its new strategy. Accordingly, my fourth hypothesis postulates:

H4: *The use of the military to confront the drug cartels will result in more*

homicides caused by violent confrontations.

Another hypothesis in need of testing deals with the level of violence in border states. According to Wilkinson (2009), countries located closer to the final destination of the drugs have more at stake, and thus may become more violent to protect their territory. Similarly, Jones (2008) proposes that when cartels control a particular area, they can also maintain trafficking corridors known as plazas, or the major transition points for drugs from Mexico to the United States. The final destination of many drugs coming from Mexico is the United States. Therefore, states situated on the border will be more desired by drug cartels, and they will be more willing to pay the costs of violence in order to reap the rewards of controlling plazas. In other words, cartels must control premier locations, primarily with violent acts, if they want to maximize their income. Drawing from the above reasoning, my fifth hypothesis states:

H5: *Violence will be higher in Mexican border states than in states not situated on*

the border.

The last hypothesis that will be tested in this study is associated with the correlation between violence and poverty. To begin, scholars, such as Quinney (1977) and Lotspeich (1995), theorize that individuals frustrated by their economic status, due to unemployment or low wages, will act illegally in order to improve their financial situations. Involvement in drug cartels serves as a form of employment and a means of monetary gain. Individuals can earn money by selling drugs or completing tasks given to them by higher ranking members. Therefore, drug cartels will be more likely to recruit members from impoverished areas because they will be more attracted to the drug cartel lifestyle. As a result, competition, and thus violence, will increase in these locations. Also, law enforcement officials may lack the proper facilities and resources in impoverished areas, hence diminishing their capacity to maintain rule

of law. As a result, drug cartels will be more willing to utilize violent tactics in these locations since the police will be a less formidable obstacle. With that being said, my sixth hypothesis proposes a negative correlation between violence and economic status:

H6: *States with poorer economic conditions will have higher levels of violence.*

4.4 Concerns when Measuring this Relationship

When measuring the effects of militarization on levels of violence, it is necessary to note that a problem of causation arises. Instead of troop deployments causing an increase in homicides, it may very well be the case that spikes in violence result in the utilization of the military to control domestic security threats. In other words, even though changes in the independent variable are associated with changes in the dependent variable, increases in the dependent variable may be impacting the independent variable. Therefore, reverse causality, or a problem of endogeneity, may characterize this relationship.

This is a plausible idea. If levels of violence remain stable and relatively unchanged, then the government has very little incentive of deploying the military throughout the country, especially since these deployments cost money and reduce resources. On the contrary, if spikes in violence occur, and the government is unable to depend on the police to enforce laws and restore order, then the next logical thing to do would be to deploy the military. Apart from the police, the military is probably the most capable and willing institution to tackle domestic security threats. As a result, in order to accurately analyze the aforementioned hypotheses, it is necessary to address this endogeneity problem. The next chapter will provide an in-depth discussion as to how I try to solve this issue, as well as an outline of my research design and empirical results.

CHAPTER V

THE EFFECTS OF MILITARIZATION

This paper strives to analyze, through a study of Mexico's Drug War, the effects of the military's involvement in domestic security threats. As was previously mentioned in the introduction, other scholars have done some work in analyzing this relationship. For example, Bailey and Taylor (2009) utilize two main causal mechanisms to explain the increase in drug related violence that occurred after the militarization of public security. I use those same causal mechanisms in this study, yet there is one key contrast between the two—Bailey and Taylor utilize a qualitative approach while I employ a quantitative approach. There is a reason for this difference. Until recently, not enough data related to the Mexican case was available to conduct a quantitative study, hence the reason why qualitative analyses were used. Now that more data has become available, however, scholars have the ability to examine this case quantitatively. This study is one of the first to do so.

Overall, I believe that conducting a quantitative analysis will have two major benefits. First, the theories that Bailey and Taylor (2009) propose are plausible, yet need more rigorous testing in order to strengthen their validity. Hopefully, the results from this study will do just that. Second, with the completion of this study, I hope to expand the discussion related to the Mexican case, which might open the door for more policy implications and suggestions.

With that being said, it is time to discuss the research design of this study. This discussion will first describe the time frame of the study and define the unit of analysis. Then, it will explain the independent and dependent variables, including why they were chosen, how the

data was collected, and their strengths and weaknesses. Next, this chapter will outline the instrumental variables, which hope to solve the endogeneity problem. Afterwards, it will go on to describe and analyze the empirical findings of the quantitative analyses.

5.1   Time Frame and Unit of Analysis

To reiterate, the core argument of this study states that the use of the military to handle domestic security threats will result in higher levels of violence. In order to examine this argument, as well as the more specific hypotheses discussed in the previous chapter, I will quantitatively analyze the impact of troop deployments on homicides in Mexico.

The time frame of this study ranges from December 2006 to December 2009. December 2006 is the chosen start date because Calderón first implemented his new strategy of utilizing the military to fight the drug cartels in that month. Also, during that same time period, 7,000 troops were deployed to Michoacán. Therefore, if the analysis began in January 2007, I would lose an important observation in my study. The analysis concludes in December 2009 because, according to the data, no more troops were deployed after that year. In subsequent years, drug cartels may have become more accustomed to functioning with an increased military presence, thus other factors impacting levels of violence may become more prominent once deployments stopped. As a result, since I examine the effects of militarization on violence, I want to reduce the possibility of other variables influencing my study. Overall, I believe that limiting the analysis within this time frame will provide the most accurate results.

The unit of analysis to study the Mexican case in this time frame will be state-year. This unit of analysis provides a total of 96 observations. More specifically, I include all 31 Mexican states, as well as the Federal District in these observations. By including every state in this study, instead of selecting particular states that are similar to one another, I limit the possibility

of sample bias. Also, I combine observations from December 2006 into the year 2007 in order to not lose valuable data. It is possible that integrating December 2006 into 2007 will bias my results, but as previously mentioned, this month needed to be included in the dataset. Also, data is not available for troop deployments nor homicides before this time period.

Additionally, this unit of analysis is beneficial for other reasons as well. From observing the available data, I have determined that there is marked variation regarding troop deployments at the state level. Furthermore, the data does not provide detail as to which specific locations within the state these troops were deployed, thus narrowing the scope of the unit of analysis would make it difficult to analyze deployments. There is also variation regarding homicides at the state level. Although it has been determined that drug cartel violence is relatively concentrated within a few cities and towns (Beittel 2011, 20), this paper examines the correlation between militarization and levels of violence at the state level. Consequently, the analysis would be skewed if homicides were observed at the municipal level.

Drug cartels must also be analyzed at the state level. As previously explained in the chapter that defines drug cartels, territory stands as one of their defining characteristics (Jones 2009, 7). Even though it is difficult to pinpoint the exact location of specific cartel groups, it is believed that they do not operate in one town or city. In other words, cartel operations typically occur statewide, or even across a group of states. For example, the Sinaloa cartel operates in various locations, including Sinaloa, Durango, Guerrero, Mexico City, and Ciudad Juarez, while the Juarez cartel functions primarily in Chihuahua (Beittel 2011, 9). In addition to expansive locations, drug cartels have a very fluid nature and may change their positions to adapt to external factors such as the drug market or governmental resistance (Beittel 2011, 9). Therefore, in the case that cartels did move geographically in the future, it would be difficult to replicate my

results if analyses were conducted on units smaller than states. In sum, I believe a state-year unit

of analysis is the best option for this study.

5.2   Measuring the Independent Variable: Militarization

The concept that drives my analysis is militarization, or a measure of both the act of

deployment and the number of troops deployed by President Calderón to certain states.

Unfortunately, there are some obstacles that impede the process of measuring this variable.

Since the Mexican government considers all military information to be classified, it does not

release any data related to this institution. Consequently, official documents and statistics do not

contain information related to, among other things, military spending, military deployments, and

troop movements. In other words, it is very difficult to obtain data related to the Mexican

military.

Luckily, the *Justice in Mexico* project, by coding local, regional, and national

newspapers, has created a small dataset that provides information pertinent to troop deployments.

Troop deployments serve as a valuable means of measuring militarization. In this dataset,

deployments are grouped in monthly intervals and range from December 2006 to July 2009; a

total of nine states received at least one troop deployment during this time period. In order to

accommodate this research project, I decided to disaggregate some of the data.[1] Troops include

not only soldiers, but also federal police, meaning the coders characterized law enforcement

officials as serving in tandem with the military. Also, this dataset does not include estimates for

troop replacements, which unfortunately reduces the accuracy of analyzing militarization.

Overall, although newspapers do not provide the most accurate source of information regarding

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[1] See Appendix A for a table regarding troop deployments and a detailed explanation as to how the data was disaggregated.

troop deployments, due to reasons such as bias, censorship, and the inability to observe all military actions, they currently stand as the best possible option.

With this dataset, I have created two independent variables to measure militarization. The first variable is continuous and includes the log of troop deployments. If troops were deployed in a single state more than one time in a given year, then that data was aggregated into a yearly interval. Utilizing the log of deployments, instead of the actual amount of troops deployed, provides a more even distribution, and thus more accurate results. The second variable is dichotomous and is either a 1 if troops were deployed or a 0 if troops were not deployed. It is important to employ both of these variables because the act of deploying troops may have a different effect on violence than the amount of troops present in a particular state.

5.3   Measuring the Dependent Variable: Drug Trafficking Related Homicides

The aim of this analysis is to link the variations in military troop deployments described above with levels of violence. Unlike Mexican military information, however, there is ample amount of data related to violence in Mexico, primarily through the measure of homicides. For example, the TransBorder Institute, through the coding of *Reforma* news reports, maintains a dataset that covers drug related homicides per state on a monthly basis. Similarly, the Presidencia de la República, a government agency in Mexico, recently released a dataset that contains pertinent information about drug related homicides from December 2006 to December 2010 at the municipal level. I employ the Mexican government's dataset because it should be able to provide more accurate information than news reports. Also, it not only tallies the total number of drug related homicides, but also categorizes them according to three types of violence: drug related executions, violent confrontations, and aggressions targeting authorities.

To measure these types of homicides in concordance with the unit of analysis, I aggregated the municipal data up to the state level and transformed it from monthly intervals into yearly intervals. With the categorized information of different types of homicides, I devised four dependent variables. The first one measures the total number of homicides related to drug cartel violence. The second dependent variable measures the total number of drug related executions, which focus on the deaths of drug cartel members caused by extreme violence. According to the government, descriptive characteristics of these executions include the location where the dead were found, the sex and age of the deceased, as well as whether or not a message was left on the dead body (PDLR 2011). The third dependent variable measures the deaths of people of authority, which can include the military, the police, or government officials (PDLR 2011). Finally, the fourth dependent variable measures the number of deaths caused by violent confrontations between drug cartels, or between cartels and military forces (PDLR 2011). Homicides for this variable can include both cartel members and soldiers. Overall, each of these variables is continuous and allows me to measure levels of drug cartel violence in different ways.

5.4   Control Variables

It is highly likely that other factors are influencing this relationship, and thus it is necessary to include control variables in this study. Since this is a small N study, however, it will be detrimental to my analysis if I include too many control variables. As a result, I will only be utilizing two controls. One control is the log of Gross Domestic Product (GDP) by state. Recently discussed in the previous chapter, it is possible that poorer economic conditions positively impact violence. In other words, less wealthy states may tend to have higher levels of violence. Therefore, I obtained the annual GDP, in pesos, of each state from INEGI's *Sistema de Cuentas Nacionales de México* to control for the variable concerning wealth. The second control

variable makes a distinction between border states and non-border states. Again, as hypothesized in the previous chapter, border states will have higher levels of violence due to their close proximity to the United States. I included a dichotomous variable to control for this effect.

5.5   Instrumental Variables

As previously mentioned at the end of the last chapter, one issue that arises with measuring the impact of militarization on levels of violence is the problem of endogeneity. In order to eliminate the possibility of reverse causality and further strengthen the causal mechanism of this study, I will utilize instrumental variables. An instrumental variable serves as a method to generate exogenous variation solely in the independent variable. Using observational data, regression predictions can be used to demonstrate that changes in the instrument are associated with changes in the independent variable but do not influence the dependent variable. Accordingly, the instrument should be correlated with the independent variable but uncorrelated with the dependent variable. Also, the instrument should be uncorrelated with the error term. This method is conceptually difficult and easily misused, thus scholars must be cautious when selecting their instruments. Still, many other studies have employed instrumental variables in order to eliminate the problem of endogeneity, including Hansford and Gomez (2010) and Gabel and Scheve (2007).

I will use two instrumental variables for this study: the partisanship of the governor and state population size. The partisanship of the governor at the time when troops were deployed serves as a worthwhile instrument for a couple of reasons. First, as **Table 1** demonstrates, there is a correlation between troop deployments and the party of the governor. Of the nine states that received troop deployments, eight of them had a governor who was not part of the PAN,

Table 1: Party of Governor at Time of Troop Deployment

State	Governor	Party of Governor
Baja California	Eugenio Elorduy Walther	PAN
Chihuahua	José Reyes Baeza Terrazas	PRI
Durango	Ismael Hernández Deras	PRI
Guerrero	Carlos Zeferino Torreblanca Galindo	PRD
Michoacán	Lázaro Cárdenas Batel	PRD
Nuevo León	José Natividad González Páras	PRI
Sinaloa	Jesús Alberto Aguilar Padilla	PRI
Tamaulipas	Eugenio Hernández Flore	PRI
Veracruz	Fidel Herrera Beltrán	PRI

Source: National Conference of Governors (CONAGO)

Calderón's party. Six were members of the PRI and two were members of the PRD (The Party of the Democratic Revolution). There is a supposed reason why this correlation exists. It is believed that Calderón sent troops to states with governors of opposing parties because, in case his strategy of military confrontation failed, he could blame the governors of the PRI and the PRD. This would save the reputation of Calderón's party, and preserve the chances of another PAN candidate being elected president. Furthermore, the partisanship of the governor does not influence the level of violence within the state, since he or she cannot control the actions of the drug cartels.

Aside from the governor's party, the second instrumental variable I use is the log of the state's population size, based upon INEGI's 2010 statistics. One of the main goals of the

President should be to provide security to his or her citizens and protect them from danger. Therefore, Calderón should want to protect the highest amount of Mexicans possible from drug cartel violence. To do so, he should send military troops to the states that have the largest population sizes, which would in turn help ensure the safety of the greatest amount of people. According to the data, there is a correlation between troop deployments and population size, as Veracruz has one of the highest populations in the country at 7.6 million. At 4.6 million, Nuevo León also has a very large population. Furthermore, population size should not impact levels of violence, as drug related homicides could occur regardless of how many people live in a particular area.

5.6   Instrumental Variable Regressions

Even though it was difficult to select proper instrumental variables, I believe that partisanship of the governor and population size are correct instruments to use. They are both correlated with troop deployments, but are uncorrelated with violence. According to my instrumental variable regressions with a two-stage least squares estimator, however, it appears that I may have been incorrect.

Table 2 presents the results from the first-stage regressions. The table is divided into four sections, since I instrumented for all four dependent variables. All of the results from the first-stage regressions demonstrate that only one instrument has a p-value less than 0.01, and is thus significantly different from zero. That instrument is the dichotomous variable for border and non-border states. In other words, border states are the only variable displaying a positive significant correlation with both the log of troop deployments and the dichotomous variable of

Table 2: Instrumental Variable (2SLS) Regression Results: First Stage

	Log of Deployments	Deployment (Yes/No)
Total Homicides		
Border/Non-Border State	2.77*** (0.725)	0.398*** (0.092)
GDP (Log)	-0.468 (0.501)	-0.059 (0.065)
PRI	0.239 (0.656)	0.023 (0.085)
PRD	1.14 (0.822)	0.117 (0.106)
Population (Log)	0.737 (0.544)	0.092 (0.070)
Drug Cartel Member Homicides		
Border/Non-Border State	2.77*** (0.725)	0.398*** (0.092)
GDP (Log)	-0.468 (0.501)	-0.059 (0.065)
PRI	0.239 (0.656)	0.023 (0.085)
PRD	1.14 (0.822)	0.117 (0.106)
Population (Log)	0.737 (0.544)	0.092 (0.070)
Fatalities of Persons of Authority		
Border/Non-Border State	2.60*** (0.826)	0.377*** (0.105)

	Log of Deployments	Deployment (Yes/No)
GDP (Log)	-0.154 (0.678)	-0.027 (0.088)
PRI	0.252 (0.784)	0.025 (0.101)
PRD	1.77 (1.10)	0.183 (0.142)
Population (Log)	0.467 (0.658)	0.063 (0.085)
Fatalities from Violent Confrontations		
Border/Non-Border State	2.75*** (0.740)	0.396*** (0.094)
GDP (Log)	-0.480 (0.511)	-0.060 (0.066)
PRI	0.269 (0.674)	0.027 (0.087)
PRD	1.14 (0.835)	0.117 (0.107)
Population (Log)	0.740 (0.553)	0.093 (0.071)

Note: * $p = < .1$, ** $p = < .05$, *** $p = < .01$

deployments. This does not bode well for my chosen instruments, as it may be the case that they are weak. In order to further investigate this issue, I now turn to the results of the second stage my instrumental variable regressions.

Table 3: Instrumental Variable (2SLS) Regression Results: Second Stage

Model One	Total Homicides	Drug Cartel Member Homicides	Fatalities of Persons of Authority	Fatalities from Violent Confrontations
Troop Deployments (Log)	121.61 (76.27)	110.08 (72.36)	2.39** (1.07)	9.16* (5.32)
GDP (Log)	22.38 (52.16)	22.39 (49.48)	0.264 (1.031)	-0.320 (49.53)
Border/Non-Border State	63.75 (219.28)	74.46 (208.03)	-3.59 (3.05)	-7.57 (15.19)
Model Two				
Deployment Yes/No	1088.95 (731.41)	987.33 (690.07)	21.51* (11.32)	80.90 (50.64)
GDP (Log)	21.63 (56.99)	21.68 (53.77)	0.264 (1.21)	-0.340 (3.92)
Border/Non-Border State	-56.19 (292.24)	-36.65 (275.72)	-5.74 (4.41)	-14.40 (20.11)

Note: * $p = < .1$, ** $p = < .05$, *** $p = < .01$

Table 3 displays the results for these regressions. At first glance it appears as though two dependent variables are statistically significant: fatalities of persons of authority and fatalities from violent confrontations. Their coefficients are also positive. This is important to note because it means that the instruments may have worked properly when measuring certain types of drug related violence. In other words, when measuring the effects of militarization on deaths of persons of authority and deaths from violent confrontations, the partisanship of the governor and population size are probably correlated with troop deployments, but not correlated with changes in violence. Therefore, more accurate predictions can be made regarding the effects of

militarization on particular types of violence since causation has become more clear. Still, we cannot say for certain that the endogeneity problem has been completely solved due to the fact that these coefficients do not have a p-value less than .01, nor are they similar in size when compared to the results from the OLS regressions (See **Table 5**).

Generally speaking, all of the coefficients for the dichotomous variable of militarization and the log variable of troop deployments are positive. This is substantively interesting because it provides suggestive evidence that militarization can cause increased levels of violence. Furthermore, these coefficients suggest that the use of the military to handle domestic security threats might result in different spikes of violence depending on the violent action. For example, the coefficients for drug related homicides are much higher than the coefficients for deaths of persons of authority, meaning that militarization causes more violence between cartels than cartels and other groups.

Still, similar to what was mentioned above, clear conclusions regarding causation cannot be made. Not only do some results lack statistical significance, but the majority of the coefficients in the second stage are significantly higher than the coefficients presented in the OLS regression models (See **Table 5**). Therefore, it is possible that both the partisanship of the governor and population size are correlated with the dependent variable and the error term in the OLS regression. This is plausible because states governed by the PRI or PRD may be more corrupt than states governed by the PAN. Corruption can lead to a lack of proper law enforcement and police control, thus increasing the cartels' ability to commit more violent acts. Additionally, drug cartels may operate in more populated areas in order to gain the highest possible amount of customers. As a result, the violent acts they commit would tend to occur in these areas.

Aside from the difference in degree of the coefficients, some of the coefficients even changed from positive to negative. This change signifies that the instruments possibly had an effect on the relationship between the independent and dependent variables. Overall, it is difficult to be confident in these results, as they are insignificant and appear to tell a different story from the OLS regression models.

Before drawing final conclusions about the instruments, however, it is necessary to test for the endogeneity of troop deployments. To do so, I implement the Durbin-Wu Hausman test. This tests the null hypothesis that troop deployments are exogenous. The results demonstrate, with p scores greater than 0.1, that the aforementioned hypothesis is not rejected, so in fact we cannot reject exogeneity of both the log troop deployments and the dichotomous variable in this model. In addition, I will examine the strength of the instruments by testing the joint significance of all of the instruments. They are jointly insignificant from zero. Also, an F score of over 10 is typically required to suggest that instruments are sufficiently strong. Here, however, the F score is about 1.5. After conducting this final test, it is evident that the chosen instruments are weak and do not solve the endogeneity problem in this study.

Even with these shortcomings, keep in mind that this was a first attempt at solving the problem of endogeneity. Though it did not provide clear evidence of causation, it did suggest the possibility that certain types of violence may be caused by militarization. To aid future scholarship in further reducing the endogeneity problem, I need to discuss possible reasons why the instruments used here are weak. It may be the case that troops were not deployed to these particular states because they had governors of opposing parties. Maybe Calderón was not concerned with having a scapegoat to place the blame upon in the event that his strategy failed. Also, population size may not have been a key factor in Calderón's decision-making process.

Instead of protecting the largest amount of people, troops might have been sent to the states

characterized by the greatest drug cartel threat. They also could have been deployed in states

with the most corrupt police departments. With this reasoning, the military could have stepped

in to eliminate corrupt relationships and thus reduce the strength of the drug cartels. Even

though these are currently speculations, they could be utilized in future research. In sum, it

would behoove scholarship to reduce the endogeneity problem in order to more clearly

understand the impact that militarization can have on levels of violence.

5.7   Simple OLS Regression Model

Before discussing the OLS regression results, it is important to mention that, due to weak

instrumentation and an inability to solve the endogeneity problem, the following findings are

strictly suggestive and do not lead to any clear conclusions. With that being said, I employ an

OLS regression model to measure the effects of militarization on levels of violence in Mexico.

To begin measuring this relationship, I first utilize a simple OLS regression. The results of this

test can be found in **Table 4**. Bear in mind that part of the reason why both the coefficients and

standard errors are so large is due to the small sample size of troop deployments.

Overall, both the log of troop deployments and the dichotomous variable are statistically

significant. Each demonstrates a strong, positive correlation between military presence and

levels of violence, meaning that as troops are deployed, homicides also increase. Going into

greater detail, the coefficient for the log of deployments provides specific information about this

correlation. For example, if a troop's size was to increase from 1,000 to 1,500 men, this would

cause 30 more homicides to occur that year. Even more drastically, states in which troops have

been deployed experience about 506 more total homicides per year. **Figure 1** visually explains

Table 4: Simple OLS Regression Results

Independent Variable	Total Homicides	Drug Cartel Member Homicides	Fatalities of Persons of Authority	Fatalities from Violent Confrontations
Troop Deployments (Log)	74.21*** (15.12)	71.66*** (14.57)	0.6653*** (0.1606)	1.766** (0.7834)
Deployments (Yes/No)	506.65*** (116.59)	487.45*** (112.43)	4.324*** (1.250)	13.90** (5.896)

Note: * p = < .1, ** p = < .05, *** p = < .01

Figure 1: Bar Graph of Average Annual Total Homicides

Average Total Homicides of Militarized and Non-militarized States by Year
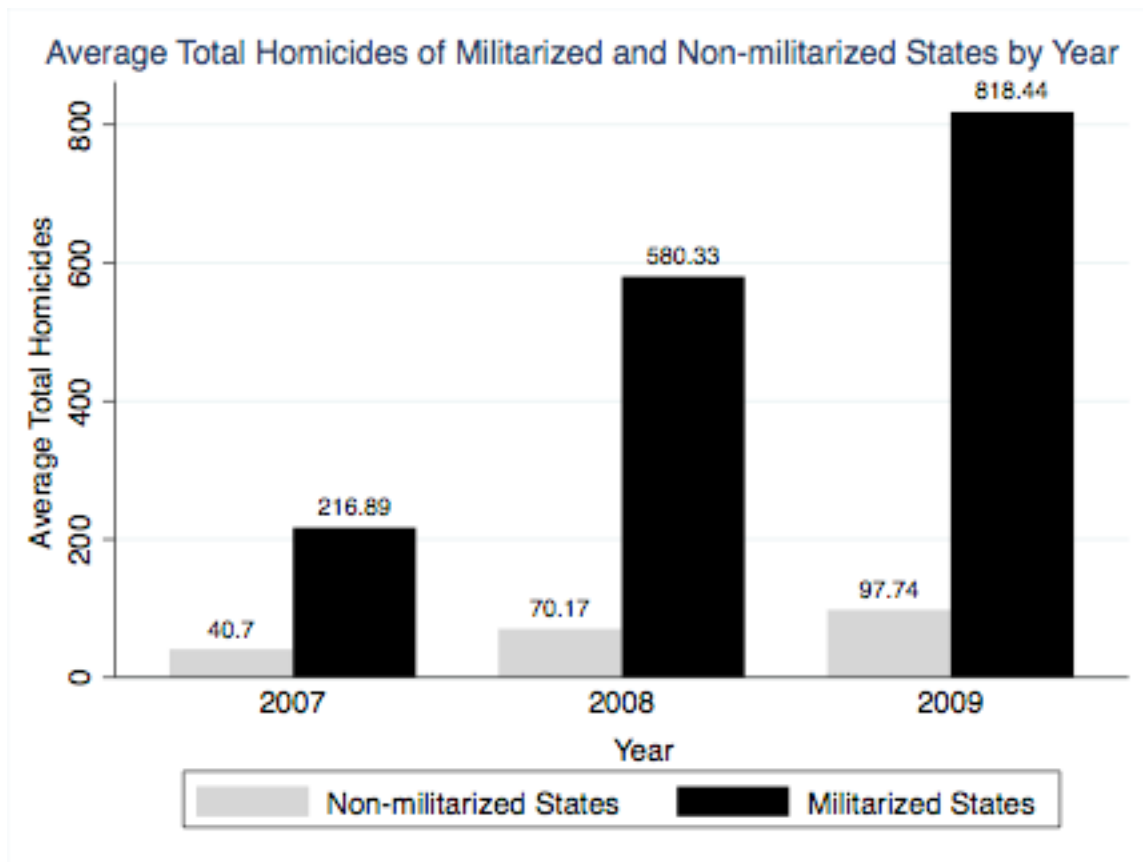
this correlation as it compares the annual total homicides of militarized states and non-militarized states. In 2009, for instance, there were about eight times more homicides in militarized states than non-militarized states. This graph shows another interesting trend—regardless of militarized and non-militarized states, it is clear that violence has increased from 2007 to 2009 throughout Mexico.

Apart from total homicides, the results provide other types of interesting information. Since fatalities of persons of authority and fatalities from violent confrontation comprise a minor percentage of total homicides, it is not surprising that their coefficients are small. Even with small coefficients, the results show that militarized states tend to have, on an annual basis, 14 more deaths from violent confrontations than non-militarized states. Furthermore, militarized states are likely to have around four more fatalities of persons of authority compared to non-militarized states. Overall, these results are the first step in providing evidence for the positive correlation between militarization and violence. Since other factors can influence this correlation, however, I employ multiple OLS regression models to account for them.

5.8   Multiple OLS Regression Model

The multiple OLS regression tests, whose results are displayed in **Table 5,** involve two models. Model one utilizes the log of troop deployments as the main explanatory variable, whereas model two uses the dichotomous variable for deployment as its main explanatory variable. Overall, congruent with the simple OLS regression test, the models here are both statistically significant and demonstrate a positive correlation between militarization and levels of violence. Furthermore, the first model explains, on average, about 19 percent of the total variation in the relationship between military presence and violence. Similarly, the second model explains, on average, about 16 percent of the total variation. Now, I will address my

Table 5: Multiple OLS Regression Results

Model One	Total Homicides	Drug Cartel Member Homicides	Fatalities of Persons of Authority	Fatalities from Violent Confrontations
Troop Deployments (Log)	62.71*** (16.00)	60.84*** (15.42)	0.6368*** (0.1717)	1.164 (0.8266)
GDP (Log)	26.01 (49.52)	25.43 (47.76)	0.3166 (.6790)	0.0921 (2.565)
Border/Non-border State	208.46* (115.45)	195.44* (111.34)	0.4372 (1.262)	11.94** (5.968)
Model Two				
Deployments (Yes/No)	413.66*** (126.65)	400.25*** (122.25)	4.167*** (1.366)	8.683 (6.386)
GDP (Log)	26.60 (50.66)	26.01 (48.90)	0.3182 (0.6979)	0.0996 (2.553)
Border/Non-border State	189.09 (118.05)	176.59 (113.94)	0.2029 (1.296)	11.67* (5.936)

Note: * p = < .1, ** p = < .05, *** p = < .01

general empirical prediction and hypotheses individually to determine what they do or do not suggest regarding this research project. Again, similar to the simple OLS regression results, no clear conclusions can be made, since causation may still be in question.

5.8.1 General Empirical Prediction

To begin, the strong statistical significance and positive correlation of both the simple and multiple OLS regression models suggest that the general empirical prediction appears to be accurate. Apparently, the use of the military to handle domestic security can result in higher levels of violence. Overall, the Mexican case provides the first step in coming closer to a well-

supported conclusion that the militarization of certain states to confront the drug cartels causes a spike in homicides.

5.8.2 Hypothesis 1

The results suggest that militarized states tend to have higher levels of violence compared to non-militarized states. The dichotomous deployment variable, with a p-value of less than .01, provides the most telling evidence for this hypothesis. States receiving troop deployments are likely to have, on average, 413 more total homicides per year. When breaking homicides down into categories, this association holds true, except for deaths from violent confrontations. Militarized states tend to have around 400 more drug cartel member deaths and 4 more persons of authority deaths per year. Since the p-value for deaths from violent confrontations is greater than 0.1, its coefficient is statistically insignificant from zero.

Similarly, the log of troop deployments tells a similar story, but to a smaller degree. For example, if a particular state deployed 1,000 troops in 2007 and 2,000 troops in 2008, total homicides would be expected to increase by 43 in 2008. Moreover, if a state was not militarized in 2007 but became militarized in 2008, it would experience an increase in total homicides as well. The size of the spike in homicides depends on how many troops are deployed. This means that not only are militarized states more likely to experience greater violence, but also that states characterized by stronger military presences tend to have more homicides. Overall, I find suggestive evidence from both variables that levels of violence tend to be higher in states that are militarized.

5.8.3 Hypothesis 2

The strong statistical significance and positive correlation shown in the results suggest that the use of the military to confront drug cartels can lead to an increase in cartel member

fatalities. There is consistent evidence for this hypothesis in both the dichotomous and logged variables. Militarized states tend to have around 400 more cartel member fatalities per year than non-militarized states. Also, using the example from the previous section, an increase in troop size from 1,000 to 2,000 will cause 42 more homicides to occur. **Figure 2**, through the use of predicted values and a predicted line, provides supporting evidence for the latter correlation. Overall, the results show that fractionalization of drug cartels due to militarization may possibly lead to an increase in cartel member fatalities, yet causation is still in question, thus no confirmations can be made.

5.8.4   Hypothesis 3

The regression results suggest that the use of the military to confront the drug cartels can cause an increase in state official deaths. Consistent evidence of this claim can be found primarily through the strong statistical significance and positive correlation of the dichotomous variable, but also through the logged variable. Compared to non-militarized states, militarized states tend to have four more persons of authority die every year. On the other hand, in order for troop deployments to cause the death of one more person of authority each year, the size of the deployment will need to increase drastically. The predicted values of **Figure 3** show that this correlation is observable, yet even though the fitted line suggests the presence of this relationship, it does not account for other causal factors.

5.8.5   Hypothesis 4

The results do not provide evidence to suggest that militarization can cause an increase in deaths from violent confrontation. Even though the coefficients are positive, they are not statistically significant. This is important because it possibly debunks a theory regarding violence. The theory proposes that the militarization of states would cause cartels to become

Figure 2: Scatterplot of Cartel Member Deaths with Predicted Line from Regression

Figure 3: Scatterplot of Authority Figure Deaths with Predicted Line from Regression

involved in violent confrontations with the military in order to protect their funds, their drug supplies, and their overall livelihoods. Also, confrontations in turf wars would surge in intensity due to increased fractionalization and competition caused by militarization. These theories may be incorrect due to a particular reason. Since actors can suffer a large number of costs during violent confrontations, including public visibility and the increased possibility of being captured or killed, cartels might choose to avoid those risks and evade these types of confrontation. Instead, they might try to remain in the background and use execution style killings to demonstrate their resolve.

Still, it appears as though another factor may impact cartel involvement in violent confrontations. The coefficients for border states are positive and significant in both models. They show that border states tend to have about 12 more fatalities due to violent confrontations per year than non-border states. **Figure 4** displays the annual average of violent confrontation deaths in border and non-border states. On average, there were about twice as many of those types of homicides in border states as there were in non-border states, thus further suggesting the possibility of this correlation. Therefore, it may be likely that the distinction between border states and non-border states impacts the amount of violent confrontation deaths.

This is a plausible idea. Border states are valuable territories that cartels seek to control because of their close proximity to the United States, which provides them the quickest means to make profit. In turn, cartels situated on the border will be more likely to become involved in violent confrontations with the military in order to protect their territory and their money. Similarly, since border states are highly coveted areas, there should be more violent confrontations in those locations amongst drug cartels trying to protect their territory or gain new

Figure 4: Bar Graph of Average Annual Violent Confrontation Deaths

Average Deaths from Violent Confrontations in Border and Non-border States by Year
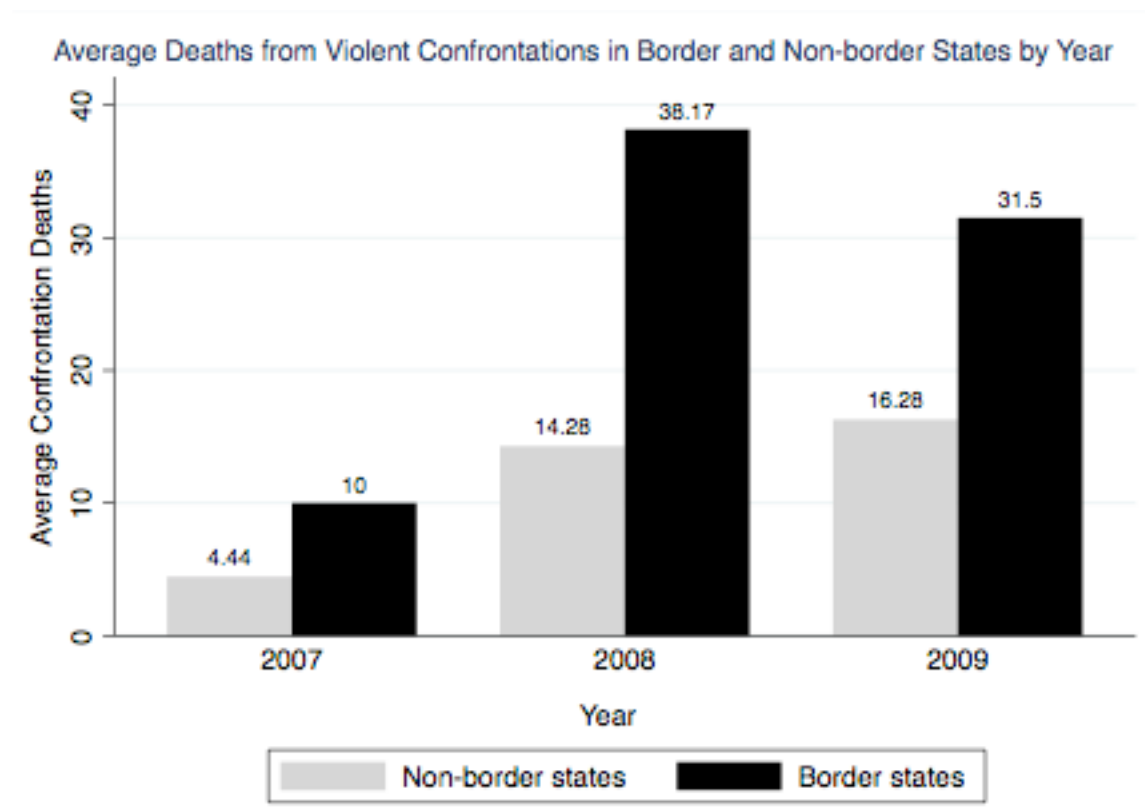
territory. Overall, the rewards of controlling border states outweigh the costs of losing them, thus potentially resulting in an increase of violent confrontation deaths in those areas.

5.8.6 Hypothesis 5

The observed evidence in the regression results suggests that Mexican border states may be slightly more violent than non-border states. Border states do correlate with higher levels of violence according to the coefficients, but they are only significant for certain types of homicides. For example, there is weak empirical support for the correlation between border states and total homicides in the first model, as those states tend to have about 208 more deaths each year. There is not, however, any empirical support for this same correlation in the second model. Similarly, there is weak empirical support for the relationship between border states and

cartel member homicides in the first model but not in the second model. It is apparent that border states have no significant impact on the deaths of persons of authority. On the contrary, fatalities from violent confrontations are the only type of homicide that has strong statistical support.

Overall, these findings provide evidence to support the theory proposed in the previous section regarding the causes of violent confrontation fatalities. It appears as though violent confrontations occur more often in border states than non-border states. Other types of violence, such as drug related executions, are not as well supported by these results. Therefore, since the findings are not entirely consistent, I can suggest that border states are more violent than non-border states, but that depends on the type of violence occurring.

Additionally, these findings help support the evidence published in Beittel's Congressional Research Service Report (2011). The report demonstrates that in 2008 drug related violence was concentrated in a few cities and states. More specifically, about 60 percent of drug related homicides occurred in three cities, two of which are on the border: Tijuana (Baja California), Ciudad Juarez (Chihuahua), and Culiacan (Sinaloa). Starting in 2009, however, violence began to spread to new areas throughout the country, including non-border states such as Durango and Guerrero. Apparently, violence has expanded to different locations as time has worn on, meaning it no longer occurs primarily in border states. The variation of empirical support for violence in the regression results suggests possible truth in these findings.

5.8.7 Hypothesis 6

After reviewing the regression results, it appears that poorer economic conditions may not impact levels of violence. None of the coefficients for gross domestic product are significant. Furthermore, the coefficients are positive, not negative as expected, which

demonstrates a positive correlation between violence and economic conditions. Therefore, if these results were significant, it would mean that more prosperous locations may experience higher levels of violence. The possibility for cartels to recruit unemployed citizens and lack of police sophistication might not be factors that influence violence. Instead, since violence began to spread to economically important urban centers and major tourist destinations in 2008, drug lords may be enticed by the large amount of wealth located in those areas (Beittel 2011, 21). As a result, they will establish headquarters in locations that provide easy access to material goods. Also, wealthy individuals may be the most willing to spend the highest amount of money on drugs, thus cartels might concentrate themselves in these areas in hopes of attracting the richest buyers. Overall, there is no consistent evidence to suggest that poorer states tend to have higher levels of violence, and it may very well be the case that the opposite is occurring in Mexico.

5.9   Summary

After reviewing and analyzing the empirical results for both the instrumental variables and the main independent and dependent variables, a couple of generalizations can be made. The instruments chosen in this study do not solve the endogeneity problem, as evident in their lack of statistical significance and higher coefficients compared to their OLS regression counterparts. As a result, it may be the case that partisanship of the governor and population size are correlated with the dependent variable and error term. Still, since this is a first attempt at solving the endogeneity problem, hopefully other scholars will continue to expand the discussion and research related to this issue.

Aside from the instrumental variables regression, the OLS regression results suggest that militarized states are more violent than non-militarized states. Somewhat differently, border states tend to be more violent than non-border states, but this correlation is dependent on the type

of violence that occurs. In militarized states, the deployment of more troops tends to result in higher levels of violence, meaning that drug cartels may observe the size of the military in their location and act more violently towards stronger troop presences. Also, it is possible to suggest that the amount of troops deployed correlates with the degree of fractionalization amongst cartels, since cartel member deaths increase with troop size. Finally, from both analyzing and visually representing the data, it becomes apparent that drug cartel related violence has increased annually from 2007 to 2009.

Unfortunately, no clear conclusions can be made regarding the regression results due to other causal factors that may still be in question. The interpretations presented here are only suggestive, and do not imply that they are entirely true. Confidence in the findings can be strengthened when both the instrumental variable and OLS regression models produce similar results. To do so, strong instruments need to be chosen. Also, a different type of regression model, such as a hierarchical model, may provide more accurate results for future scholarship. Overall, more rigorous testing needs to occur so that more convincing conclusions can be provided. In order to support the suggestions drawn from the regression results, the next chapter will provide a case study that further explores the central arguments of this paper.

CHAPTER VI

CHIHUAHUA

Data contributed by both the Trans-Border Institute and the Presidencia de la República provide evidence showing that Chihuahua has been and continues to be one of the most violent states in Mexico (Beittel 2011, 21; Donnelly and Shirk 2009). In fact, according to the Presidencia de la República database, in both 2008 and 2009, Chihuahua had the highest totals of drug trafficking related homicides, with over 2100 and 3300, respectively, in those years. Furthermore, during those two years, the most cartel member killings and the third most deaths from violent confrontation occurred there as well. Ciudad Juarez accounts for a large portion of this violence, but other municipalities throughout the state experience violent acts also. Therefore, with the extensive amount of violence, as well as the variation in types of killings and locations in which they occur, Chihuahua serves as the best state to utilize in a case study. Accordingly, this chapter will examine different homicides reported in news stories from 2007 to 2009, and use them as a tool to help further explain and support the theories proposed in this study.

6.1   A Few Important Facts

Before discussing the various examples of this case study, it is necessary to provide the reader with a few important facts. Military troops were first deployed in Chihuahua in January 2007. In March 2008, February 2009, and March 2009, more troops were deployed, thus bringing the total amount of military personnel sent to Chihuahua over that three year span to about 12,000 soldiers. Apart from troop deployments, a turf war transpired during this time

period as well. After allying themselves for many years, the Juarez cartel cut ties with the Sinaloa cartel in 2008 to become a more independent organization (Beittel 2011, 9). There are many possible causes behind this split, such as changes in leadership, and a response to acts of betrayal, but the primary reason involves the militarization of public security (Grayson 2011, 78-79; Beittel 2011, 15). The strategies utilized by the military invoked modifications in the Sinaloa cartel, thus resulting in the Juarez cartel's desire to break away. Ever since the split, both cartels have been competing to control the valuable territory of Chihuahua, and more importantly the border city of Ciudad Juarez. Violence has become the primary tactic utilized in this conflict. Many of the homicides discussed in the following section will be correlated to the ongoing turf war between these two cartels.

6.2   Ciudad Juarez

In Ciudad Juarez, during the evening hours of Wednesday, September 2, 2009, hooded gunmen burst into a drug rehabilitation center with AK-47 assault rifles, gathered together those inside, lined them up, and proceeded to open fire with their weapons (Ellingwood 2009a). Once the shooting concluded and the gunmen disappeared, 18 people were dead (Ellingwood 2009a). Though no one knows the exact reason why this massacre occurred, many Mexican officials, including the former state Attorney General of Chihuahua Patricia González Rodríguez, believe that the motivation behind this act was the extermination rival drug cartel members (Cano 2009).

Drug treatment centers in Mexico have become a safe haven for cartel members who fear being caught or killed by the violent acts of rival gangs (Cano 2009). They take refuge in these centers, during the day or at night, assuming that other cartels will not know their whereabouts. This does not appear to be the case, however, as another four drug rehabilitation center massacres happened within a twelve month period before September 2009 in Chihuahua (Cano

2009). These massacres occur repeatedly because they are a particular tactic used by the two competing drug cartels. Even though it is unknown as to which organization commits the killings, the most likely goal in doing so is to eliminate rival cartel members. More importantly, it not only reduces the size of one's competition, but also signals to them that they have no place to hide. No matter where members of the cartel run to, they will be sought out and executed by their rivals. Therefore, the only way of avoiding death is to leave the city completely and reestablish the organization in a different location. In addition, massacres do not involve much risk for the cartel committing the act. There is very little chance that the opposing members will have time to react upon entrance, and also the killers will probably not get caught by the police due to the act's hit and run characteristics.

Aside from eliminating rival competition and threatening further violence in the turf war, massacres of drug rehabilitation centers can also serve as a signal to the government because certain people in these locations are not cartel members. Those people are actual addicts trying to get clean. For example, one of the victims in the September 2 massacre was an addict who spent eight months there undergoing rehab and chose to continue living there in order to attend prayer sessions (Ellingwood 2009a). The killing of innocent bystanders by cartels can signify to the government that they are disgusted with the current state of militarization in Chihuahua. If troops are not removed and things do not return to normal, then more citizens will be killed due to the government's decision to confront the cartels. Overall, the execution style killings in drug rehabilitation centers provide evidence for both theories of cartel fractionalization and retaliation against the government's new strategy.

Additionally, the killings of police officers provide another signal to the government. For example, in February 2009, Juarez's police chief, Roberto Orduna Cruz, resigned after officers

were slain with posted threats left on their bodies (Ellingwood 2009b). Two of these bodies included a police officer and a prison guard, each left with threats stating that a policeman would be killed every 48 hours unless the police chief resigned (Ellingwood 2009b). The city's second-ranking police officer, Sacramento Perez, was fatally shot, along with three other agents during the same time frame (Ellingwood 2009b). Generally speaking, these actions help the cartels reestablish their authority in the city and maintain their businesses through the elimination of trustworthy law enforcement officials. The use of messages also clearly demonstrates their desire to reduce competency amongst state officials.

More specifically, the killings of policemen signal to the government that they are dissatisfied with the current state of affairs in Juarez. They do not appreciate the restructuring of police departments because it eliminates former corrupt policemen who helped them do business. Accordingly, the cartels forced Roberto Orduna Cruz, a leader in this new system, to resign because he stood as an obstacle against their drug trade. Furthermore, the police assist the military in their services, thus the killing of policemen and forced removal of a police chief help drug cartels demonstrate to the government that they want a return to the status quo.

The killing of a federal investigator in Juarez, José Ibarra Limón, is another example of cartels reasserting their authority and signaling to the government. In July of 2009, Ibarra was shot in the head and killed by four people, most likely members of a drug cartel (Lacey 2009). Of the numerous cases that he was looking into at that time, one of them was the death of a prominent journalist and longtime crime reporter for *El Diario,* who, similar to Ibarra, was most likely assassinated by a drug cartel (Lacey 2009). Evidently, Ibarra investigated important cases, most of them being tied to the violent acts of drug cartels. The federal investigator's death provides the cartels a greater sense of security because it eliminates an individual who could

potentially help lead to the capture of certain members. In addition, this act shows the government that their attempt to stop the drug cartels and investigate their criminality is futile, as it will only lead to the deaths of prominent persons. Overall, the killings of federal investigators and policemen show that state officials are not safe as drug cartels strive to force the government to cease its strategy of confrontation.

6.3   Other Locations in Chihuahua

Aside from Ciudad Juarez, numerous other killings have occurred throughout the state of Chihuahua. Many of them involved execution style killings, most likely perpetrated by cartel members and directed towards a rival organization. For example, in a suburb called Francisco Villa, a man driving a Grand Marquis was shot and killed by an armed group of people (Cano 2008). Similarly, in a municipality called Nuevo Casas Grandes, another armed group opened fire on a van, killing one man and injuring two more (Cano 2008). These types of acts are probably part of the ongoing turf war between the Juarez and Sinaloa cartels, as each group tries to demonstrate their dominance throughout the state.

Other than opening fire on vehicles, cartels also capture and decapitate members of rival organizations. In June of 2008, the bodies of three decapitated men were discovered with a note directed towards Joaquín "El Chapo" Guzmán, the leader of the Sinaloa cartel (*El Universal* 2008). Likewise, during this same time period, another decapitated body was found in the agricultural zone of the valley of Juarez, also with a message for "El Chapo" (*El Universal* 2008). These killings serve as more obvious signs of the ongoing turf war between the Juarez and Sinaloa cartels. The perpetrators of these actions are most likely members of the Juarez cartel, since they left messages for "El Chapo". Though the news reports do not mention what the messages actually said, many of them typically involve threats of future captures and killings.

Also, decapitating a human body is a much more violent style of execution than simply shooting someone, thus this action signifies to the other group that it is willing to use gruesome tactics in order to control the territory. It may also be used as a fear tactic, with hopes of encouraging rival members to quit the cartel or join their own organization in order to reduce competition. Decapitation also alludes to the fact that the victim was most likely captured before his or her death. During this time, he or she may have been interrogated by the rival cartel trying to gain important information related to future strategies or locations of cartel leaders.

Additionally, the majority of decapitated bodies are typically found in public places. This can serve as another fear tactic directed towards rival drug cartels. Furthermore, it allows for the possibility of Mexican citizens to see the bodies. If Mexicans do see the bodies, they may be so disgusted that they demand the government to discontinue militarization, since it might stop these actions from occurring. The clear visibility of violence can certainly cause unrest amongst the population, thus inciting a drastic response. Also, it can entice individuals from the population to join cartels if they desire protection from these gruesome acts. Overall, the presence of decapitated bodies not only demonstrates that the turf war is in full effect, but it may also be used as a tactic to encourage the citizenry to take action.

6.4   Indiscriminate or Selective Violence?

In chapter four, I discussed Kalyvas's (2006) classification of violence into two categories: indiscriminate and selective. Now, applying his reasoning, I will determine if the violent acts described above can be characterized as indiscriminate or selective. Overall, I find that the majority of these acts are selective, yet there is still the presence of indiscriminate violence.

The act of killing innocent civilians in a drug rehabilitation center is indiscriminate. For selective violence to occur, the perpetrator needs to have information regarding the victim or victims, such as their identities. In other words, selective violence involves personalized targeting. The identities of the innocent civilians killed in the rehabilitation center, however, were most likely unknown. They unfortunately happened to be inside when the massacre occurred. Therefore, they were not personalized targets. Even so, indiscriminate violence serves a purpose as it causes guilt by association. The drug cartels hope to induce a feeling of guilt amongst the government, which in turn may change their behavior and thus cause them to remove the military from the state. Also, indiscriminate violence demonstrates the cartel's power within the state, as it shows its ability to injure or kill almost anyone. Moreover, it hurts the perceived capabilities of the state, since one of its main tasks is to ensure order and protect the citizenry, yet it fails to do so.

Apart from indiscriminate violence, the other violent acts employed by drug cartels can be deemed selective. The main goal of the drug rehabilitation center massacre was to eliminate members of rival cartels. As a result, the actors who committed the executions may not have known the exact identities of the people inside, but they knew that a good number of them were members of the opposing organization. In other words, the victims were personalized targets. The killings of police officers also served as a form of selective violence due to two reasons. The cartels knew that they were law enforcement officials, hence a form of personalized targeting. Also, through the use of threatening messages, these acts led to the individual guilt of the police chief as he chose to resign from his position.

Similarly, decapitating rival drug cartel members and leaving messages with their bodies is another act of selective violence. This is because the perpetrators had knowledge of their

victims' affiliation with another organization. They also directed their messages towards "El

Chapo", hoping to instill a level of individual guilt within him, which may, in turn, cause him to

cease operations. Lastly, the killings of the cartel members in their vehicles and the

assassination of Ibarra were also forms of selective violence because the identities of the

individuals were clearly known. Overall, one of the goals of indiscriminate violence is to

demonstrate a group's power and ability to hurt another group, whereas the main goal of

selective violence is to maximize territorial control (Kalyvas 2006, 147, 174). Consequently, a

primary reason why there is more selective violence than indiscriminate violence observed in the

Mexican case is due to the fact that drug cartels are trying to control territory.

CHAPTER VII

CONCLUSION

The main objective of developing and writing this paper was to quantitatively determine if the use of the military to handle domestic threats leads to higher levels of violence. I find, in support of previous qualitative studies (e.g. Bailey and Taylor 2009), that militarization of domestic states does tend to cause an increase in homicides. Both the dichotomous variable and the log variable of troop deployments had a strong, positive effect on homicides. More specifically, deployments had the greatest effect on cartel member homicides, but also strongly impacted fatalities of persons of authority. Somewhat differently, deaths from violent confrontations might not occur as a result of militarization, but due to the state's proximity to the border, thus supporting the idea that drug cartels are willing to risk the most costs in order to control the most important territories. The case study of Chihuahua further supports these suggestions and their related theories, as personalized targets and different styles of killings allude to an ongoing turf war and the cartels dissatisfaction with the government's militarization strategy.

Mexico's public policy decision to utilize the military to help maintain order was influenced by various factors. The long history of the armed forces involvement in domestic issues, the institution's independent structure, and its prescribed authority impacted this decision. Furthermore, the failure of the police to enforce laws, due to its numerous corrupt relationships with the drug cartels, led to the necessity of the military's involvement. Since the police could not ensure public security, the armed forces became the central institution to provide that public

good. Overall, the government listened to the complaints about the people's distrust in law enforcement officials and responded accordingly.

The relationship between militarization and violence can be studied from different perspectives as well. Future research should strive to look not only at violence, but also other types of criminal acts. For example, drug cartels have become "poly-criminal organizations, engaging in a wide variety of criminal activities," including kidnapping, auto-theft, extortion, money-laundering, software piracy, and human smuggling (Beittel 2011, 16). Though some of those acts are not easily observable, it is clear that criminal organizations, including drug cartels, become involved in a variety of illicit activities. The study of domestic militarization can also be looked at through its impact on civil liberties and human rights. The Mexican case serves as a great opportunity for this type of research. Through the use of interviews and list experiments, scholars might be able to determine the impact that the military has had on the citizenry's perception of the quality of democracy.

Apart from future research, two main policy implications can be drawn from this study. Public strategies emphasizing military action may not be the best solution when confronting the drug cartels. The military, through their presence within the country, is able to prevent cartels from consolidating their control over economic and political areas. Soldiers successfully capture or kill a large number of prominent cartel leaders. Unfortunately though, other cartel members will always replace those leaders, and thus business continues as usual. Drugs will still be sold throughout Mexico and shipments will still be transported across the border to the United States. Furthermore, as the military struggles to eliminate the cartels, their presence leads to increased levels of violence and puts the lives of innocent citizens at risk.

Instead of trying to eliminate the cartels, it may be best if the government tries to reduce the country's dependence on drug consumption by implementing more rehabilitation programs and improving current ones. Also, the United States needs to reduce its population's dependence on drugs in order for this strategy to possibly work. By reducing drug dependency, the cartels will lose their business, and in turn their monetary funds, which will hopefully lead to their demise. To help prevent increased levels of violence when maintaining order, the government should try to enhance the reputation of the police and deter them from creating corrupt relationships by augmenting their funding and improving facilities.

With that being said, the study presented here focuses on the short-term effects of militarization in Mexico. It may be the case that the long-term results will allude to the successes of this chosen policy. Therefore, time will tell if drug trafficking in Mexico has been strongly reduced or eliminated entirely, or if it remains to be a prominent influence throughout the country.

APPENDIX A

Major Federal Police and Military Deployments from 2007 to 2009

State	Month	Troops
Michoacán	December 2006	6,700
Baja California	January 2007	3,300
Guerrero	January 2007	7,000
Chihuahua	January 2007	1,333
Durango	January 2007	1,333
Sinaloa	January 2007	1,334
Nuevo León	February 2007	1,800
Tamaulipas	February 2007	1,800
Veracruz	May 2007	1,200
Nuevo León	June 2007	1,600
Tamaulipas	February 2008	n.a.
Chihuahua	March 2008	2,500
Baja California	October 2008	150
Chihuahua	February 2009	1,800
Chihuahua	March 2009	6,500
Michoacán	July 2009	5,500

Source: *Justice in Mexico Monthly News Reports.* Numbers reflect large-scale deployments of both soldiers and federal police, but does not include troop replacements.

Note: I have manipulated some of the data from its original form to make it suitable for my research design. In its original form, the deployments for Chihuahua, Durango, and Sinaloa in January 2007 were combined into a single 4,000 troop deployment. Also, the February 2007 deployments in Nuevo León and Tamaulipas were combined to a 3,600 troop deployment.

APPENDIX B

CODEBOOK

MILITARIZATION OF PUBLIC SECURITY AND VIOLENCE

Saved Under: Mexico Annual.dta

sname = Name of Mexican state
year = Year of observation (2007-2009; December 2006 is included with the 2007 data)

brdr = States whether or not the state borders the United States
border = 1 if state does border the United States
nonborder = 1 if state does not border the United States

National Conference of Governors (CONAGO)
Data from: http://www.conago.org.mx/Gobernadores/Listado.aspx

pog = Party of state governor
pan = 1 if governor is member of the PAN party
prd = 1 if governor is member of the PRD party
pri = 1 if governor is member of the PRI party

Justice in Mexico Project
Donnelly, Robert A. and David A. Shirk. 2009. *Police and Public Security in Mexico.*
 Introduction. USA: University Readers, Inc. Page 29.
Data from:
http://web.me.com/davidashirk/FILESHARE/David_A._Shirk_files/60043_review.pdf

troop = Amount of troops actually deployed in the state
deploy = Dichotomous variable for troop deployments (1 = troops deployed, 0 = no troops
 deployed)
logtr = Natural log of troop deployment statistics

Presidencia de la República - Base de datos de fallecimientos (Database of Drug Trafficking
Related Homicides)
Data from: http://www.presidencia.gob.mx/base-de-datos-de-fallecimientos/

htotal = Total drug trafficking related homicides
hexec = Number of drug cartel member homicides
hauth = Number of deaths of persons of authority
hconf = Number of deaths caused by violent confrontations

INEGI - Sistema de Cuentas Nacionales de México (SCNM)
Gross domestic product (GDP) of total economic activity, in pesos
Data from:
http://www.inegi.org.mx/prod_serv/contenidos/espanol/bvinegi/productos/derivada/regionales/pib/2005_2009_seg/PIBE2009.pdf

loggdp = Natural log of state's GDP

INEGI - Mexico in Figures
State's total population as of 2010
Data from: http://www.inegi.org.mx/

logpop = Natural log of state's total population

Works Cited

Azaola, Elena. 2009. "The Weakness of Public Security Forces in Mexico City." In *Police and Public Security in Mexico* eds. Robert A. Donnelly and David A. Shirk. USA: University Readers, Inc., 125-146.

Bailey, John, and Gustavo Flores-Macías. 2007. "Violent Crime and Democracy: Mexico in a Comparative Perspective." Presented at the Annual Meeting of the Midwestern Political Science Association.

Bailey, John, and Jorge Chabat, eds. 2002. *Transnational Crime and Public Security: Challenges to Mexico and the United States.* San Diego: Center for U.S.-Mexican Studies, University of California.

Bailey, John, and Matthew M. Taylor. 2009. "Evade, Corrupt, or Confront? Organized Crime and the State in Brazil and Mexico." *Journal of Politics in Latin America* 1 (2):3-29.

Bailey, John, and Roy Godson, eds. 2000. *Organized Crime and Democratic Governability: Mexico and the U.S.-Mexican Borderlands*. Pittsburgh: University of Pittsburgh Press.

Beittel, June S. 2011. *Mexico's Drug Trafficking Organizations: Source and Scope of the Rising Violence*. Washington D.C.: Congressional Research Service.

Cano, Luis Carlos. 11 November 2008. "Reportan 10 ejecuciones en Chihuahua." *El Universal*. http://www.eluniversal.com.mx/notas/554663.html

Cano, Luis Carlos. 3 September 2009. "Suman 18 muertos en centro de rehabilitación en Juárez." *El Universal*. http://www.eluniversal.com.mx/notas/624245.html

Díaz-Cayeros, Alberto et al. 2011. "Living in Fear: Mapping the Social Embeddedness of Drug Gangs and Violence in Mexico." Social Science Research Network.

Donnelly, Robert A. and David A. Shirk. 2009. *Police and Public Security in Mexico.* Introduction. USA: University Readers, Inc.

El Universal. 3 June 2008. "Decapitan a 3; dejan mensaje al 'Chapo'." http://www.eluniversal.com.mx/nacion/159908.html

Ellingwood, Ken. 4 September 2009a. "18 Killed in Juarez Clinic for Addicts." *Los Angeles Times.* http://www.latimes.com/news/nationworld/world/la-fg-mexico-rehab-attack4-2009sep04,0,5425770.story

Ellingwood, Ken. 21 February 2009b. "Ciudad Juarez Police Chief Quits After Killings of Officers, Threats." *Los Angeles Times.* http://articles.latimes.com/2009/feb/21 /world/fg-mexico-police21.

Gabel, Matthew and Kenneth Scheve. 2007. "Estimating the Effect of Elite Communications on Public Opinion Using Instrumental Variables." *American Journal of Political Science* 51 (October): 1013-1028.

González, Francisco E. 2009. "Mexico's Drug Wars Get Brutal." *Current History* 108 (February): 72-76.

Grayson, George W. 2011. *Mexico: Narco-Violence and a Failed State?* New Brunswick, NJ: Transaction Publishers.

Grigoriadis, Vanessa and Mary Cuddehe. "An American Drug Lord." *Rolling Stone* 1138 (September): 52-59.

Hansford, Thomas G. and Brad T. Gomez. 2010. "Estimating the Electoral Effects of Voter Turnout." *American Political Science Review* 104 (May): 268-288.

Hernández-Bringas, Héctor, and José Narro-Robles. 2010. "El homicidio en México, 2000-2008." *Papeles de Población* 16 (63): 243-271.

Jones, Nathan. 2008. "Using Counterinsurgency Strategy to Reassert the Westphalian State Against Criminal Networks: The Case of the Gulf Cartel in Mexico." Presented at the Annual Meeting of the International Studies Association.

Kalyvas, Stathis N. 2006. *The Logic of Violence in Civil War*. New York: Cambridge University Press.

Kellner, Tomas, and Francesco Pipitone. 2010. "Inside Mexico's Drug War." *World Policy Journal* 27 (Spring): 29-37.

Lacey, Mark. 17 October 2009. "Mexico Lawmen Outmatched by Drug Violence." *New York Times.* *http://query.nytimes.com/gst/fullpage.html? res=9C04E7DC1138F934A25753C1A96F9C8B63&ref=marclacey*

Lecuona, Guillermo Zepeda. "Mexican Police and the Criminal Justice System." In *Police and Public Security in Mexico* eds. Robert A. Donnelly and David A. Shirk. USA: University Readers, Inc., 39-64.

Lotspeich, Richard. 1995. "Crime in the Transition Economies." *Europe-Asia Studies* 47 (June): 555-590.

Lyall, Jason. 2009. "Does Indiscriminant Violence Incite Insurgent Attacks? Evidence from Chechnya?" *Journal of Conflict Resolution* 53 (June): 331-362.

Mares, David R. 2003. "U.S. drug policy and Mexican civil-military relations: A challenge for the mutually desirable democratization process." *Crime, Law, & Social Change* 40 (July): 61-75.

Meyer, Maureen, Coletta Youngers, and Dave Bewley-Taylor. 2007. "At A Crossroads: Drug Trafficking, Violence and the Mexican State." *Washington Office on Latin America* Briefing Paper 13 (November):1-12.

Moloeznik, Marcos Pablo. 2009. "The Militarization of Public Security and the Role of the Military in Mexico." In *Police and Public Security in Mexico* eds. Robert A. Donnelly and David A. Shirk. USA: University Readers, Inc., 65-92.

PDLR (Presidencia de la República). 2011. "Base de datos de fallecimientos ocurridos por presunta rivalidad delincuencial." http://www.presidencia.gob.mx/base-de-datos-de-fallecimientos/

Quinney, Richard. 1977. *Class, State, and Crime*. New York: McKay Publishers.

Rocha, Oscar. 2005. "Civil-Military Relations and Security Policy in Mexico." In *Mexican Governance: From Single-Party Rule to Divided Government* eds. Armand B. Peschard-Sverdrup and Sara R. Rioff. Washington D.C.: Center for Strategic and International Studies.

SEDENA. 2001. Programa de Operación y Desarrollo de la Secretaría de la Defensa Nacional 2001-2006. Mexico: SEDENA.

Suprema Corte de Justicia de la Nación. 1996. Semenario de la Federación y su Gaceta, novena época, tomo III, March.

Weinstein, Jeremy. 2007. *Inside Rebellion: The Politics of Insurgent Violence*. New York: Cambridge University Press.

Wilkinson, Shelly. 2009. "Violence and the Drug Trade in Latin America." Presented at the Annual Meeting of the Midwestern Political Science Association.

Williams, Phil. 2010. "El crimen organizada y la violncia en México: una perspectiva comparativa." *ISTOR: Revista de Historia International* 11 (Fall):15-40.