Partisanship in Mexico: Influence of Violence and State Spending

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Partisanship in Mexico: Influence of Violence and State Spending

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By
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I can barely believe this is over. So many hours and nights later, I’m finally writing this acknowledgements section. My fascination with Mexico, thanks to my personal family history and twenty-two years-worth of trips, fueled the research questions behind this paper and I am overjoyed that I can now speak for hours uninterrupted on Mexican politics. I also sit here knowing that I could not have done this alone.

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All my friends. You are all the reason that this senior year has been my favorite year at Claremont McKenna College. First, to my entire adopted apartment – Tony, Ash, Quinn, Ellen, Alexa, Melanie, and Cassie. Thanks for the positive peer pressure, comradery in Poppa, the good and bad jokes, your love, countless wine nights, and putting up with my sarcasm. I also want to thank Lee, Julian, Peter, and Sarah (and countless others) for your friendship and always making me laugh. I love all of you and know that I could easily write a paragraph about any of you. You’re all lifelong friends and I look forward to our future adventures.

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Abstract

This paper serves to further investigate factors influencing partisanship in Mexican politics with a focus on state spending and drug violence. With state spending, this paper builds on prior literature about political effects of federal social spending (Handelman 1997, Domínguez and Chappell 2004, Díaz-Cayeros 2009) to propose a similar theory regarding state social spending. The proposed panel data model for national elections between 2000 and 2012 finds that for diputados elections, a thousand peso increase in state spending had a statistically significant influence on party voting – boosting PRI candidates (typically incumbents) by 0.66% and hurting both PAN and PRD candidates by 0.78% and 1.57% respectively. This paper also proposes an alternative theory of state spending whereby the effect comes from a linkage of spending and economic performance. With drug violence, this paper studies the importance of the Mexican Drug War on the Mexican political environment but finds no consistent party impact of instability (modeled with intentional homicide statistics) in national elections from 2000 to 2012. This paper delves into potential explanations for this finding including different effects by election, distrust of political parties, and the perception of little difference between parties. Finally, the paper outlines other responses to instability and drug violence to demonstrate approaches taken by Mexican citizens outside of the ballot box. These alternative strategies include protesting, lobbying, migration, and the rise of private security.
Introduction

In December 1910, General Porfirio Díaz took the oath of office as Constitutional President of Mexico for the eighth time.¹ His 26-year iron fist rule came to an end in May 1911 after the Mexican Revolution, but his impact on Mexican politics was felt for decades. Although the new Mexican Constitution of 1917 strictly prohibited the re-election of any candidate, the succeeding National Revolutionary Party, later renamed the Institutional Revolutionary Party (PRI), held power in Mexico uninterruptedly in the country for 71 years from 1929 to 2000.² In contrast with other authoritarian or one-party governments, however, the Mexican political landscape has included elections since Porfirio Díaz was first elected to the presidency in 1877.³ These national elections, however, served a dramatically different role than typical elections. As Howard Handelman noted in the late 1990s, the purpose of elections under the PRI “was not to determine the winners, normally a forgone conclusion, but rather to offer the public a sense of participation in the political process and thereby to legitimize PRI control.”⁴ This view of elections was so ingrained into the Mexican political leadership that even initial electoral reforms under the PRI in the 1960s to encourage opposition parties were not taken to usher in democracy but rather to stabilize and legitimize the PRI government.⁵

Despite these intentions, however, electoral reforms and increased political opposition over the last decades of the 20th century slowly encouraged true democratic

⁵ Morris, Stephen. Political Reformism in Mexico. Page 89.
competition. In the 1988 national elections, the PRI lost its two-thirds majority in Congress, marking the last time such a threshold would be held by any party and setting the stage for coalition politics. The shift to democracy was demonstrated most prominently by the election of President Vincente Fox from the National Action Party (PAN) in the 2000 presidential election. This marked the first time the PRI had lost the presidency since 1929. In acknowledging Fox’s victory, incumbent PRI President Zedillo said,

We have been able to confirm that we now have a mature democracy, with solid and trustworthy institutions and, in particular, with a citizenry of great conscience and civic responsibility.

Since Fox’s election in 2000, Mexico’s political scene has been dominated by three parties: the Institutional Revolutionary Party (PRI), the National Action Party (PAN), and the Party of the Democratic Revolution (PRD). In the 2006 presidential election, PAN candidate Felipe Calderón won over PRD candidate López Obrador in the closest national election in Mexican history. In the 2012 presidential election, PRI candidate Peña Nieto’s victory signaled a return of the PRI to power. Meanwhile, control of Congress has similarly swayed between the three parties with none holding a majority alone. The emergence of campaigns has similarly seen increased interest given

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6 Negroponte, Diana. The End of Nostalgia: Mexico Confronts the Challenges of Global Competition. Page 42.
10 Negroponte, Diana. The End of Nostalgia: Mexico Confronts the Challenges of Global Competition. Page 42.
their newfound importance. As the old linkages of clientelism and fraud have faded, experts have been curious as to the factors that will take their place.

Although this field is rich with literature, two developments and potential factors have been understudied until this point. First, the role of state spending and second, the influence of the Mexican Drug War. With the decline of clientelism, many experts wondered about the role of social welfare programs in the new democratic Mexico. Would welfare benefits continue to sway voters even without vote buying? As will be detailed later, studies have found evidence of party influences from federal social spending – but the topic of state social spending has not been studied previously. To begin the study on this topic, this paper includes state spending per person as a variable on party preference in national elections from 2000 through 2012. Further, this paper proposes an alternative theory for state spending dependent on a link between higher spending and better state economic performance.

Secondly, since 2006, Mexico has been engaged in a largescale national campaign against drug trafficking organizations which have ravaged the country. While tied to individual elections, no prior study has attempted to uniformly create a model to see party preference results from increases in drug violence (represented in this paper with intentional homicide rates). This paper will discuss the effect of the Mexican Drug War on the Mexican people from 2000 through 2012 and outline various methods in which it

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could influence party preference and politics including the ballot box, protesting, lobbying, migration, and the rise in private security.
Literature Review

Since this paper primarily focuses on drug violence and state spending as potential motives for partisanship in Mexico, its first helpful to provide an overview of other factors affecting Mexican politics. This chapter will overview common demographic trends in the 2000, 2006, and 2012 presidential elections to provide context for further analysis of Mexican politics. It is assumed that many of these same demographic trends seen in presidential elections are applicable to senate and diputados elections. One note before delving into the literature, however, is the differing effects of even the most general demographic variables across the elections. Instead of tied to a party, some of these variables (gender, age, income, education, and region) vary by individual candidate and election which presents a complication for the panel data model used in this paper to study drug violence and state spending. As Roderic Camp notes, an “analysis of traditional demographic variables in Mexican presidential elections reveals that traditional demographic variables remain significant, if not consistently so, from one election to the other.”12 As seen in voting percentages from exit polls from the 2000, 2006, and 2012 presidential elections,13 voter groups are prone to change their vote by election depending on which of the two parties have the strongest support in that election. This voter swing creates a cycle in Mexican elections where one of the parties becomes a

13 See Figure # 1: Demographic Variables and the Presidential Vote in 2000 (Percentages), Figure # 2: Demographic Variables and the Presidential Vote in 2006 (Percentages), and Figure # 3: Demographic Variables and the Presidential Vote in 2012 (Percentages) in the Appendix
“distant third” as witnessed in all presidential elections since 2000. The grouping of elections together in the study of state spending and drug violence later in the paper was necessary, however, given the absence of enough data to model elections individually.

This chapter, however, will first delve into demographic variables and their impact on Mexican politics. It will briefly overview the influence of gender, age, income, education, and region on presidential elections since 2000. The influence of these variables can also be seen in exit polls from the three elections, which have been attached in the Appendix of this paper.

### Gender

In elections since 2000, gender preferences have not played a significant role in voting at the presidential level. Exit polls from the 2000, 2006, and 2012 presidential election showed relatively small differences between male and female voters. In gubernatorial races in the states of Mexico and Coahuila in 2011, “women and men gave PAN, PRD, and PRI candidates equal support.” There are signs that gender is becoming a more salient political identity, however, as trends have shown that women are making up a larger share of voters and the 2012 presidential election saw the first selection of a...

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15 See Figure # 1: Demographic Variables and the Presidential Vote in 2000 (Percentages), Figure # 2: Demographic Variables and the Presidential Vote in 2006 (Percentages), and Figure # 3: Demographic Variables and the Presidential Vote in 2012 (Percentages) in the Appendix.

female presidential candidate (Vasquez Mota from the PAN).\textsuperscript{17} For these reasons, it has been proposed that “gender is definitely a variable which deserves far greater attention in the future.”\textsuperscript{18}

**Age**

Age has often played a significant role in voting preference in elections since 2000, but not on a consistent party basis. In the 2000 presidential election, PAN candidate Fox captured 49\% of voters under 30 years old but that level of support waned to just 38\% and then 23\% support for the PAN in the 2006 and 2012 presidential elections respectively.\textsuperscript{19} In the 2000 presidential election the generational divide was most evident in voting outcomes with young voters overwhelmingly in favor of Fox while voters over 60 years old voted overwhelmingly for the PRI candidate. Given the significance of the first opposition candidate to win the presidency and emphasis on change and democratization, it is theorized that young voters were especially taken with Fox because he represented change from a semi-authoritarian system. The age vote has been less prominent in the subsequent 2006 and 2012 presidential elections. While voting similarly to the electorate, there was evidence of increased youth support for López Obrador in the 2012 presidential election. As evidenced in exit polls, voters under 30 supported Obrador’s candidacy 7 percentage points higher than the broader electorate.

\textsuperscript{17} Ibid.  
\textsuperscript{18} Ibid.  
\textsuperscript{19} See Figure # 1: Demographic Variables and the Presidential Vote in 2000 (Percentages), Figure # 2: Demographic Variables and the Presidential Vote in 2006 (Percentages), and Figure # 3: Demographic Variables and the Presidential Vote in 2012 (Percentages) in the Appendix
Recently, focus on this age gap has included discussions on news medium – especially since voters indicating social media as their main source of news overwhelmingly supported Obrador in 2012 compared with those who indicated television networks who voted disproportionally for Peña Nieto.

**Income**

Income has proven to be one of the most influential demographic variables in presidential elections. The conservative neoliberal PAN party has traditionally done well among higher income groups while the PRI and PRD have traditionally done better among lower income groups. This relationship is complicated, however, since the three-party political environment since 2000 has led to a different distant third place in each election. The traditional relationship between income and voting, however, is well observed in the 2000 and 2006 elections with the highest income group voting for the PAN candidate with 65% and 50% support respectively. These same elections saw the lowest income groups voting for the PRI candidate with 49% support in 2000 and the PRD candidate with 34% in 2006. Political scientists have modeled the relationship and found supporting data that “richer states on average tend to support the conservative party at higher rates than poorer states.” The findings for the 2012 presidential election, however, in which higher income groups voted disproportionally for the PRD candidate

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indicates that “higher income Mexicans were attracted to López Obrador for reasons other than his economic proposals, probably because he was perceived as honest and representing change.”

**Education**

Education has also proven to be a significant demographic variable, and is also directly associated with income. The PRI has traditionally done well among those with lower education – capturing this group by 55% in 2000 despite losing the election. Those with higher education have predictably favored the PAN, but in a similar fashion to what happened to the highest income group in the 2012 election, these highly educated voters swung to the PRD in 2012.

**Region**

Region is also an important factor in Mexican partisanship. Start economic differences across the regions of Mexico has helped each to identify more strongly with different parties. The wealthier North and Center-West are traditional PAN strongholds, and areas where the PRI and PRD have historically performed worse than nationally. The PRI and PRD instead have relied on increased support in the Center and South, with

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23 Ibid.
24 See Figure # 1: Demographic Variables and the Presidential Vote in 2000 (Percentages), Figure # 2: Demographic Variables and the Presidential Vote in 2006 (Percentages), and Figure # 3: Demographic Variables and the Presidential Vote in 2012 (Percentages) in the Appendix.
25 Ibid.
the Federal District (part of the Center) votes disproportionately for PRD candidates.\textsuperscript{27}

These patterns mirror the findings of income on partisanship and make sense given the PAN’s policies regarding economic liberalization which have been credited for helping the North and Center-West especially. These regional ties are still flexible however, as shown in the most recent 2012 presidential election. The PRI candidate Peña Nieto’s strong performance in the traditional PAN’s strongholds (North and Center-West) set the stage for his victory.\textsuperscript{28}

**Conclusion**

This chapter sets the stage for understanding partisanship in Mexico with a look at traditional demographic variables including gender, age, income, education, and region. While results vary by election, there are some general noteworthy trends detailed above including the support of the wealthier and more educated for the conservative PAN party. The exit polls used primarily to understand these demographic relationships, however, are very basic and devoid of drug violence figures and reference to spending in all but the 2006 presidential election (where only beneficiaries of two federal programs, Oportunidades and Seguro Popular, are analyzed). Based on this limited research, authors have begun looking at non-traditional variables including the role of media, social media, policy issues, and individual candidate attributes.\textsuperscript{29} This paper hopes to build on this

\textsuperscript{27} Ibid.
\textsuperscript{28} Ibid.
literature on partisanship in Mexico with an in-depth look at the potential influence of drug violence and state spending on partisanship and an expanded view of elections to cover all congressional elections (president, senators, and diputados) from the 2000, 2003, 2006, 2009, and 2012 elections.

Data Chapter

Methodology

Based on the available data, a panel data model with fixed effects for time and individual states was chosen to model the influence of drug violence and state spending on partisanship in Mexico. The model used is shown below:

\[ y_{it} = x_{it}' \beta + x_{i-1}' \delta + \eta_t + \alpha_t + \epsilon_{it} \]

This model allows for the regression of all Mexican states across multiple years to discern trends and see if an uptick in violence or state spending influenced party-voting. Without delving too deep into the variables, in the model: \( y_{it} \) represents the dependent variable (percentage of the vote), \( x_{it}' \beta \) represents independent variables (including indicators for drug violence and state spending along with other control variables), \( x_{i-1}' \delta \) represents lagged independent variables (change in violence), \( \eta_t \) is the time fixed effect variable, and \( \alpha_t \) is the individual state fixed effect variable. This model allows for the data to be tracked for causality while also controlling for time-specific and any state-specific trends or other influences not represented elsewhere in the model (\( \eta_t \) and \( \alpha_t \)). Finally, \( \epsilon_{it} \) is the error term that represents the degree which the model misrepresents the results seen in \( y_{it} \).

Interest on the varied effect on both federal and other congressional elections led to the creation of three separate models within the same panel data format: (1) party percentage of the vote in presidential elections, (2) party percentage of the vote in senate elections, and (3) party percentage of the vote in members of Congress (diputados).
elections. Since presidents and senators in Mexico serve six year terms,\textsuperscript{30} in this model $t = 2000, 2006, \text{ and } 2012$. Representatives in the Lower Chamber however serve three years,\textsuperscript{31} so in that model $t = 2000, 2003, 2006, 2009 \text{ and } 2012$. In all models $i = 1, 2, \ldots, 32$ represents all 31 states in Mexico\textsuperscript{32} and the federal district (in alphabetical order with Aguascalientes as 1 and Zacatecas as 32). For a full listing of states in alphabetical order as used in the model, see Figure 1: States of Mexico in the Appendix.

**Difficulties**

Complicating data collection was the reality that the Mexican government has only recently begun to collect and report data like other developed nations. Although Mexico conducted its first census in 1895, collections were sporadic and only in 1990 began conducting the “Censo de Población y Vivienda” every five years.\textsuperscript{33} The census itself is further challenging for proper data analysis since the Mexican government only started including information on ethnicity and religion in 2015.\textsuperscript{34} The lack of data on such crucial social indicators in Mexico have meant that researchers have turned to private polls and data, which was not available for use in this model. The only relevant data from

\textsuperscript{31} Ibid.
the census that was collected over the period of interest (2000 – 2012) was total population and gender.

Data collection issues were not confined to the census. The primary source for statistical information in Mexico is the National Institute of Statistics and Geography (“Instituto Nacional de Estadística y Geografía”, INEGI). The INEGI is an independent agency of the Mexican Government, created in 1983 by president Miguel de la Madrid, that is dedicated to collecting and reporting statistical information for the country. Given its short life, it isn’t surprising that some of the crucial economic data it collects only goes back a decade. Examples of this constraint on the model included unemployment, number employed by the state government, and GDP which were all first collected and reported in 2003. Because this data was therefore not available for this analysis in a third of data collection years for presidential and senate election models, they were discarded in the statistical analysis and could not be incorporated into the model.

Further difficulties arose from the desire for backward projections on important economic factors such as GDP. While hoping to include these in the model, I was unable to find any backward projections on the Mexican economy at the state-level. The World Bank and other economists did provide backward estimates of the GDP for Mexico as a whole, but since there were no reliable state-level projections the model was forced to

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36 The citation for all three of these data points specifically within INEGI are found later when defined in the “Variables” section of the Chapter.
rely even further on time and state fixed effect variables ($\eta_t$ and $\alpha_t$) to prevent distortions in the model.

**Variables**

As discussed earlier, the data was organized into a panel data model on the basis of state and year. In the model, $ID$ represents the listing of states from 1 to 32 (including the federal district). $Year$ is represented as the year of the election for that data (elections since 2000).

The dependent variable ($y_{it}$) varies by regression but ultimately is either *Turnout* (measured by total voters compared with total registered voters) or *PRI, PAN, or PRD* (percentage of total voting population that voted for the PRI, PAN, or PRD).

The independent variables ($x'_{it}\beta + x'_{i-1}\delta$) included *Turnout* (total votes out of total registered voters), *Homicides* (international homicide figures reported by the INEGI for the year of the election to approximate drug violence), *Homicides2* (percentage increase in drug violence since the last election), *PopGrowth* (population growth since the last election and the year before election), *Spending* (gross state expenditures per person in the year of election), *Male* (percentage of the population that was male), $N1$, $N2$... ($\eta_t$) (time fixed effect variable), and $A1$, $A2$, ..., $A31$ ($\alpha_t$) (individual state fixed effect variable).

**Findings:**

The STATA regression outputs are presented below in three different models for presidential, senate, and member of Congress (diputados) elections. While the focus of
this paper will be the influence of drug violence (represented with *Homicides* and *Homicides2*) and level of state spending (represented with *Spending*), the model also found other interesting connections in Mexican politics worthy of commentary and further investigation. Primarily, this model confirms prior literature on the role of gender in politics and finds no significant and consistent role of gender across different elections (except perhaps for males voting for PRI candidates in congressional diputados elections). Further, the model found a curious relationship between population growth and partisanship. In both Presidential and Senate elections, it was indicated that population growth was helping PAN and hurting PRD candidates. In Diputados elections, however, this influence was nonexistent and instead population growth was found to have a large negative influence on PRI candidates. Given that none of these findings had p-values less than 0.01, however, the displayed relationship is dubious and in need of further in-depth investigation to determine whether these findings hold. The model also hinted at a relationship between rising instability (shown with *Homicides2*) and turnout with a negative impact on turnout in diputados elections by 6.8%. Since this finding was not consistent across different elections and only had a p-value less than 0.05 however, the finding is still unreliable and the exact relationship between drug violence and turnout requires more research.

The model also predictably found a relationship between presidential election years and turnout with diputados elections in presidential years showing improved turnout by 64.2%. Further, there may be some effect from presidential coattails as diputados elections in presidential years also saw significant effects on voting percentage for both PRD and PRI candidates. Specifically, presidential election years were found to
boost PRD voting percentage by 6.7% and hurt the PRI voting percentage by 4.8%. This finding is hardly surprising. Between 2000 and 2012, the PRI was ousted from power at the federal level and the party’s horrible reputation at the national level would drag down local candidates during presidential election years. Over this same time period, the PRD identity was increasingly reliant on its presidential nominee – Cuauhtémoc Cárdenas (candidate in 1994 and 2000) and López Obrador (candidate in 2006 and 2012). For proof of this, look no further than López Obrador’s separation from the PRD after his loss in the 2012 presidential election. Their identity had been so tied to him that in recent polls for the 2018 presidential election the PRD candidate is running at only 6% compared with their former nominee who is running second at 25% under his own new political party MORENA.38 Although the findings provide further evidence for the importance of coattails in Mexican politics, the topic is already well-researched and outside the purview of this paper.39

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## Presidential Elections Model

<table>
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<tr>
<th>VARIABLES</th>
<th>(1) PRI</th>
<th>(2) PAN</th>
<th>(3) PRD</th>
<th>(4) Turnout</th>
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<td>-0.0956</td>
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<tr>
<td></td>
<td>(0.0765)</td>
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<td>(1.45e-05)</td>
<td>(2.97e-05)</td>
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<tr>
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<td>(0.00609)</td>
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<td>PopGrowth</td>
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<td>96</td>
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</table>

Note: Each model also includes dummy variables for each state (save one), coefficients not reported. The table reports Huber-White standard errors in parentheses. Statistical significance is noted with the conventional *** p<0.01, ** p<0.05, * p<0.1
## Senate Elections Model

<table>
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Note: Each model also includes dummy variables for each state (save one), coefficients not reported. The table reports Huber-White standard errors in parentheses. Statistical significance is noted with the conventional *** p<0.01, ** p<0.05, * p<0.1
### Member of Congress (Diputados) Elections

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Note: Each model also includes dummy variables for each state (save one), coefficients not reported. The table reports Huber-White standard errors in parentheses. Statistical significance is noted with the conventional *** p<0.01, ** p<0.05, * p<0.1.
State Spending

In Mexican politics, social or welfare spending has been proven to have a significant relationship on voting habits. The political ramifications of social spending first arose after radical increases in federal social expenditures since the 1960s. Social spending grew from 19% of federal expenditures under President López Mateos (1958 – 1964) to 59% of federal expenditures under President Fox (2000 – 2006). Given the 210% increase in federal social or welfare spending, political scientists were curious as to the political effects. In an analysis of the 2006 presidential election, Alberto Díaz-Cayeros et al. found that welfare recipients were more likely to have voted for PAN candidate Felipe Calderón. The finding was somewhat unexpected since it was the PRD candidate López Obrador who was the most outspoken candidate in favor of increased social spending. Instead, the finding suggested that increased welfare voting led recipients to vote for the incumbent party. Those receiving help from social spending under President Fox (PAN) ended up voicing approval for increased social spending by voting for the PAN candidate in the next election.

Building on this prior research, this paper chose to include gross state expenditures in the model to see if state spending similarly influenced political outcomes. Although not having a consistent relationship on presidential or senate elections,

42 Ibid.
individual state spending was found to have a significant impact on voting percentages for the PRI, PAN, and PRD in local Diputados elections. Specifically, a thousand peso increase in spending per person was found to boost PRI candidates by 0.66% while proving to have a negative impact on both PAN and PRD candidates by 0.78% and 1.57% respectively. This chapter explores state spending, explains these findings, and finally proposes an alternative economic theory for the displayed relationship.

**Exploring State Spending**

Unfortunately, due to the highly-centralized nature of Mexican politics and only recent emergence of federalism, the topic of state spending has been considerably less studied than federal spending. To analyze the relationship between state spending and political outcomes, however, one must first make some assumptions about state spending. Based on literature on federal spending trends in Mexico and limited individual state budgets, one can deduce that state spending in Mexico has become increasingly social in nature and is focused primarily on education and welfare.

The recent rise of social expenditures in Mexico has been a well-documented phenomenon. The focus on so-called social development spending has been a largely unified effort from the three major parties. The two most prominent social programs that have been credited with massive reach and political impacts are Oportunidades and Seguro Popular.

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The first of these programs, Oportunidades (originally entitled Progresa), was established in 1997 consisted of three complementary elements:

(1) a cash transfer, intended primarily for food consumption; (2) a scholarship, to cover the opportunity cost of children’s labor so they could stay in school; and (3) nutritional supplements.\(^{44}\)

Originally rolled out in rural areas, Oportunidades was expanded to urban areas and by 1999 reached approximately 2.6 million families and 40% of rural households.\(^{45}\) Oportunidades was expanded further under PAN president Fox and by 2005 coverage had almost doubled to 5 million families.\(^{46}\) This type of conditional cash transfer (CCT) program has proven extremely effective at targeting the poor and promoting both short-term and long-term benefits.\(^{47}\)

The second program, Seguro Popular, was introduced by the Fox administration in 2002 to provide health coverage to the uninsured in Mexico. By 2005 the program had been implemented in all 31 states and covered almost 3 million families.\(^{48}\) Unlike Oportunidades, Seguro Popular spending is controlled by the state and therefore “coverage and spending still vary widely among states.”\(^{49}\) While these are the two most recent and relevant programs for analyzing electoral effects, detailing the percentage of total federal expenditures by category reinforces this trend towards social spending.


\(^{45}\) Ibid. Page 231.

\(^{46}\) Ibid. Page 231.

\(^{47}\) Ibid. Page 232.

\(^{48}\) Ibid. Page 232.

\(^{49}\) Ibid. Page 232.
The Evolution of Federal Social Expenditures

<table>
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<th>Presidential Administration</th>
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</tr>
<tr>
<td>Fox 2000 - 2006</td>
<td>31</td>
</tr>
<tr>
<td>Zedillo 1994 - 2000</td>
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<tr>
<td>Salinas 1988 - 1994</td>
<td>33</td>
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<tr>
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<tr>
<td>López Portillo 1976 - 1982</td>
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</tr>
<tr>
<td>Echeverria 1970 - 1976</td>
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</tr>
<tr>
<td>Díaz Ordaz 1964 - 1970</td>
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<td>López Mateos 1958 - 1964</td>
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<td>Ruiz Cortines 1952 - 1958</td>
<td>53</td>
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<tr>
<td>Alemán 1946 - 1952</td>
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Source: Este País, (December 1999), 16; México, Presidencia de la Republica, Quinto informe de gobierno, anexo estadístico, September 1, 2011, 127 – 128.

While similar category breakdowns are not made available on a per-state basis, a look at the Nuevo Léon budget for 2016 is helpful to provide an estimate for how state funds are used. In 2016, a full 72% of state spending in Nuevo Léon was dedicated to social development programs (“desarrollo social”).\(^{51}\) Breaking down that spending further, the 2016 state budget stated that a full 53.4% of that social spending was on education while the next largest category was social welfare programs (“protección social”) at 10.7%\(^{52}\). Secondly, an analysis of total state expenditures has shown a significant increase in spending since 2000. On average, state spending from 2000 to 2012 had increased 265.9% with outliers being Baja California (grew by 68.3%) and

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\(^{51}\) “Presupuesto Ciudadano 2016.” Nuevo León: Gobierno del Estado. Secretaria de Finanzas.

\(^{52}\) Ibid.
Yucatán (grew by 604.9%). This is not surprising given federal trends with social spending and also the expectation for states to cover some welfare program spending including about half of Seguro Popular spending. These findings line up with the literature on federal social expenditures and provide the basis for the assumption that state spending has similarly seen a rise in social and welfare expenditures.

**Political Impact**

The idea that government spending influences voting is a relatively old concept and even provides the basis for pork barrel spending (politicians would seek additional funding for projects in their district and would in return improve their chance at reelection). Polling has produced informal proof of this relationship in the United States with Democrats twice as likely as Republicans to have received food stamps. Further, academic literature has shown that voters will punish the government for cutting back welfare state entitlements. Conventional literature on welfare state reform even includes political risk as a key assumption (see: Huber and Stephens 2001, Pierson 2001, Starke 2006). While until very recently reelection was not a component of Mexican

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53 See Figure 5: Gross State Expenditures (Percentage Growth since Last Election) in the Appendix.
democracy, the idea of using social spending in exchange for party allegiance is a similar concept.

In 1988, after his narrow and fraudulent election, President Carlos Salinas (1988 – 1994) introduced a “massive public words and welfare program, called the National Solidarity Program (PRONASOL).” Although of definite value to the poor in Mexico, one of the purported goals of the program was to “rearticulate state-society links [and] recover lost legitimacy…” The strategy proved effective and has been partially credited with the strengthening of the PRI’s vote in the subsequent 1991 and 1994 national elections. This trend was so troubling to Mexican politicians that subsequent electoral reforms called for the prohibition of government social welfare program advertisements during campaigns. These restrictions were largely ignored, however, and President Zedillo (1994 – 2000) implemented his own social welfare program entitled PROGRESA which consisted of conditional cash transfers to combat poverty. Although the creation of the programs themselves was not counterproductive to democracy, concerns were raised from the marketing of them as PRI programs and the message of PRI operatives who told beneficiaries “We’ve helped you; now you help us!”

62 Ibid.
The collapse of the one-party system in Mexico was supposed to have eroded these informal PRI links, but the implication of social spending has remained a concern in the Mexican political landscape. During the 2006 presidential election, the PAN government under Fox was the target of similar accusations of manipulating social welfare programs during the campaign season. One influential nongovernment poll-watching organization warned for months “that the PAN was using federal social programs to buy votes.” Despite these accusations, however, independent analysis has largely found that while “Oportunidades and Seguro Popular made the PAN’s election in 2006 possible… voters acted out of their own free choice.” Even without direct manipulation of votes, however, Alberto Díaz-Cayeros et al. found that beneficiaries of Oportunidades and Seguro Popular were more likely to vote for the PAN candidate Calderón by 11% and 7% respectively. Although vote buying through social programs had ended, it seemed as though social spending was still having a significant political impact. This data provides evidence for the theory of increased support for incumbent political parties among social spending beneficiaries with the same political scientists concluding:

The PAN’s claiming credit for social policy benefits, we believe, is what propelled poor people receiving help from Oportunidades and Seguro Popular to support that party. Beneficiaries of these social programs were significantly more

65 Ibid. Page 238.
66 Ibid. Page 239.
satisfied with their personal finances and with the way the president was handling the economy than were similarly poor individuals who did not receive these welfare benefits.  

The increased support of social spending recipients for the incumbent political party is a concept that be expanded to understand the relationship between state spending and support for the PRI party. Although the PRI lost the presidency in 2000 and the PAN held power at the federal level over the duration of this model (from 2000 to 2012), the PRI remained the prominent political force at the state and local level. Just as an increase in social spending at the federal level led to increased support for the incumbent party in presidential elections, it is possible that increased social spending at the state level led to increased support for the incumbent state-level party (PRI) in diputados elections. This would help explain why the model found that a thousand peso increase in spending per person at the state level was found to boost PRI candidates by 0.66% and hurt both PAN and PRD candidates by 0.78% and 1.57% respectively. The association of state spending with diputados elections rather than senate or presidential elections would also be understandable under this theory whereby presidents and senators were judged with federal outcomes more in mind – while diputados were instead believed to be more local representatives. The true beneficiaries of this relationship, however, would be governors and state legislatures.

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67 Ibid. Page 244.
Supporting this theory are stories of PRI governors during the 1990s moving around state funds to help shore up support for the PRI. These were traditionally understood as examples of vote buying but rest on the same underlying assumption that state spending can influence voting patterns. In the run up to the 2000 elections, PRI Governor Manuel Barlett (1993 – 1999) passed a law to divert spending from “cities controlled by the National Action Party (PAN) to rural areas where it was easier for the PRI to harvest votes.”\footnote{Domínguez, Jorge and Chappell Lawson. \textit{Mexico’s Pivotal Democratic Election: Candidates, Voters, and the Presidential Campaign of 2000}. Page 48.} In Yucatán, PRI Governor Víctor Cervera Pacheco (1993 – 2001) did similar by distributing massive amounts of new resources under federal antipoverty programs.\footnote{Ibid.}

Repeating this paper’s same model with respect to state spending level and more local elections would be interesting to test the proposed theory. Unfortunately, however, the INE does not provide comprehensive election results for state elections making this type of data collection much more difficult. In addition to conducting more research with local elections, it would also be helpful to conduct a study by which states were differentiated based on the ruling local party (indicated by either governor or state legislature) to test whether increased state spending benefits the incumbent party instead of just the PRI party since this model was unable to differentiate between the two.

\textbf{Economic Performance}

Instead of increased social spending leading to increased citizen loyalty to the incumbent party at the state level, an alternative theory relies on state spending as a proxy
for economic performance. Interpreting increased state spending as an indication of a better state economy means that the discovered relationship is reflective of voters showing a higher tendency to vote for the incumbent party based on positive economic outcomes. To explain this theory, this section will first establish the link between economics and voting preference and then discuss the way spending and economics may be linked.

Political theorists have largely popularized the hypothesis that positive economic conditions are a boon to the incumbent party and a detriment to other contesting parties.71 Academic research has largely affirmed this theory. Pundits used this type of language to associate Obama’s election in 2008 with a worsening economy and his reelection in 2012 as a result of an improved economy.72 Famed statistician Nate Silver includes economic performance in his election prediction models and specifically wrote that “the historical evidence is robust enough to say that economic performance almost certainly matters at least somewhat.”73

In Mexico, the influence of economic performance on elections actually dates back to the 71-year long hegemonic rule of the PRI. It has been argued that relatively positive economic performance was a factor that convinced Mexican citizens to

acquiesce with the semi-authoritarian regime and keep the PRI in power.\textsuperscript{74} There is an abundance of literature supporting this theory, finding that authoritarian regimes are less likely to survive with poor economic performance (see: Haggard and Kaufman 1995, Przeworski and Limongi 1997, and Geddes 1999).\textsuperscript{75} Economic performance in Mexico has continued to play a role in voter choices even after the so-called rise of democracy with Fox’s election in 2000. An analysis of the 2000 and 2006 presidential elections has revealed that a voter’s assessment of the country’s economic circumstances was one of three variables that largely explained the distribution of voter preferences (alongside partisanship and an assessment of the incumbent president’s performance).\textsuperscript{76}

The abundance of literature on economic political impacts therefore spawns the theory that the relationship between state spending and voting preference is just a proxy for the relationship between economics and voting preference. For this to be true, however, state spending and economic performance must be linked. The exercise therefore becomes a question of whether state spending and economic performance are linked. This section will detail the two potential arguments in this regard: either state

\begin{footnotesize}
\begin{enumerate}
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\end{enumerate}
\end{footnotesize}
spending has a positive relationship on economic performance or economic performance has a positive relationship on state spending.

Fortunately, there is plenty of literature on the topic of whether more state spending leads to better economic outcomes. Unfortunately, however, the topic is still hotly contested. Proponents point back to John Maynard Keynes’s 1936 book *The General Theory of Employment, Interest and Money* which posited that the government can act to stabilize the business cycle largely with spending.\(^77\) The theory was developed into the classic IS-LM macroeconomic model which was the dominant framework of economic analysis until the mid-1970s and is still taught in macroeconomic courses across the world.\(^78\) In this IS-LM mathematical model, government spending is directly related with a country’s GDP. The Keynesian model and its assumptions on government spending, however, have come under heavy fire especially since the 1970s. Economists of different schools of thought have commented on the crowding-out nature of government spending and proposed instead the possibility that government spending can in fact harm an economy.\(^79\) The debate rages to this day with evidence and studies on both sides. The American Recovery and Reinvestment Act of 2009 – popularly known as Obama’s stimulus plan – was a recent example of the continued controversial role of

government spending in economic performance. Proponents argued the spending would 
jump-start the economy while conservatives warned more government spending would 
not improve the economy and instead would slow the recovery. Even today, the results 
are contested with prominent economists on both sides. 80

The other viewpoint from which economic performance and state spending may 
be connected, with state spending increasing as an economy does well, is less 
academically explored. The assumption would hold that as an economy improves so do 
tax revenues meaning state spending would increase accordingly. While the logic seems 
sound, the relationship is complicated by specific tax mechanisms and fears of inflation 
during times of high growth. Ultimately, neither hypothesis concretely explains the 
relationship between state spending and economic performance. Yet, the first theory in 
which social spending is related with increased incumbent party support makes a more 
convincing argument. Further studies including better control variables for economic 
performance (state GDP) may also be helpful as it could reveal that it is economics, not 
individual state spending, that is driving the apparent relationship between spending and 
voting for the PRI (interpreted as the incumbent state party).

Conclusion

Given that the relationship between state spending and economic performance 
remains a point of contention, the interplay between voting preferences and state 
spending is more likely to be a result of rewarding incumbent political parties for

80 Matthew, Dylan. “Did the stimulus work? A Review of the none best studies on the 
increased social or welfare spending. Like the relationship between federal social spending and incumbent party voting, individual state spending has also proven to have a positive impact in Diputados elections on PRI candidates (the incumbent governing party in most states from 2000 to 2012).  

It would be interesting to repeat this study specifically relating individual state spending to voting outcomes for the incumbent governing party (which party held the governorship) and with the incumbent party of past Diputados. This would help to prove whether the relationship between individual state spending and PRI candidates reflects voting for the governor’s political party or the incumbent party of the Diputados – or whether contrary to the interpretations of this chapter, that individual state spending is directly tied to increased support for the PRI rather than the incumbent party.

The relationship between spending and partisanship, combining both the theory on state spending in this chapter and the effects of federal spending in other literature, present an interesting perspective for Mexican politicians. Not only does it strengthen the incentives for increased social spending but it also adds a dimension of worry with budget cuts. Recently, for example, the Mexican government announced plans to cut spending by $10 billion in 2017 amid worries of poor economic growth. The move may

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81 As of March 2017, the PRI only held 15 of 32 governorships in Mexico (still more than any other party) but historically (from 2000 to 2012 when this model takes place) they have held a much more dominant role. The continued dominance of the PRI at the state level even after the loss of the presidency in 2000 is well-supported in academic literature including from: Langston, Joy. “Chapter 7: The Dinosaur that Evolved: Changes to the PRI’s Gubernatorial Candidate Section, 1980 to 2009.” In The Oxford University Handbook on Mexican Politics, ed. Roderic Ai Camp, 143 – 166. Oxford: Oxford University Press. 2012.

further damage the ruling PRI in upcoming national elections which has already been suffering as President Peña Nieto (PRI) had a record low 12% approval rating as of January 2017.\textsuperscript{83} If states too cut their spending, especially on critical social welfare programs, incumbent parties by state may see political ramifications.

It would be remiss not to mention the literature in opposition to the proposed theory. Although prior literature and this model have found results that reinforce the idea that voters distinguish between political parties and reward good behavior with increased loyalty, the presence of this voting behavior itself has been questioned. In “Electoral Competition, Participation, and Government Responsiveness in Mexico,” Matthew Cleary explored this same theory in Mexico only to conclude that the quality of government is dependent on an engaged citizenry and cooperation rather than the threat of electoral punishment.\textsuperscript{84} Under this contradictory theory, the Mexican public would not recognize a relationship between political party and governance meaning that the ballot box would be an inefficient mode to voice concerns or choose leadership.\textsuperscript{85} Although the influence of federal social welfare programs has widespread evidence and this paper’s model finds significance from state spending, other political scientists continue to dispute that this relationship exists.\textsuperscript{86} Studies around the 2004, 2008, and 2012 presidential

\begin{thebibliography}{99}
\bibitem{ibid} Ibid.
\end{thebibliography}
elections in the United States, for example, found that “voters’ perception of their dependence on federal spending are unrelated to vote choice in the three presidential elections, with the exception of senior citizens who benefit from federal spending, who were more likely to vote Democratic in 2012 than seniors who did not benefit.”\textsuperscript{87} Even with specific attention to Mexico, there is contention on whether welfare recipients vote differently. In Matthew Singer’s book \textit{The Electoral Politics of Vulnerability and the Incentives to Cast an Economic Vote}, he states that “we found no evidence that welfare recipients were more likely to vote for the PAN or any other party.”\textsuperscript{88} It is unclear whether this statement is also meant to say he found no evidence of welfare recipients voting in greater percentage for the incumbent party, but his writing indicates this is the case as he largely casts aside the role of welfare spending on ballot box decisions.\textsuperscript{89}

\textsuperscript{87} Lacy, Dean. “Moochers and Makers in the Voting Booth: Who Benefits from Federal Spending, and How Did They Vote in the 2004 Through 2012 Presidential Elections?” Presented at annual meeting of the \textit{American Political Science Association} (August 2014) and the \textit{American Association for Public Opinion Research} (October 2014).


\textsuperscript{89} Ibid.
Responses to Violence

When faced with declining or unstable government, citizens engage in various activities to voice dissatisfaction and survive. There is therefore no denying that the rise in drug violence and instability in Mexico has altered the political landscape and relationship between the people and the state. Despite this logic, however, statistical analysis from the model used in this paper was unable to find a significant consistent relationship between intentional homicide and party voting in Mexico since 2000.\textsuperscript{90} However, the availability and seemingly common use of responses apart from voting (including: protests, lobbying, migration, and private security) reinforces the reality of a large impact of drug violence on the population and could also potentially help to explain the lack of significance as Mexican citizens are turning to these strategies instead of using their power in the ballot box. This would hold with other findings that Mexicans are typically very politically engaged except when it comes to voting.\textsuperscript{91} The reluctance of voters to use parties as an avenue to express dissatisfaction may well be linked to a distrust of political parties and the failure of parties to present different strategies to combat violence. The lack of significance between violence and party voting may also be related to an evolving democratic system whereby the “fear vote” has not consistently helped a single party over multiple elections or may be indicative of a system of voting for individuals over parties. Since this model uses data from all elections between 2000

\footnotesize
\textsuperscript{90} See Findings in Data Chapter.
and 2012, it would be unable to detect influences that help different parties in different elections.

While additional studies and polls would be needed to confirm this theory, this chapter will present this argument by first explaining the history and impact of drug violence in Mexico. Secondly, this chapter will explore voting with regards to violence in order to present features of Mexican politics that have plausibly prevented consistent and widespread use of the ballot box to voice dissatisfaction over the rise in drug violence. Finally, this chapter will outline various other responses to violence in Mexico including protests, lobbying, migration, and the rise of private security.

**The Mexican Drug War**

“As I have said, today organized crime poses the greatest threat to Mexicans’ safety, freedom and tranquility. It is an enemy that knows no limits, that severely damages society as a whole and jeopardizes peace, security and our institutions”

– President Felipe Calderón. June 28, 2010.92

Despite the long history of drug trafficking in Mexico, it was only in the mid-1980s that the Mexican drug trafficking organizations rose to prominence and came into conflict with the Mexican government – setting up decades of fighting. As John Baily points out in his article on “Drug-Traffickers as Political Actors in Mexico’s Nascent Democracy,” 1985 marked a “tipping from a stable equilibrium of corruption and

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collusion to one of violent confrontation among the DTOs [Drug-Trafficking Organizations] and between these and the state.\textsuperscript{93} Reasons for this tipping point and escalation through the 21st century are numerous and debated but it has been tied most prominently to the crackdown on major rival Colombian cartels, the emergence of competitive democratic politics in Mexico, the arrest of key cartel leaders, and an increasing ease to smuggle drugs across the border following the tripling of trade volume between Mexico and the United States after the signing of NAFTA.\textsuperscript{94}

Whatever the reason, by October 2007 it was noted in a Congressional Research Service Report for the U.S. Congress that Mexican drug cartels “now dominate the wholesale illicit drug market in the United States”\textsuperscript{95} and the violence had spread to target “civil society and higher-ranking politicians and government officials.”\textsuperscript{96} Under both President Ernesto Zedillo (1994 – 2000) and President Vincente Fox (2000 – 2006), troops were committed to both prevent the flow of drugs through Mexico and to destroy the production of drugs in Mexico. However, violence in the country escalated in December 2006 with the full entrance of the Mexican armed forces into the so-called “Mexican Drug War.” On December 11, 2006 the newly elected President Felipe Calderón sent 4,000 Mexican Army soldiers to Michoacán to end drug violence there.\textsuperscript{97}

\textsuperscript{93} Ibid.
\textsuperscript{94} Ibid.
The Michoacán operation remains active to this day and the only somewhat reliable death figures come from six years ago in 2010 when it was reported that over 500 people had been killed including 50 soldiers and 100 police officers. In his first speech as president, Calderón said, “today criminality is trying to terrorize and immobilize [our] society and government” and he promised to “fight to re-take public security.” Between 2007-08, he followed through on this promise and seven more large-scale joint operations were launched in Baja California, Guerrero, Nuevo León, Tamaulipas, Chihuahua, Durango, and Sinaloa.

The overall death toll from drug and gang-related violence has been staggering. A 2015 Congressional Research Service report estimated that at least 80,000 people had been killed because of organized crime related activities since 2006. An accurate death count however is understandably difficult and the subject of much debate. The Mexican press has mostly agreed with the CRS figure, with Zeta (newspaper based in Tijuana) publishing the figure at 83,191 over the course of President Calderón’s presidency (2006 – 2012). U.S. press agencies have put forward a lower estimate over the same time with the number of deaths between 40,000 and 60,000. The Trans-Border Institute at the University of San Diego, however, estimated between 120,000 and 125,000 drug-related

deaths during the Calderón administration.\textsuperscript{103} The difficulties of obtaining accurate drug violence figures are well explained in a PBS article from July 2015:

To be sure, the homicides documented in Mexico cannot all be linked directly to the drug war, and distinguishing drug-war violence from the raw totals can be fraught with challenges. Many murders are never investigated, and the Mexican government has not issued annual figures on organized-crime-style homicides — those believed to be the work of cartels — since 2010. Even when it did, such data was often knocked for being untrustworthy. Some counts have blamed the drug war for as much as 55 percent of all homicides. Others have put the estimate as low as 34 percent. Yet those figures have likewise been criticized. For example, someone killed by a high-caliber or automatic firearm would be counted as a victim of organized crime, but if they were strangled or stabbed to death, they would not necessarily be considered a casualty of the drug war.\textsuperscript{104}

As a result of these difficulties, many prominent reports on the drug war have used “intentional homicides” as reported by the Instituto Nacional de Estadística y Geografía (INEGI). While not all of these homicides are related to drug trafficking, there is ample evidence that drug violence has been responsible for the drastic increase in intentional homicides especially since 2007. Media organizations in Mexico (most prominently the newspapers 	extit{Reforma} and 	extit{Milenio}) have compiled independent tallies that indicate “at least a quarter and as many as half of all intentional homicides in 2015 bore characteristics typical of organized-crime related killings, including the use of high-caliber automatic weapons, torture, dismemberment, and explicit messages.”\textsuperscript{105} Further,

\textsuperscript{103} Ibid.
while the calculation is not perfect, intentional homicides are well documented and a good indication of instability in general.

Using intentional homicide figures from INEGI, one can see the clear increase in violence in the country. Between 2000 and 2015, intentional homicides increased by 104.75%.\textsuperscript{106} This figure even factors in the decrease in violence seen since the election of President Enrique Peña Nieto in 2012. If only looking at 2000 through 2011, intentional homicides increased by 155.18%.\textsuperscript{107}

\begin{center}
\textbf{Mexico: Intentional Homicides}
\end{center}

\begin{figure}
\includegraphics[width=\textwidth]{mexico_homicides.png}
\caption{Mexico: Intentional Homicides}
\end{figure}

To make that more relatable, over the seven-year period between 2007 and 2014, about 103,000 civilians died in Afghanistan and Iraq combined from both homicide and war casualties.\textsuperscript{109} During this same period, roughly 113,112 people were murdered in the

\textsuperscript{106} Calculations made using data pulled from Instituto Nacional de Estadística y Geografía (INEGI).
\textsuperscript{107} Ibid.
\textsuperscript{108} Ibid.
United States.\textsuperscript{110} In Mexico, according to data reported by the Mexican government for this time frame, over 164,000 civilians were the victims of homicide.\textsuperscript{111}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{chart.png}
\caption{Killings and Civilian Deaths (2007 - 2014)}
\end{figure}

While informative, the absolute number of homicides per country serves to hide the size of the country. Accordingly, the United Nations reports an “intentional homicides per 100,000” figure to more accurately compare different countries. Even when looking at the data in this manner however, Mexico stands out.

\begin{itemize}
\item \textsuperscript{110} FBI’s Uniform Crime Reporting (UCR) Program. 2007 – 2014.
\item \textsuperscript{112} The original comparison and idea for graph taken from PBS article “The Staggering Death Toll of Mexico’s Drug War” for Frontline by Jason Breslow (citation above). Sources for the data and following graph taken from \textit{Instituto Nacional de Estadistica y Geografia} (INEGI), the United Nations, FBI, and the website “Iraq Body Count.”
\end{itemize}
When looking at the figures by state in Mexico, the situation looks even worse.
Intentional homicides actually rose by over 250% in 8 Mexican States (Baja California Sur, Colima, Guanajuato, Guerrero, Hidalgo, Nuevo León, Tabasco, and Tamaulipas).\textsuperscript{114}

To further exemplify the effect of the drug trafficking organizations on safety in Mexico, one need look no further than Nuevo León where intentional homicides rose by 1,872% between 2000 and 2011.\textsuperscript{115}

Worse still is the fact that murder is only part of the story. To fully understand the atrocities and instability caused by the rise of the drug trafficking organizations and the Mexican Drug War, one must also consider widespread kidnapping, armed robbery, intimidation, extortion, and sexual assault. In just the six years between 2006 and 2012, the

\textsuperscript{113} Global Study on Homicide 2013. United Nations Office on Drugs and Crime.
\textsuperscript{114} Ibid.
\textsuperscript{115} Ibid.
Mexican attorney general had compiled a list of more than 25,000 adults and children that had gone missing.\textsuperscript{116}

While all of this is concerning, it is also important to note that Mexico’s crime problem extends beyond its overall homicide rate. As John Baily noted in 2010, the “crime problem with respect to Narco-trafficking has two main dimensions: acute violence and systemic infiltration.”\textsuperscript{117} Indeed, although Mexico has seen a drastic increase in violence since 2006, Mexico’s homicide rate in 2015 – at about 13 per 100,000 inhabitants – still ranked towards the middle of Latin America with a rate higher than Chile (3), Peru (7), Nicaragua (8), and Costa Rica (11) but still lower than Colombia (25), Brazil (26), Honduras (57), Venezuela (90) and El Salvador (103).\textsuperscript{118} Despite the relatively average national homicide rates for Mexico when compared with the rest of Latin America, it is this systemic infiltration and widespread nature of corruption that have contributed to a high level of instability and distrust from the Mexican public.

In an indication of continued level of instability (even after the relative decline in violence since its peak in 2011), the U.S. State Department had active travel warnings on 21 (out of 32) Mexican states as of December 8, 2016.\textsuperscript{119} Of these warnings, the strongest


\textsuperscript{119} The 11 states not containing active travel warnings were: Campeche, Chiapas, Guanajuato, Hidalgo, Mexico City, Puebla, Querétaro, Tabasco, Tlaxcala, Veracruz, and Yucatán. Source: “Mexico Travel Warning.” \textit{U.S. Department of State: U.S. Passports and International Travel}. Updated December 8, 2016.
were in relation to five states (Mexico, Jalisco, Michoacán, Sinaloa, and Tamaulipas) where the U.S. State Department urges American citizens to defer all non-essential travel.\footnote{Ibid.}

Despite varying regional intensity, the impact of the increase in drug violence is felt throughout the entire country and reflected in the attitudes of the Mexican people. Since homicide rates had consistently dropped even under the Zedillo (1994 – 2000) and Fox (2000 – 2006) administrations, security was “not the leading preoccupation for most Mexicans [prior to 2006].”\footnote{Guerrero, Eduardo. “Security Policy and the Crisis of Violence in Mexico.” \textit{The End of Nostalgia: Mexico Confronts the Challenges of Global Competition}. Brookings Institution Press: Washington, D.C. 2013. P. 113.} In August 2006, only 35% listed a security issue as their top concern but by 2012, this figure rose to 50%.\footnote{Ibid.} This rising concern for security in the face of increased drug violence is seen in polling across Mexico. In a Pew Foundation survey from 2009, 81% of respondents said that crime is a “very big” problem.\footnote{Pew Global Attitudes Project. “Most Mexicans See Better Life in U.S. – One in-Three Would Migrate.” September 23, 2009. 1,000 interviews nationally, May 26 to June 2, 2009. +/- 3.0 percent margin of error.} The same survey found that 42% of Mexicans reported they were the victim of a crime in 2008 (second highest rate in Latin America after Venezuela).\footnote{Camp, Roderic Ai. “Armed Forces and Drugs: Public Perceptions and Institutional Challenges.” \textit{Woodrow Wilson International Center for Scholars: Mexico Institute}. May 2010. Page 6.} Another poll from 2009 in Mexico found that when asked about threats to Mexican national security, 84% of respondents’ answers directly related to components of drug trafficking violence (47% organized crime, 15%
public insecurity, 8% kidnapping, 7% corruption, and 7% armed groups). Confirming this theory, when asked to name the “greatest threat to their country from abroad, 53 percent listed drug trafficking, followed by 21 percent indicating arms trafficking.”

Although these polling figures are most relevant to the time frame of the model (2000 – 2012), it’s worth noting that the election of PRI president Peña Nieto in 2012 has not improved the situation. Polling in 2015 found that 69% disapproved of Peña Nieto’s handling of corruption and 63% disapproved of his handling of fighting crime and drug traffickers. Crime, drug-related violence, and corruption also remain top national concerns with all three being mentioned by over 70% of respondents as “big problems.” Further, the public’s perception of the police has actually gotten worse with attitudes towards the military starting to erode and confidence in the police falling from 35% in 2009 to a record low of 27% in the 2015 survey. All of this polling emphasizes the influence that the Mexican Drug War and increased violence has had and continues to have on Mexicans’ safety and perception of their country.

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128 Ibid.
129 Ibid.
Party Preference

In Joy Langston’s article analyzing citizens’ political options before the collapse of the PRI’s “one-party hegemonic regime,” she posited,

In 2000, however, the Mexican party system was far more developed than it had been in 1988 or earlier. Stable party options, such as the PRD and the PAN, now offered a democratic alternative to voters…

The emergence of different political parties and democratization of the country guided the hypothesis that political party voting would be a prominent avenue through which the Mexican public would voice dissatisfaction related to the Mexican Drug War. Based on this hypothesis, percentage of votes for the major three political parties were included in models for presidential, senate, and members of parliament (diputados) elections in the hope of providing evidence of party-shifts in line with rising drug violence and instability. Contrary to this hypothesis however the resulting model found that neither intentional homicides nor a lagged intentional homicide variable were statistically significant on party vote across elections for the president, senators, or members of parliament (diputados) since 2000.

While unexpected, this finding showing no statistically significant relationship is still useful to discuss the Mexican political party system and perceived legitimacy of democracy in Mexico. While the finding shows no link between drug violence and party-preference, one should be careful not to overstate the implication as it is very possible Mexicans are still using the ballot box in response to drug violence – simply not in a

131 See Findings in Data Chapter.
consistent basis based on party since 2000. This section will outline various aspects of Mexican politics that could help to explain the model’s finding. The section will begin with an exploration of Mexican political participation and then outline potential explanations for this lack of a concrete relationship including struggles of an evolving democratic system, voting for individuals over parties, no clear party differences on strategies to counter the rise in drug violence, and multidimensional voting.

The first step to understanding the link between drug violence and politics is knowing that individual tend to specialize in specific modes of political participation (Verba et al. 1971, 1978; Verba and Nie 1972). According to the International Social Survey Programme’s 2004 survey on citizenship, it was found that Mexican participation rates exceed the Latin American average in terms of individual contacting of politicians or civil servants, contacting the media to express one’s views, and in the share of the population that has donated money or raised funds for a social or political activity. Mexican rates of attendance at political meetings and rallies exceeded those of long-established democracies. However, in the most conventional forms of participation... Mexicans take part at considerably lower rates than citizens of long-established democracies.

With this in mind, it was noted that electoral participation is another matter. In Joseph Klesner’s article on Mexican voter participation, he noted that “Of 11 Latin American countries that held elections between November 2005 and December 2006, the average turnout rate was 72.1 percent. Mexico’s turnout rate in its July 2006 presidential election

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was only 58.6 percent.” Based on both these observations, Klesner concludes that “Mexican participation rates (except for voting) are healthy.” This observation of participation trends in Mexico helps to reinforce the theory that Mexicans are voicing dissatisfaction with drug violence and instability with means other than voting. Later in the chapter, a few of these other strategies including protests, lobbying, migration, and a turn to private security will be discussed.

The evolving and relative young democratic system in Mexico is another reason why instability and drug violence were not found to have a consistent and significant influence on party selection in Mexico. Despite the fall of the semi-authoritarian PRI from power and emergence of a relatively stable three-party system, the Mexican people still struggle with perceived legitimacy of elections. These fears are built upon a long history of show elections under the PRI before 2000 and the blatantely fraudulent election in 1988 especially. To this day, fears over fair elections persist and were well demonstrated in the 2006 presidential election when López Obrador refused to concede the election, called for an investigation of the results, and declared himself the “legitimate president of Mexico.” While Mexico has attempted to combat this legitimacy gap with independent election bodies (see: INE), the problem persists. As noted in 2011, “only 49 percent of Mexicans believed that the victorious candidate in the most recent election really received the majority of votes!” This is linked to a general distrust of political

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134 Ibid.
135 Ibid.
parties and an associated dissatisfaction with democracy. Mexican political parties rank among the least trusted institutions in Mexico with only 31% of respondents in 2009 indicating either “some” or “much” confidence. For context, the only two institutions surveyed that were trusted less than political parties were the police (29% confidence) and Congress (28% confidence). In the 2003 ENCUP (La Encuesta Nacional sobre Cultura Política y Prácticas Ciudadanas) survey, membership to political parties was ranked among the lowest of political engagement with only 16 percent of respondents reporting to be members. This finding is reinforced by a poll on reasons for Mexican voters casting ballots for president in 2000, in which only 5% of voters named “party loyalty.” Mexicans still do associate themselves with political parties and each has a so-called “base” but recent political fluidity has led to a rise of nonpartisan voters and the capturing of other party loyalists. For example, in the 2006 presidential election, the PRI received 31% of the PAN’s proposed 27% base of so-called party loyalists. This same dissatisfaction with political parties is reflected in Mexicans’ attitudes towards democracy in general. According to Latinobarometer data, the proportion of Mexican citizens who are “somewhat” or “very” satisfied with democracy dropped from a high of

139 Ibid.
142 Ibid.
45 percent in 1997 to around 17 percent between 2003 and 2005.\textsuperscript{143} In David Crow’s article on the subject of Mexican dissatisfaction with democracy, he specifically notes that “disenchantment leads to lower voter turnout, less civic engagement, and more legal and illegal protest.”\textsuperscript{144} These legitimacy struggles around politics in Mexico may help to explain why voters are not using political parties to the extent of the original hypothesis behind the model. If dissatisfied with democracy and generally distrustful of political parties, voters may be turning to protest and other strategies to deal with rising instability.

Another possible explanation for the lack of significance between drug violence and partisanship is the tendency to vote for individuals over parties leading to an inconsistent “fear vote” presented in the model. If drug violence helped different parties in the 2000, 2006, and 2012 elections, they would largely cancel out and not show up in the proposed panel data model. In accordance with this theory, there is evidence both that Mexicans vote for individuals over party and that the so-called “fear vote” helped candidates from different parties in different elections. The tendency to vote for individuals over parties is evident in many democracies and similarly in the public polling. In the 2000 presidential election, when asked to explain the reason for their vote, the highest response was 22\% indicating “his proposals” followed by 9\% indicating “the candidate.”\textsuperscript{145} These responses stand in comparison to the response of only 5\% of voters who indicated “party loyalty” in the same survey.\textsuperscript{146} López Obrador’s decision to leave

\textsuperscript{144} Ibid.
\textsuperscript{146} Ibid.
the PRD and form his own party reinforces this trend of voting for individuals over parties. Following Obrador’s loss in the 2012 presidential election, he resigned from the PRD and formed his own political party named MORENA. In recent preliminary polls for the 2018 presidential election, Obrador is running second with 25% of the vote with MORENA while the PRD’s candidate is polling at only 6%. The predicted collapse of the PRD voting percentage and radical rise of MORENA based purely on their candidate reinforces this reality that voting in Mexico is largely based on individual candidates as opposed to political parties. This explanation would hold that Mexicans do in fact use the ballot box to voice dissatisfaction with drug violence but in a more nuanced manner than simply voting out the incumbent party and instead related to perceptions around individual candidates.

Incorporated into this explanation of the voting with respect to violence is the lack of a clear difference in strategy between parties to counter the rise in drug violence. In Mexico there is no grand interparty debate on anti-drug trafficking strategy. In the first presidential debate for the 2012 presidential election, there was no mention of the military budget and also no major debate between candidates outlining different paths forward to combat violence. Although public statements do not reflect a big difference between PRI, PAN, and PRD approaches to drug violence, there is a more informal assumption among the Mexican public that the PRI would approach drug traffickers

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147 “Mexico’s López Obrador leaves coalition to form new movement.” BBC. September 10, 2012.
149 INETV. “Primer debate entre la candidata y los candidatos a la Presidencia de la Republica.” YouTube.
differently. This thought holds that the PRI is more likely to negotiate with drug traffickers and therefore decrease violence – similar to how the PRI operated prior to losing the presidency in 2000. Emblematic of this perception, in 2011 President Calderón was quoted by the New York Times as saying the PRI negotiated with drug traffickers – setting off a political controversy in the 2012 presidential election. When asked to clarify, however, the president’s office “denied that Calderón had told the newspaper that the PRI would make deals with the cartels should it win the election.”

Academic research has actually found evidence for this thought, with Melissa Dell finding a statistically significant relationship between close election of PAN mayors and increases in drug-related violence. Evidence of this perception on voting in the 2012 presidential election seems to be abundant from news articles. Upon Peña Nieto’s victory, many newspapers discussed his promise to “bring peace and prosperity back to a country weary of drug violence…” while after his victory articles outlined his pending choice between an “aggressive fight or a more compromising approach towards the cartels.”

The hypothesis behind this model expected a positive relationship between drug violence and PRI candidates based on this perception. The lack of a significant linkage between a political party and violence in this model, however, indicates that either the Mexican

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151 Ibid.
public votes primarily on individual candidates and not this perceived party distinction or
that the public did not vote on this perception until the 2012 presidential election. The
answer to this question would be more easily established if drug violence were more
widely included in Mexican surveys on elections. The last proposed explanation for the lack of a relationship between political
parties and voting in the model is simply based on the nature of voting. Voting is
inherently multidimensional whereby various factors are weighed against each other on
an individual basis to determine which candidate or party someone will support. While
violence is one factor, it is very possible that citizens in Mexico largely vote based on
other factors. Simply looking at voting percentage results without actual exit polls or a
large panel data set makes it very difficult to properly discern the exact weight and
relationship between violence and partisanship. This section outlined possible
explanations to why the Mexican public has either not used the ballot box in response to
rising instability or why the impact on party voting has not been consistent. Further
research and polling would be required to determine which of these theories (and it could
be more than one) holds true. Apart from voting, there are a host of other forms of
political participation that the Mexican public could use in response to drug violence. The

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Most examples of polling results for voting in presidential elections is devoid of
violence as a factor. Asking respondents about their personal perception of violence and
their ultimate voice would help to discover a link and more accurately define a “fear
vote” in an election. Examples of analyses where drug violence is not included as a
voting factor include breakdowns in: Camp, Roderic Ai. *Politics in Mexico: Democratic
following sections will outline a couple examples including protests, lobbying, migration, and the rise in private security.

**Protests and Lobbying**

For the sake of simplicity, this thesis treats lobbying and protesting almost indistinguishably using the uniform definition of “expressing disapproval and attempting to influence or sway a public official towards a desired income.” While there were many smaller protests against the governments’ response to drug violence – including a “die-in protest” among doctors in Ciudad Juárez in 2010 – the largest protest movement in regards to The Mexican Drug War began in May 2011.\(^\text{157}\)

In March 2011, Mexican poet and activist Javier Sicilia’s 24-year-old son was captured, tortured, and shot by members of a drug cartel.\(^\text{158}\) Despite condolences from President Calderón, Sicilia felt these were empty words and organized a protest of over 200,000 Mexicans who marched to the capital on May 8, 2011 to pressure the government for peace.\(^\text{159}\) This protest marked the beginning of the Mexican Indignados Movement (or in Spanish: Movimiento por la Paz con Justicia y Dignidad). The movement called for ending the war with specific focus on drug legalization, ending the governments’ militarized approach to crime, punishing corruption, giving more visibility

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\(^{156}\) A “die-in protest” is a protest in which citizens lie on the streets pretending to be dead in order to highlight the death of loved ones due to drug violence.

\(^{157}\) Stewart, Brian. “Mexico’s changing drug war: Can activism succeed where the army can’t?” *CBC News*. April 15, 2015.


\(^{159}\) Ibid.
to victims of violence, and addressing the social and economic causes of organized crime.\textsuperscript{160} In August of the same year, Sicilia and other movement leaders were in talks with government officials to modify a national security law that would have given broader powers to the Army and police in the war.\textsuperscript{161} Although almost unanimously approved in the Chamber of Deputies on August 2, 2011, pressure from the protestors led lawmakers to approve an amended version with added language and restrictions to promote human rights and civil liberties.\textsuperscript{162} In recognition of his role in sparking protests to voice dissatisfaction with the war, TIME magazine even named Javier Sicilia as a person connected with “The Protestor” as person of the year in 2011.\textsuperscript{163}

The movement has grown and continues to this day with international support and attention. In 2012, Scalia traveled and visited 27 different U.S. cities in his so-called “Caravan for Peace” calling for the end of the War on Drugs.\textsuperscript{164} More recently, following the disappearance of 43 students in September 2014, a national #YaMeCansa (roughly translates to “I’m tired”) campaign rose to prominence calling for an end of the Mexican Drug War.\textsuperscript{165} The message was adjusted slightly by different users with examples including “Enough, I’m tired of living in a narco state” and “Enough, I’m tired of corrupt

\textsuperscript{162} Ibid.
politicians.” In December 2014, the unrest led to protests across Mexico and 43 different U.S. cities (with their own adapted hashtag #USTired2) demanding justice, especially in light of the fact that Mexican police officers had arrested and delivered the 43 students to a local drug cartel – who later admitted to killing them. In addition to protests, there have been different organizations attempting to influence politics surrounding drug violence. The most prominent example of which has been Transparencia Mexicana, which has been lobbying politicians to reveal their assets in an effort to fight corruption which they see as “the origin of all the country’s ills”.

Migration

In polling data from the Pew Research Center in 2009, 33% of respondents (Mexican citizens) reported that they would move to the U.S. if they had the means and opportunity. When asked further about the reasons why they would move, 81% cited dissatisfaction at crime in Mexico while another 73% cited dissatisfaction with illegal drugs and 68% said corrupt political leaders. This is reflected in academic literature as well, where the relatively high crime rate and instability from drug-related violence have been cited as common so-called push factors for immigration from Mexico. In a report from 2010, Wood et. al. reported quantitative evidence for this theory by finding a

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166 “‘I’ve had enough,’ says Mexican attorney general in missing students gaffe.” The Guardian. November 8, 2014.
167 Ibid.
168 “Objetivos.” Transparencia Mexicana.
170 Ibid.
statistically significant relationship between crime victimization and interest in emigrating to the United States from Latin America.\textsuperscript{171} Specifically, those who reported they or a family member had been the victim of a crime in the past year were 30\% more likely to be considering migration.\textsuperscript{172} A host of news articles have also commented on this rationale behind immigration with titles including “Fleeing Drug Violence, Mexicans Pour Into U.S.” (\textit{New York Times}, 2010), “Want To Reduce Illegal Immigration? End The Drug War.” (\textit{Huffington Post}, 2015), “Refugees From Mexico Drug War Flee to US” (\textit{The Nation}, 2009), and many others.\textsuperscript{173}

In addition to news articles and stories from immigrants, another area which demonstrates the tendency to flee violence can be tracked with asylum requests from Mexico to the United States. Unfortunately for many of these asylum seekers, fear of a crime is not enough to qualify for asylum (“well-founded fear or persecution if sent back to their home country” is required); but the numbers do indicate a class of immigrants due to instability. However, the number of asylum requests is increasing. In 2009, 338 Mexicans passed an “initial credible fear review” by an asylum officer but just four years later in 2014, 2,612 Mexicans passed this initial review.\textsuperscript{174} Despite the prospect of fleeing Mexico for safety, asylum has not been a fruitful path, as exemplified by the fact that

\begin{itemize}
\item \textsuperscript{172} Ibid.
\item \textsuperscript{174} Dibble, Sandra. “Rising numbers of Mexicans seek asylum.” \textit{The San Diego Union-Tribune}. March 12, 2014.
\end{itemize}
despite hearing 9,317 asylum requests from Mexico between 2007 and 2010, only 183 were granted.\footnote{McKinley, James. “Fleeing Drug Violence, Mexicans Pour Into U.S.” New York Times. April 17, 2010.}

In 2014, the United States witnessed a high profile example of this type of immigration as it saw a surge of young children on its southern border. CNN described the it as a refugee crisis caused by “drug cartels… driving vulnerable populations northward to the United States.”\footnote{Carpenter, Ted Galen. “Drug cartels are causing a refugee crisis.” CNN. July 8, 2014.} This situation raises another factor of drug violence that prompts migration – the search for economic opportunity. As Caitlin Dickson in a report for the Daily Beast noted in 2014:

…by making these countries so dangerous and virtually unlivable for its poorest citizens, the cartels have effectively created an incentive for people to flee, thereby providing themselves with more clientele for their human smuggling business.\footnote{Dickson, Caitlin. “How Mexico’s Cartels Are Behind the Border Kid Crisis.” Daily Beast. July 9, 2014.}

Accurately measuring migration flows from Mexico is difficult as there is no official count on the part of the Mexican government. Further, there is no large data set recording migrants’ rationale behind their movements. That said, there are smaller reports that have done just that with regards to just immigration between Mexico and the United States. Outside of immigration patterns with the United States, however, the topic is severely lacking data.

With regard to immigration patterns with the United States, the data available seems to undermine the strength of drug violence as a motive for Mexicans fleeing the
country. According to data from the Mexican National Survey of Demographic Dynamics (ENAID) and the U.S. Census, more Mexicans have left the United States than entered in recent years. Specifically, between 2009 and 2014, there was a net loss (for the U.S.) of 140,000 Mexican immigrants.\textsuperscript{178} There was also a smaller net loss of 20,000 Mexican immigrants between 2005 and 2010.\textsuperscript{179} This stands in contrast to the net gain of over 2.2 million immigrants between 1995 and 2000, and also questions the role of violence in immigration patterns. Evident in the contracting net immigration trends with the push factors of drug violence is the complicated nature of immigration – which includes motives from instability to economics and family reunification. Despite these macro-patterns, however, it is important to note that leaving Mexico is a prominent strategy for many displaced and threatened by drug violence. In a 2012 Congressional Research Service report entitled “Mexican Migration to the United States: Policy and Trends,” it was noted that despite total emigration flows declining, there was evidence of “increased emigration by middle and upper class Mexicans, particularly from northern Mexico, in response to drug trafficking-related violence.”\textsuperscript{180} The report continued to cite a study estimating that 230,000 Mexicans had been displaced by violence as of December 2010 and that roughly half of them had moved to the United States.\textsuperscript{181}

Another form of emigration resulting from drug violence, and hinted at in the displacement wording above, is fleeing unstable states for other states in Mexico.

\textsuperscript{179} Ibid.
\textsuperscript{181} Ibid.
Tracking this type of migration is even more difficult than international migration. Stories have however confirmed the expected patterns of drug-related migration within Mexico. A study by Parametría (public opinion research organization located in Mexico City) found that an estimate of 1.6 million were displaced by violence between 2005 and 2010, with another 700,000 displaced in just the next year between 2010 and 2011.¹⁸² While some of these are individual families leaving after clashes between drug cartels or between drug cartels and Mexican armed forces, others are under the direct threat of death. In the state of Tamaulipas, the entire village of Ciudad Mier was forced to leave in 2010 after the feuding cartels there threatened to kill anyone that stayed.¹⁸³

**Private Security**

In Mexico, due to a long history of corruption, dissatisfaction with the Mexican police and other federal and state security forces have predictably fueled a dramatic turn towards private security firms, especially by the Mexican elite. In public polling, the police rank among the lowest trusted institutions in Mexico. In a 2009 poll, only 29% of respondents indicated confidence in the police.¹⁸⁴ This is heavily intertwined with a belief of the police as corrupt. In a 2009 study on police in Mexico, David Shirk found that 49% of residents in Guadalajara (where 70% consider crime and insecurity a serious issue) considered the police to be corrupt and 68% of those believed that the corruption

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¹⁸³ Ibid.
occurred at the highest levels. In general, this distrust of institutions and perception of mass corruption are also displayed with 68% of Mexicans reporting that corrupt leaders are a serious national concern. All of this has led to a belief that the Mexican government is unable to fully “protect the streets” and fueled the rise of private security in response to the rise in drug violence. These beliefs are only reinforced with scandal after scandal. As Logan Puck notes in his article commenting on the relationship between private security and the police in Mexico,

Mexico must cope with police forces that are particularly infamous for their abusive and corrupt practices. These practices were most recently exemplified in September 2014 in Iguala, Guerrero, when municipal police forces detained 43 protesting college students at a public event. The protestors disappeared as they were allegedly handed off by the police to local elements of organized crime, who murdered them. The event sparked international outrage, and nationwide protests rocked Mexico for weeks.

The Mexican government has attempted to address these concerns but to little avail. The Mexican government passed laws in the 1990s and 2000s aimed to “foster a positive and collaborative relationship between public and private security forces,” but the partnership is largely symbolic as private security firms seek to “dissociate from the institution’s poor reputation.” This low level of trust in the police was a guiding reason given by anti-drug trafficking mission to be largely turned over to the Mexican armed

188 Ibid.
forces under the Calderón administration. Unlike the police, the army gains significant
trust among the Mexican people, with 74% expressing confidence in a 2009 poll while
the same poll reported only 29% confidence in the police.\footnote{Sistemas de Inteligencia en Mercado y Opinión, June-August, 2009, “Encuesta Seguridad Nacional,” 1,250 interviews nationally, July 24-27, 2009, +/-1.9 percent margin of error.} Although the use of the
army to combat drug traffickers was widely popular, with 89% supporting the decision, it
nevertheless was not perceived as an actual solution with 65% reporting that they thought
the army would “only solve the problem temporarily.”\footnote{Parametría. 1,200 interviews nationally, January 27-30, 2007, +/- 2.8 percent margin of error. Published in Excelsior. February 19, 2007.} Further undermining Mexican
confidence in government is the rising perception that the Mexican Army is losing the
war against drug traffickers. In 2011, 59% of Mexicans reported that the country was
worse off than in 2006 despite the Army’s anti-drug trafficking campaigns.\footnote{Wyler, Grace. “Poll: Mexico’s Cartels Are Winning the Drug War.” Business Insider. March 29, 2011.} Further, 77% said that Calderon had “lost control of the situation.”\footnote{Ibid.} The debacle and apparent
failure of the Mexican Drug War led two of the three leading candidates in Mexico’s
2012 presidential election to discuss the withdrawal of Mexico’s military from the drug

All of this has led to a belief that the Mexican government is unable to fully
“protect the streets” and fueled the rise of private security in response to the rise in drug
violence. In some cases, the situation is so extreme that private security is instructed to
not involve the police. Alberto Herrera, who works for International Private Security
(Mexico-based security company) in 2014 spoke of one such case, explaining “They didn’t want us to call the police. People don’t necessarily trust the cops.”194 Between 2005 and 2015, the number of security firms rose from 173 to 1,103 (a 530% increase) as personnel grew from 419 to 73,000 (17,000% increase).195 These official numbers are only among registered firms and reported staff. Estimates from the National Private Security Confederation show that the actual number of firms could be as high as 9,000 and estimated that the number of security guards was between 250,000 and 600,000.196 This means that the number of private security guards in the country could actually outnumber the entire Mexican police force which was estimated at 544,000 people in 2012.197 This trend is only recently getting serious attention as commentators and security experts are warning of corruption and threats from such a private police force.198

Conclusion

This chapter outlined the various methods in which the Mexican Drug War and corresponding instability has influenced the political landscape. Despite the continued carnage and violence, the panel data model found intentional homicides (a proxy for drug violence) to have no significant impact on any type of national elections. This finding, however, does not say that drug violence has not influenced the political landscape. The

196 Ibid.
issue of security has influenced voters in separate elections but not in a systematic manner in favor of a certain party. The same “fear vote” helped PAN candidate Calderón in 2006 and then PRI candidate Peña Nieto in 2012. This chapter also outlines factors of Mexican politics that may be limiting the use of political parties as an avenue for these frustrations.

Although not in the model, there are a variety of other methods in which the Mexican Drug War has altered the political climate. Other strategies to express dissatisfaction have included protests, lobbying, migration, and the rise of private security. This chapter outlines each to find how they have shifted from 2000 through 2012. Multiple protest movements have spread through Mexico over this time – including most prominently the Mexican Indignados Movement and #YaMeCansé movements which have demanded an end to corruption and violence. Analysis of migration patterns revealed that many Mexicans are choosing to leave the country – with skyrocketing asylum applicants to the United States. Mexicans have also moved around Mexico avoiding conflict as demonstrated by studies of displaced citizens. The other development has been the rise of private security especially among the country’s elite. These developments speak to the huge impact of drug violence on the Mexican voter and indicates an overarching destabilizing component as citizens seem to overwhelmingly be turning to factors outside of the state for solutions (see: private security and migration). The Mexican Drug War remains a topic of extensive academic interest and could benefit from individual election analysis complimented by future voter interviews and surveys.
Conclusion

The shift of elections in Mexico from authoritarian displays of legitimacy to the actual democratic selection of leadership has been accompanied by extensive literature on partisanship. This paper serves to compliment this research with further analysis on the influences from state expenditures and the Mexican Drug War. Using a panel data model and extensive research, it was shown that both factors play a role in Mexican politics. Specifically, state expenditures were found to have a significant relationship on partisanship in diputados elections with a thousand peso increase in state spending relating to a 0.66% boost for PRI candidates and a negative 0.78% and 1.57% relationship on PAN and PRD candidates respectively. This paper provides the theory that this relationship is most likely the result of a rise in social spending and a largely PRI incumbency at the state level between 2000 and 2012. With this finding, this paper proposes the first empirical evidence showing that state funds influence party preferences. This mirrors prior findings of federal social spending influencing party voting by boosting the incumbent party. The paper also proposes an alternative theory relating state spending to economic performance and higher voting for the incumbent state party. These findings serve as the impetus for further research in the topic with more advanced models or data on incumbency specifically with effects on state-level elections (instead of national elections used in this model). Hopefully further research can fully explain the continued role of social welfare spending at the state level on partisanship.

This paper also delves into the role of the Mexican Drug War on partisanship. Although contrary to initial expectations, the finding of no relationship between drug violence (represented with intentional homicide figures) and party voting was easily
explained with further analysis. The grouping of elections together in the model could be serving to hide the “fear vote” from drug violence that helped certain parties in certain elections and other parties in other elections. Additionally, a general distrust of political parties and ignorance on significant party platform difference regarding drug violence could help explain why the results showed no relationship. Under this theory, Mexicans would be inclined to use avenues outside of the ballot box to pursue change or voice dissatisfaction. Survey data in Mexico would be the best method to determine the validity of this theory. In line with this theory, however, this paper did explore other areas of political life for alternative strategies. Research reveals that the Mexican Drug War has played a significant role in fueling a variety of actions. First, there have been many protests and lobbying movements aimed directly at what are perceived as the roots of the Mexican Drug War. This paper specifically discussed Javier Sicilia’s Mexican Indignados Movement and the more recent #YaMeCansé campaign. Second, the Mexican Drug War has led to an increase in migration both as people are displaced by violence and an increasing number of Mexicans have chosen to leave the country. Third, the Mexican Drug War has seen the extensive rise in private security especially among the elite as dissatisfaction with the police is widespread. All three of these factors help explain the dramatic effect of the Mexican Drug War on the political environment in Mexico and speak to the increasing distrust in typical Mexican institutions.

Understanding the influence of both these factors helps to explain partisanship in Mexico and exposes previously understudied influences in national elections. Ultimately, I also hypothesize from these findings that an analysis of same two these factors in state-level elections would yield an even greater effect.
Appendix

Figure 1: States of Mexico

11. Guanajuato 22. Querétaro

*Ciudad de México is the capital of Mexico and its own independent federal district

### Figure 2: Demographic Variables and the Presidential Vote in 2000 (Percentages)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Fox (PAN)</th>
<th>Labastida (PRI)</th>
<th>Cárdenas (PRD)</th>
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<tbody>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
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</tr>
<tr>
<td>Male (49%)</td>
<td>46</td>
<td>35</td>
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<tr>
<td>Female (51%)</td>
<td>43</td>
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<td>15</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Under 30 (32%)</td>
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</tr>
<tr>
<td>30 - 45 (38%)</td>
<td>46</td>
<td>36</td>
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</tr>
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<td>45 - 59 (20%)</td>
<td>39</td>
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<td>17</td>
</tr>
<tr>
<td>60+ (11%)</td>
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<td>47</td>
<td>18</td>
</tr>
<tr>
<td><strong>Education</strong></td>
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<td></td>
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</tr>
<tr>
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<tr>
<td>Primary (34%)</td>
<td>33</td>
<td>48</td>
<td>17</td>
</tr>
<tr>
<td>Secondary (21%)</td>
<td>48</td>
<td>34</td>
<td>16</td>
</tr>
<tr>
<td>Prepatory (18%)</td>
<td>53</td>
<td>28</td>
<td>15</td>
</tr>
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<td>University (20%)</td>
<td>58</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td><strong>Income (no. minimum salaries)</strong></td>
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</tr>
<tr>
<td>&lt;1 (28%)</td>
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</tr>
<tr>
<td>1 - 3 (28%)</td>
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<td>3 - 5 (15%)</td>
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<td>15</td>
</tr>
<tr>
<td>5 - 10 (13%)</td>
<td>56</td>
<td>28</td>
<td>13</td>
</tr>
<tr>
<td>&gt; 10 (8%)</td>
<td>65</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Urban (80%)</td>
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<td>15</td>
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<td>20</td>
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<td><strong>Region</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>North (26%)</td>
<td>43</td>
<td>46</td>
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<td>Center-West (20%)</td>
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<td>Mexico City area (27%)</td>
<td>46</td>
<td>27</td>
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<td>Center (9%)</td>
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<tr>
<td>South (19%)</td>
<td>35</td>
<td>44</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Mitofsky, *Consulta* 2000. N = 37,062. Responses of Don’t Know / No Answer excluded. Votes for other candidates excluded. Percentages are rounded and may not add up to 100%.

---

### Figure 3: Demographic Variables and the Presidential Vote in 2006 (Percentages)\(^{201}\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Calderón (PAN)</th>
<th>Madrazo (PRI)</th>
<th>Obrador (PRD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (52%)</td>
<td>36</td>
<td>22</td>
<td>37</td>
</tr>
<tr>
<td>Female (48%)</td>
<td>38</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 - 29 (30%)</td>
<td>38</td>
<td>21</td>
<td>34</td>
</tr>
<tr>
<td>30 - 49 (49%)</td>
<td>38</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>50+ (21%)</td>
<td>34</td>
<td>26</td>
<td>37</td>
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<td><strong>Education</strong></td>
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<tr>
<td>Basic</td>
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<td>29</td>
<td>33</td>
</tr>
<tr>
<td>Middle</td>
<td>37</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>Higher (22%)</td>
<td>42</td>
<td>14</td>
<td>38</td>
</tr>
<tr>
<td><strong>Income (monthly in pesos)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2000</td>
<td>31</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>2000-3999</td>
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<td>24</td>
<td>39</td>
</tr>
<tr>
<td>4000-6499</td>
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<td>21</td>
<td>37</td>
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<td>6500-9199</td>
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<td>16</td>
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<td>9200+</td>
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<td><strong>Residence</strong></td>
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<tr>
<td>Urban</td>
<td>40</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>Rural</td>
<td>31</td>
<td>28</td>
<td>36</td>
</tr>
<tr>
<td><strong>Presidential approval</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Approved fox's performance</td>
<td>17</td>
<td>26</td>
<td>51</td>
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<td>Did not approve</td>
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<td>PRI</td>
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<tr>
<td>PRD</td>
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<td>3</td>
<td>93</td>
</tr>
<tr>
<td>Independents (35%)</td>
<td>34</td>
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<td>43</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>North</td>
<td>43</td>
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<td>Center-West</td>
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<td>Center</td>
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</tr>
<tr>
<td>South</td>
<td>27</td>
<td>29</td>
<td>40</td>
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<tr>
<td><strong>Beneficiaries of social programs</strong></td>
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<tr>
<td>Oportunidades</td>
<td>41</td>
<td>26</td>
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<td>Seguro popular</td>
<td>44</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td><strong>View of future personal economic situation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve</td>
<td>60</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Same</td>
<td>30</td>
<td>24</td>
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</tr>
<tr>
<td>Worse</td>
<td>12</td>
<td>31</td>
<td>52</td>
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<tr>
<td><strong>Vote in 2000</strong></td>
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<td></td>
<td></td>
</tr>
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<td>Fox</td>
<td>57</td>
<td>8</td>
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<td>Labastida</td>
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<td>Cardenas</td>
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<tr>
<td>New voters</td>
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<td>19</td>
<td>37</td>
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Source: *Reforma*, exit poll, 5,803 voters, July 2, 2006, +/- 1.3% margin of error.

Figure 4: Demographic Variables and the Presidential Vote in 2012 (Percentages)\(^\text{202}\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Vazquez Mota (PAN)</th>
<th>Peña Nieto (PRI)</th>
<th>Obrador (PRD)</th>
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<td>Female (51%)</td>
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<td>29</td>
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<td>Age</td>
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</tr>
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<td>37</td>
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<tr>
<td>30 - 49 (44%)</td>
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<td>50+ (25%)</td>
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<td>Education</td>
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<td>Basic (49%)</td>
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<td>Middle (21%)</td>
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<td>29</td>
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<td>-785</td>
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<td>26</td>
<td>37</td>
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<td>Rural</td>
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<td>Presidential approval</td>
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<td>Center-West</td>
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<td>Center</td>
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<td>South</td>
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</tr>
<tr>
<td>View of future personal economic situation</td>
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<td></td>
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</tr>
<tr>
<td>Improve</td>
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<td>Same</td>
<td>24</td>
<td>43</td>
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<td>Worse</td>
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<td>82</td>
<td>10</td>
</tr>
<tr>
<td>Obrador</td>
<td>5</td>
<td>12</td>
<td>83</td>
</tr>
<tr>
<td>New voters</td>
<td>22</td>
<td>38</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: Reforma, exit poll, 3,096 voters, July 1, 2012, +/- 1.8% margin of error.

Figure 5: Gross State Expenditures (Percentage Growth since Last Election)\textsuperscript{203}

<table>
<thead>
<tr>
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<tr>
<td>Aguascalientes</td>
<td>45.2%</td>
<td>47.1%</td>
<td>40.1%</td>
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<td>Baja California</td>
<td>-22.0%</td>
<td>36.9%</td>
<td>22.3%</td>
<td>28.9%</td>
<td>68.3%</td>
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<tr>
<td>Baja California Sur</td>
<td>42.7%</td>
<td>52.0%</td>
<td>44.0%</td>
<td>20.3%</td>
<td>275.8%</td>
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<td>Campeche</td>
<td>31.8%</td>
<td>41.8%</td>
<td>18.8%</td>
<td>40.1%</td>
<td>210.8%</td>
</tr>
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<td>Coahuila de Zaragoza</td>
<td>41.2%</td>
<td>41.3%</td>
<td>55.5%</td>
<td>3.7%</td>
<td>221.7%</td>
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<tr>
<td>Colima</td>
<td>37.7%</td>
<td>43.1%</td>
<td>25.3%</td>
<td>48.4%</td>
<td>266.1%</td>
</tr>
<tr>
<td>Chiapas</td>
<td>39.2%</td>
<td>45.6%</td>
<td>44.8%</td>
<td>29.5%</td>
<td>279.8%</td>
</tr>
<tr>
<td>Chihuahua</td>
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<td>32.8%</td>
<td>30.6%</td>
<td>256.9%</td>
</tr>
<tr>
<td>Ciudad de México*</td>
<td>23.4%</td>
<td>35.5%</td>
<td>26.3%</td>
<td>22.0%</td>
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<tr>
<td>Durango</td>
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<tr>
<td>Guanajuato</td>
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<td>45.5%</td>
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<td>263.6%</td>
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<tr>
<td>Guerrero</td>
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<td>237.2%</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>54.8%</td>
<td>29.7%</td>
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<td>36.6%</td>
<td>303.9%</td>
</tr>
<tr>
<td>Jalisco</td>
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<td>45.7%</td>
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<td>222.0%</td>
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<tr>
<td>México</td>
<td>55.8%</td>
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<td>45.9%</td>
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<td>46.4%</td>
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<td>Morelos</td>
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<td>40.9%</td>
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<tr>
<td>Nayarit</td>
<td>35.7%</td>
<td>35.1%</td>
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</tr>
<tr>
<td>Nuevo León</td>
<td>33.1%</td>
<td>40.1%</td>
<td>34.0%</td>
<td>49.9%</td>
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</tr>
<tr>
<td>Oaxaca</td>
<td>47.6%</td>
<td>48.5%</td>
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<tr>
<td>Puebla</td>
<td>50.6%</td>
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<tr>
<td>Querétaro</td>
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<td>36.5%</td>
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<tr>
<td>Quintana Roo</td>
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<td>59.6%</td>
<td>72.9%</td>
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<td>San Luis Potosí</td>
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<td>Sinaloa</td>
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<tr>
<td>Sonora</td>
<td>41.7%</td>
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<td>14.4%</td>
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</tr>
<tr>
<td>Tabasco</td>
<td>40.4%</td>
<td>57.7%</td>
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<td>22.9%</td>
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<tr>
<td>Tamaulipas</td>
<td>38.7%</td>
<td>50.2%</td>
<td>48.8%</td>
<td>-1.2%</td>
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</tr>
<tr>
<td>Tlaxcala</td>
<td>39.6%</td>
<td>36.2%</td>
<td>56.2%</td>
<td>26.2%</td>
<td>274.7%</td>
</tr>
<tr>
<td>Veracruz de Ignacio de la Llave</td>
<td>47.7%</td>
<td>37.2%</td>
<td>45.5%</td>
<td>39.9%</td>
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<tr>
<td>Yucatán</td>
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<td>Zacatecas</td>
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<td>38.9%</td>
<td>65.8%</td>
<td>26.4%</td>
<td>325.2%</td>
</tr>
</tbody>
</table>

\textsuperscript{203} Table created using data found on the Instituto Nacional de Estadística y Geografía website under “Microdatos.” The direct link is as follows: www.inegi.org.mx/est/contenidos/proyectos/accesomicrodatos/
Model Variables

**ID**
Number here represents the panel data indicator of the state for that observation. The listing goes from 1 to 31, representing all 32 states (including federal district) but drops one to avoid perfect collinearity in the model. States are numbered alphabetical order with the federal district named “Ciudad de México.”

**Year**
Number here represents year of the observation. As we discussed in methodology, the years observed for models varies. For senate and presidential election models, the six-year term meant that years included 2000, 2006, and 2012. For the diputados election model, the three-year term meant that observations included 2000, 2003, 2006, 2009, and 2012.

**Turnout** ($y_{it}$) ($x'_{it}$)
Measured as total number of voters as percentage of the total number of registered voters for that election year. All of these figures are reported by the INE.\(^{204}\) This figure is used both as an independent and dependent variable in the models.

**PRI** ($y_{it}$)
Percentage of the total voting population that voted for the PRI party in that year. This was calculated from the INE online database.\(^{205}\) PRI was defined in each year as the political party or political alliance formed with the PRI that year. In 2006, the PRI formed the “Alianza por México” (Alliance for Mexico) political alliance with a smaller political party.\(^{206}\) As a result, in the calculation of percentages in 2006, the voting total for “Alianza por México” was used to indicate voting percentage for the PRI. In 2000, some voting data on PRI totals were missing on the INE online database meaning a blank for some years in certain states.

**PAN** ($y_{it}$)
Percentage of the total voting population that voted for the PAN party in that year. This was calculated from the INE online database.\(^{207}\) PAN was defined in each year as the political party or political alliance formed with the PAN that year. In 2000, the PAN

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\(^{205}\) Ibid.

\(^{206}\) “Convenios de Coalición.” *Instituto Nacional Electoral*. Accessed November 20, 2016. Do not confuse this political alliance with alliance by same name in the 2000 elections led by the PRD.

formed the “Alianza por el Cambio” (Alliance for Change) political alliance with a smaller political party. As a result, in the calculation of percentages for 2000, the voting total for “Alianza por el Cambio” was used to indicate voting percentage for the PAN.

**PRD ($y_{it}$)**
Percentage of the total voting population that voted for the PRD party in that year. This was calculated from the INE online database. PRD was defined in each year as the political party or political alliance formed with the PRD that year. In 2000, the PRD formed the “Alianza por México” (Alliance for Mexico) political alliance with multiple smaller parties. As a result, in the calculation of percentages for 2000, the voting total for “Alianza por México” was used to indicate voting percentage for the PRD. In 2006, the PRD formed the “Coalición por el Bien de Todos” (Coalition for the Good of All) political alliance with multiple smaller parties. As a result, in the calculation of percentages for 2006, the voting total for “Coalición por el Bien de Todos” was used to indicate voting percentage for the PRD.

**President ($x_{it}'$)**
In the model for representative (“diputados”) elections, there is an additional covariate named “President” that is an indicator of whether that year is a presidential election year. Years 2000, 2006, and 2012 are marked with a 1.

**Homicides ($x_{it}'$)**
Number here is the number of intentional homicides reported by the INEGI for the year of the election. Intentional homicides were chosen to indicate drug violence per state for two primary reasons: (1) it is collected and well reported by INEGI going back to 1990 and (2) closely mirrors drug violence. In fact, intentional homicides mirror drug violence so closely that they are commonly used in research on Mexican drug violence.

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210 “Convenios de Coalición.” *Instituto Nacional Electoral*. Accessed November 20, 2016. Do not confuse this political alliance with alliance by same name in the 2006 elections led by the PRI.
211 Ibid.
212 Found on the Instituto Nacional de Estadística y Geografía website under “Microdatos.” The direct link is as follows: [www.inegi.org.mx/est/contenidos/proyectos/accesomicrodatos/](http://www.inegi.org.mx/est/contenidos/proyectos/accesomicrodatos/)
Examples include the “Drug Violence in Mexico: Data and Analysis Through 2016” report published in April 2016 by the Justice in Mexico Project.\(^{213}\)

\(Homicides^2 (x^i_{i-1})\)
Number here is the number of intentional homicides reported by the INEGI for the year before the election.\(^{214}\) Since elections in Mexico are held on the first Sunday of July in election years\(^{215}\), the number of homicides in the previous year is equally as important to the mentality of the population that may influence their voting preference. The inability to extract exact date from the intentional homicide data meant that running regressions with both \(Homicides\) and \(Homicides^2\) would be the most comprehensive way to analyze the impact of drug violence on party preference.

\(Spending (x^i_{it})\)
Number here represents the gross state expenditures per person in the year of the election, shown in thousands of pesos. This value was calculated using state gross expenditures reported by the INEGI\(^{216}\) and population totals by state from the Mexico Population and Housing Census.\(^{217}\) Since the census in Mexico is only conducted every five years, the gaps in population data were filled assuming linear growth.

\(PopGrowth (x^i_{i-1})\)
Percentage here shows the growth in the population between the last election and the year before the current election. For example, population growth for the presidential election in 2000 would be the growth in the population between 1994 and 1999. Total population figure by state are from the Mexico Population and Housing Census.\(^{218}\) Since the census in Mexico is only conducted every five years, the gaps in population data were filled assuming linear growth.


\(^{214}\) Found on the Instituto Nacional de Estadística y Geografía website under “Microdatos.” The direct link is as follows:

www.inegi.org.mx/est/contenidos/proyectos/accesomicrodatos/


\(^{216}\) Found on the Instituto Nacional de Estadística y Geografía website under “Microdatos.” The direct link is as follows:

www.inegi.org.mx/est/contenidos/proyectos/accesomicrodatos/


\(^{218}\) Ibid.
**Male ($x_{it}'$)**
Percentage here shows the proportion of the population of the state that identifies as male. Gender and total population breakdown were both provided in the Mexico Population and Housing Census.\(^{219}\) Since the census in Mexico is only conducted every five years, the gaps in population data were filled assuming linear growth. The percentage of the population that identifies as female was excluded from the model to avoid perfect collinearity issues but is still represented with the percentage of the population not falling into the male covariates.

**$N1, N2... (\eta_t)$**
These covariates represent the time fixed effects in the model. These are included to capture all time effects on voting preference that are not controlled for elsewhere in the model. These help capture time trends by only comparing values for a year across states. In the model, for Presidential and Senate elections, $N1=2000$, $N2=2006$, and $N3=2012$. In representative (“diputados”) elections, as expected, $N1=2000$, $N2=2003$, $N3=2006$, $N4=2009$, and $N5=2012$. To avoid perfect collinearity issues, the last covariate is omitted from the model.

**$A1, A2, ..., A31 (\alpha_t)$**
These covariates represent the individual state fixed effects in the model. These are included to capture all state effects on voting preference that are not controlled for elsewhere in the model. These help capture state trends by comparing values for only a certain state across many years. In the model, the states are designated alphabetically with $A1=$Aguascalientes and $A32=$Zacatecas. To avoid perfect collinearity issues, the last covariate is omitted from the model.

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\(^{219}\) Ibid.
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