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Political Alignment and Inter-Jurisdictional Cooperation: Evidence from Crime in Mexico*

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ABSTRACT

We investigate the relationship between inter-jurisdictional cooperation and law enforcement in Mexico. Exploiting a Regression Discontinuity Design in close municipal elections, we study how improved opportunities for cooperation in crime prevention among neighboring municipalities, due to increased political alignment between mayors, may result in lower rates of violent crime. We find that municipalities in which the party in power in the neighboring jurisdictions barely wins tend to cooperate more with their neighbors and to experience lower homicide rates in the following years than those in which it barely lost. This effect is sizeable and robust, is increasing in the share of neighboring municipalities governed by the same party, is independent of which party governs the neighboring municipalities, and does not appear to be driven by improved cooperation with either federal or state authorities. Our findings suggest that, in the presence of geographical spillovers, favoring horizontal cooperation may be an effective way of improving the provision of local public goods.

Keywords:

JEL codes:

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«[Mexican] municipal police forces...are also among the least effective:
the patchwork of command muddles operations.
In Monterrey the metropolitan area alone has eleven different forces,
using different training, tactics and even brands of radio.
"If a criminal crosses the street he has reached a safe haven," admits one official»

The Economist, October 14th 2010

1. INTRODUCTION

The literature on federalism has traditionally focused on the fundamental trade-off between the capacity of a decentralized system to tailor policies to local preferences, and that of a centralized one to properly internalize inter-jurisdictional spillovers (Oates, 1977, 1999; Gonzalez-Navarro, 2008; Knight, 2011).[1]

One aspect that could potentially alter the terms of this trade-off concerns the possible synergies from *horizontal* inter-jurisdictional cooperation, that is, between jurisdictions of the same administrative level. When spatial spillovers are present, systematic cooperation among local authorities can make local provision of public goods more effective, whereas the lack of it can exacerbate the inefficiencies associated with decentralization.

One area in which this aspect is particularly relevant is law enforcement: in the context of a fragmented public security system, better coordination and information sharing among local police forces can favor effective crime reduction efforts. Indeed, the potential benefit from inter-jurisdictional cooperation, and the implications for the efficient organization of the administration of justice, have been extensively discussed in both the criminal justice and the public administration literature (McDavid, 1974; Ostrom et al., 1978; Parks, 2009), but have been largely disregarded by economists. One noticeable exception is represented by Loeper's theoretical contribution on inter-jurisdictional coordination in federal systems

[1] For a thorough discussion of alternative models of federalism, of the concept of federal governance and its relation with economic performance see respectively Inman and Rubinfeld (1997) and Inman (2007).

(2011).[2]

In this paper we investigate the relationship between horizontal inter-jurisdictional cooperation and the effectiveness of law enforcement in the context of Mexico, where crime incidence has steadily increased over the past decade, and an animated debate over the need for better coordination among local police forces is ongoing. Studying the effect of inter-jurisdictional cooperation is challenging because this is likely to be correlated with various unobservable factors that may affect policy outcomes in other ways. We overcome the identification challenge in a spatial context by adapting standard regression discontinuity techniques to the problem at hand. More specifically, we exploit quasi-random variation in the potential for inter-municipal cooperation due to sudden and arguably exogenous changes in the level of political alignment between mayors of neighboring municipalities.

In particular, using a Regression Discontinuity Design (RDD) with close elections, we compare the evolution of cooperation several domains, particularly in law enforcement, and of violent crime (i.e., homicides) between municipalities where the candidate of the party governing the majority of neighboring jurisdictions won and lost by a small margin. The key idea is that effective cooperation is more likely to emerge between municipalities governed by mayors of the same party than between mayors of competing parties, particularly in a highly polarized political environment like Mexico, and that such cooperation is instrumental in reducing violent crime. As any other regression discontinuity analysis, our identification strategy relies on the assumption that, if random factors, such as unexpected breaking news, weather conditions on election day, etc., have an (even small) impact on electoral outcomes, the victory of the candidate of the party that governs the majority of neighboring municipalities would mimic random assignment in elections decided by a narrow margin. Such RDD set-up therefore delivers a (local) source of exogenous variation in political alignment with neighbors, which should facilitate cooperation in law enforcement.

[2] While Loeper's argument refers to the case of a pure coordination game and focuses on the external cost for a jurisdiction to choose a policy different from that chosen by others, his framework does not allow for actual cooperation and does not take into account the spatial dimension of it, that is, that cooperation with neighbors may be more valuable than cooperation with non-neighbors.

Applying the RDD approach described above, and exploiting variation from close elections between 2005 and 2008, we find that municipalities where the candidate of the party in power in the majority of neighboring municipalities won by a small margin experienced significantly higher cooperation with politically-allied neighbors in 2008, than those where that party barely lost. Indeed, these municipalities are more likely to have agreements with allies for the provision of public services in general and particularly in public safety, garbage collection and water management. The impact of political alignment with the majority is large: for instance, the likelihood of cooperation in any domain with a a politically aligned municipality increases by 38 percentage points when a municipality gets aligned with its neighbors after a close election.

Using the same RDD approach we then study close elections that took place between 2005 and 2012, and show that municipalities where the candidate of the party in power in the majority of neighboring municipalities won by a small margin have significantly lower homicide rates during that mayor's mandate than comparable municipalities in which the majoritarian party barely lost. The effect on crime reduction is sizeable: the close election of a candidate politically aligned with most of the neighboring mayors is associated with a decrease in homicide rate of around 40%. This represents a reduction of crime rates of 23 crimes per 100,000 people (15% and 35% of the mean and standard deviation of crime rates in our sample, respectively). Furthermore, the effect is robust to the use of different specifications, to the approach defining a close election (i.e., the bandwidth in our regression discontinuity design), and to controlling for a battery of covariates potentially explaining crime rates or different measures of crime. Reassuringly, political alignment with neighbors is not correlated with a range of other socioeconomic outcomes, including crime incidence prior to the election. Finally, that the result is driven by improved horizontal cooperation is further corroborated by the fact that the reduction in crime (as well as the higher likelihood of cooperation) is more pronounced the larger the share of same-party neighbors, is independent of the party's identity, and is not accounted for by political alignment with state or federal

authorities.

Our research relates to various streams of literature. First and foremost, our work contributes to the literature on decentralization in federal systems by providing novel evidence that, in the presence of geographical spillovers, inter-jurisdictional cooperation can lead to more effective provision of local public goods. Although our findings are specific to the area of law enforcement and public security, we believe that some of the insights from our analysis can apply to other areas of public policy involving inter-jurisdictional spillovers. In this respect, our contribution relates to recent work by Acemoglu et al. (2013) on the effect of local state capacity in the context of Colombia, which highlights the importance of using a network approach to study spillovers effects on public good provision and economic development.

Our contribution is also related to the literature on the role of coordination in the implementation of crime-reducing policies. While previous contributions have focused on coordination between local and federal police (Dell, 2015), or between different police forces at the federal level (Soares and Viveiros, 2010), we focus on horizontal coordination between local police forces operating in geographically distinct (but adjacent) locations, an aspect which economists have largely disregarded or examined only indirectly (Wheaton, 2006).

Our work also relates to previous studies on the importance of political alignment (Dell, 2015; Brollo and Nannicini, 2011). While these contributions focus on the impact of shared party affiliation between local and central authorities - on drug-related crime deterrence in Mexico and on federal transfers to municipal government in Brazil respectively - evidence that political alignment can mitigate coordination problems between jurisdictions at the same administrative level is very scant. In this respect, the closest contribution to ours is probably the one Lipscomb and Mobarak (2015) who, looking at the impact of decentralization on pollution spillovers in Brazil, document lower cross-border pollution when neighboring counties share party affiliation.

Finally, from a methodological perspective, our work relates to numerous studies that have exploited close elections to identify the impact of party affiliation on a variety of political

and economic outcomes[3]. A novelty of our approach is the use of an RDD setup to examine the spatial dimension of cooperation in a rather parsimonious and intuitive fashion.[4]

The remainder of the paper is organized as follows. Section 2 provides background information on the Mexican political and institutional system. Section 3 describes the data used in the empirical analysis. Section 4 illustrates the empirical strategy and presents the main findings. Section 5 concludes.

2. Background on Mexico

The Mexican context is particularly well-suited for an empirical analysis of the impact of cooperation among local police forces on violent crime. Indeed, during the period analyzed in this paper, homicide rates in Mexico sharply increased. As depicted in Figure A.1 - which shows the evolution of the number of monthly homicides recorded in the country since 2000 - while until 2006 the incidence of homicides remained relatively constant (around 1,000/month), since 2007 the number of homicides steadily increases, reaching more than 2,000/month by the end of 2010. This unprecedented surge in violent crime in Mexico has made the object of a growing literature in social sciences to which this paper attempts to contribute.

Most observers view the increase in homicides as a direct consequence of the federal government's strategy against drug-related organized crime, which has been primarily focused on neutralizing drug cartel leaders, resulting in increased violent conflict among factions

[3] Examples include: Lee (2001); Lee et al. (2004); DiNardo and Lee (2004); Pettersson-Lidbom (2008); Dal Bó et al. (2009); Eggers and Hainmueller (2009); Ferreira and Gyourko (2007); Cellini et al. (2010); Gerber and Hopkins (2011); Boas and Hidalgo (2011); Folke and Snyder (2012); Gagliarducci and Paserman (2011)

[4] Recent contributions have questioned the use of RDD based on close elections documenting that, in some cases, even victory in very close elections can be significantly correlated with observable attributes of one of the candidates, such as incumbency status or political alignment with officials in charge of monitoring the elections (Snyder, 2005; Caughey and Sekhon, 2011a; Grimmer et al., 2012). However, a recent study by Eggers et al. (2015) - which combines data from 40,000 close elections in ten countries - shows that this type of concern is specific to races for the U.S. House in the post-war period, and does not generalize to other type of races or to other countries, including Mexico.

for the control of the territory (Guerrero-Gutiérrez, 2010; Dell, 2015). In this paper we do not attempt to identify the causes of the observed increase in violent crime; rather, we try to shed light on whether better coordination among local polices can be instrumental to its containment.

Indeed, poor coordination can be especially problematic in the context of Mexico's highly fragmented security apparatus, in which, as estimated by Sabet (2012), over 3,000 police forces coexist. Municipal polices, in particular, play a central role in this system and account for over 40% of Mexican total law enforcement officers (Guerrero-Gutiérrez, 2010). According to a report by the Directorate General for the Coordination and Development of State and Municipal Polices - a division of the Federal Ministry for Public Security - leaked to the press in 2010, as of that year 2008 of Mexico's 2445 municipalities had a local police force.[5] The Mexican Constitution (as amended in 1983 and 1999) establishes that responsibilities in the domain of public safety are shared between the federal government, states, and municipalities "within their competences", and explicitly indicates "preventive policing" as one of competences of municipal governments. As head of the municipal government the mayor is the highest authority in the domain of public security. The mayor nominates and can remove all top public security officials - including the chief of the local police and the director of the municipal prison system - and presides over all agreements of cooperation with other municipalities. Indeed, the Constitution explicitly acknowledges the possibility for municipal governments to cooperate with each other to improve the provision of local public goods, including law enforcement. Cooperation between different municipalities in the area of law enforcement usually operates through the creation of inter-municipal councils in which officials from all municipalities share information and discuss how to best coordinate their efforts. While in some states the creation and functioning of these councils is explicitly regulated by the law, in others councils have emerged spontaneously and operate

[5] Of the 417 municipalities with no municipal police 362 were located in the state of Oaxaca, while the remaining ones were distributed among 17 other states. Since municipalities from the state of Oaxaca are excluded from our sample for other reasons (discussed below), almost all the municipalities we look at had a local police force in the period of interest.

according to mostly informal procedures.

As suggested by anecdotal evidence, the mayor's party affiliation can have a considerable impact on the functioning, priorities, and policing style of municipal forces.[6] More importantly, in the context of Mexico's highly polarized political landscape, political divisions between mayors of neighboring municipalities, and the tensions that may derive from them, may further hinder inter-jurisdictional cooperation and have, in some cases, even resulted in actual confrontation between different local police forces Davis (2006); Tapia (a,b). In our empirical section we present evidence that differences in party affiliation between neighbors are indeed associated with lower cooperation in various areas of policy making, particularly in the area of law enforcement.

In light of the fragmentation and scarce coordination of Mexican police forces, it is not surprising that an animated debate on the opportunity of reforming the current organization of the Mexican security apparatus has emerged among Mexican policy-makers, including at the highest level. In October 2010, for example, the then president Felipe Calderón Hinojosa proposed a bill for the creation of a single-command national police force, motivated by the need to foster coordination and increase homogeneity in the operation of local police forces. A similar reform was proposed by his successor, president Enrique Peña Nieto. With a similar motivation, since 2011 the National Conference of Mexican Governors (CONAGO, a periodic summit of Mexican State governors) has implemented regular cooperative efforts aimed at reinforcing information sharing among local police forces engaged in operations

[6] A curios example of how the mayor's party affiliation can impact even the most basic aspects of local police organization - such as equipment purchases - is reported by Sabet (2012): "PAN administrations argue that police the world over wear blue uniforms and therefore issue uniforms and vehicles in blue. However, blue happens to be the color of the PAN party, and PRI governments have tried to emphasize other colors. When PRI Hank Rhon came to office in Tijuana in 2004 after fifteen years of PAN rule, he gave the police new black uniforms, repainted the police cruisers black, and created a new emblem for the police. Hank Rhon sold the action as symbolic of a new police force that was making a break from the past and reinventing itself, but the partisan undertone was unmistakable. When the PAN returned to office in 2007, they reversed the previous administration's changes, issued new blue uniforms, painted the patrol cars blue, and returned to the old police emblem. Mexicali's PAN administration repainted the city's black-and white cruisers blue when it came into office in 2007. Hermosillo's new PRI government, on the other hand, chose to paint the formerly blue police cars orange, a color they argued is the color of Hermosillo and not of any political party."

against crime. Andrés Manuel López Obrador's strategy for combatting organized crime was the creation of the National Guard, a national-level security force. While these initiatives have not yet been rigorously evaluated, they indicate that local authorities recognize the need for better coordination as an instrument to combat crime in a more effective way.

Recent academic contributions on violence in Mexico have also discussed the importance of cooperation among police forces. In particular, Dell (2015) presents evidence on the impact of improved coordination between federal and local police on drug-related crime and finds that improved opportunities for cooperation between local and federal governments (proxied by the degree of political alignment) result in a *higher* number of drug-related homicides. However, to the best of our knowledge, no previous empirical study has attempted to measure the impact of improved horizontal cooperation among local police forces.

Before moving to the empirical analysis we provide additional details on the Mexican institutional and political context during the time period we examine. Mexico is a multi-party competitive democracy in which, until recently, three major political parties disputed most of the positions at stake in local and federal elections: the Institutional Revolutionary Party (PRI), the National Action Party (PAN), and the Party of the Democratic Revolution (PRD).[7] With regard to the parties' ideological position, while PAN is right-to-center and PRD left-to-center, PRI is generally considered as centrist. While federal and state elections are held every six years, municipal elections are held every three years with all the municipalities in a state voting at the same time. During the time period analyzed, in both local and federal elections the three major parties - particularly PRI and PRD - generally formed coalitions with smaller parties, although in the vast majority of these cases, the coalition candidate was drawn from the major party. It was hence very likely that when the coalition led by one of the major parties prevailed in two neighboring municipalities, the elected mayors would belong

[7] The Mexican political landscape changed substantially in 2012 when former PRD presidential candidate, Andrés Manuel López Obrador, left the PRD to form a new political party, the National Regeneration Movement (*Movimiento Regeneración Nacional*, MORENA). The creation of this party implied an important reconfiguration of the political landscape in the country, including important (not easily observed) changes in local politicians' loyalties. In the 2018 federal elections MORENA would emerge as the country's most voted party paving the way for the election of López Obrador as president.

to the same party. In addition, regular elections for mayor are only held in 146 of the 570 municipalities in the state of Oaxaca. In this state, characterized by the highest concentration of indigenous population in Mexico, local leaders in most municipalities are selected according to traditional mechanisms that differ considerably from conventional electoral processes and that largely exclude national political parties from local political competition.[8] For this reason, we also exclude municipalities in the state of Oaxaca from our sample.

3. DATA

The data used in our empirical analysis come from a variety of sources. Detailed geographic information on Mexico's administrative divisions is available from the Mexican Institute for Statistics and Geography (INEGI). We use these data to identify, for each municipality, the set of neighbors, defined as those municipalities with which the municipality shares at least one boundary.

To examine the relationship between mayors' shared party affiliation and inter-municipal cooperation, we use data from the National Survey of Municipal Government, Public Safety and Justice (ENGSPJM) in 2009. The ENGSPJM surveyed all mayors holding office at the time of the survey, and was aimed at gathering information about the management and performance of municipal institutions. Crucially for the purpose of our analysis, the survey contains information on whether each municipality participates in any cooperation agreement with other municipalities during 2008, with which ones, and in what policy domain (e.g. public safety, water management, schooling, etc.).

Electoral data for elections held between 2000 and 2012 is available from the Mexican Research Center for Development (CIDAC). This data is used to identify the party affiliation of the mayors of each municipality. As mentioned, Mexican municipalities hold elections every three years to renew their local authorities. While all municipalities in a state vote in

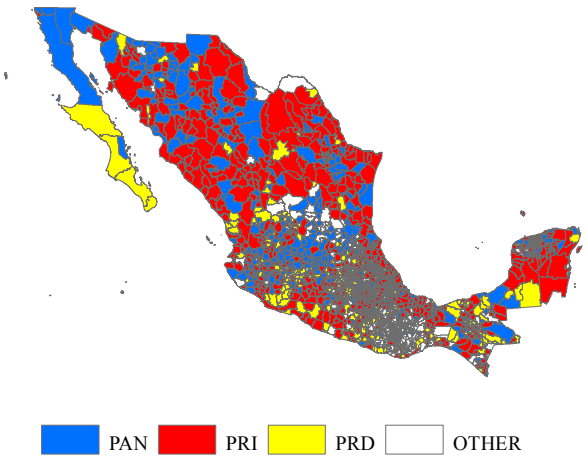
[8] More information on these systems, defined as "Usos y Costumbres" (Uses and Customs) in the 1995 state constitution, is available from Benton (2011) and Anaya (2006).

the same year, municipalities in different states may hold elections in different years. Table A.1 reports, for each state, the election years for which electoral data are used. As shown in the table, we consider two waves of municipal elections, one from 2005 to 2008 and the other from 2009 to 2012. [9] For each municipality in each year, the data include the total number of votes cast, and those attributed to each party. For every election we identify the two parties with most votes and compute the gap in vote share between the winner and the loser. Additionally, from the outcome of the previous elections, we identify the incumbent's party affiliation.

Figure 1 represents, for example, the distribution of the ruling party across Mexican municipalities in 2008. While some areas are largely controlled by a single party, there is considerable spatial heterogeneity in party's influence both across and within regions. Using this information, we compute, for each municipality, the share of neighboring municipalities controlled by each of the three main parties at the time the mayor took office. While for neighboring municipalities within the same state we consider the party of the mayor elected in the same electoral cycle, for out-of-state neighbors which did not hold elections in the same year, we consider the party in power at the time of the election.

[9] Most of the elections included in our analysis occurred between 2006 and 2011. The two exceptions are the 2005 election in the state of Coahuila and the 2012 Durango election.

FIGURE 1: MUNICIPALITIES BY MAYOR'S PARTY AFFILIATION (2008)



The figure shows the party affiliation of mayors in Mexican municipalities as of 2008. Data from the Mexican Research Center for Development (CIDAC).

To measure the incidence of violent crime, we consider the number of homicides in each municipality in the years following the relevant election. Homicide statistics, available from INEGI, are derived from demographic administrative records and include the total number of homicides recorded each year in each municipality between 2000 and 2013. Statistics of total population, annual deaths and area for each municipality, were also obtained from INEGI. Additionally, we use INEGI judicial administrative records to obtain data about prosecutions for homicides and homicides sentences. Finally, we use data on a variety of socio-economic at the municipal level which we include as controls in our regressions. These are: human development index, available from the United Nations Development Program, and share of households with access to sewage, electricity and running water, available from the Marginalization Index conducted by the National Council of Population (Consejo Nacional de la Población, CONAPO).

4. EMPIRICAL RESULTS

In this section we investigate empirically the relationship between political alignment, on the one hand, and inter-jurisdictional cooperation and crime reduction, on the other. We discuss

how, to overcome possible identification challenges, we exploit exogenous variation in party alignment due to close elections for a restricted sample of municipalities.

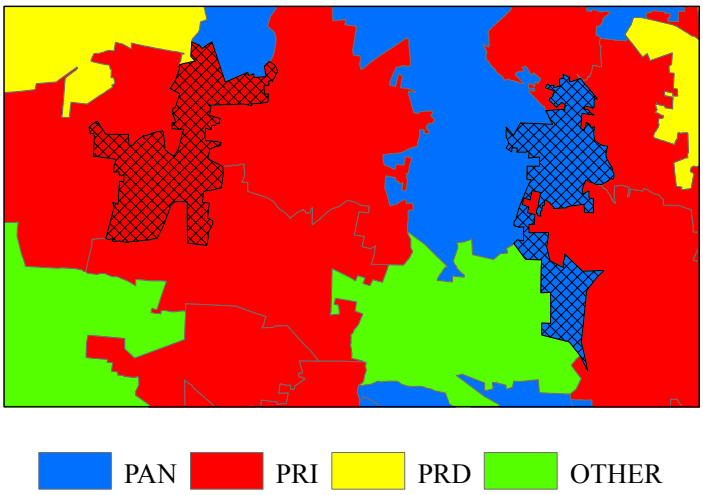
4.1. Empirical Strategy

A naive OLS regression is unlikely to provide an unbiased estimate of the causal impact of political alignment on cooperation and the prevention of violent crime. One source of bias, for example, derives from the fact that voters' political preferences, and hence electoral outcomes, may be influenced by the level of violent crime in the municipality or the ability of mayors to reach cooperation agreements with other municipalities. An alternative possibility is that third factors, such as the presence of drug cartels, may affect both the incidence of violent crime, and the electoral prospects of different candidates. To better isolate the causal impact of political alignment on both cooperation and violence, we use a regression discontinuity design (Imbens and Lemieux, 2008; Lee and Lemieux, 2009). In particular, following previous studies on the impact of party identity on socio-economic outcomes (Dell, 2015; Lee et al., 2004), we exploit the arguably exogenous discontinuity in the identity of the ruling party in a municipality given by its victory in a close election.

Since we are interested in the degree of political alignment between a given municipality and *all* of its neighbors, we look at those municipalities for which more than 50% of the neighboring municipalities were governed by the same party, and, among these, focus specifically on those municipalities in which the party governing the majority of neighbors won or lost by a small margin. Indeed around the discontinuity municipalities in which the party ruling in most of the neighbors barely won would experience an exogenous shock in their capacity of cooperating with neighbors. Figure 2 illustrates the basic intuition behind our identification strategy by means of an example. The figure depicts two municipalities in the state of Veracruz holding local elections in 2007: Samahil (shaded red area) and Timucuy (shaded blue area). Both municipalities share a border with five other municipalities, three of which were governed by the PRI, one by the PAN, and one by a minor party. However, while

in Timucuy the PAN won over the PRI by a small margin, in Samahil the PAN lost to the PRI by a similarly small margin. Our identification strategy is based on the comparison of post-election outcomes between ex-ante similar municipalities some of which - like Samahil - became politically aligned with the majority of their neighbors and others - like Timucuy - that did not.

FIGURE 2: EXAMPLE OF POLITICAL ALIGNMENT WITH NEIGHBORING MUNICIPALITIES



Note: The figure shows the party affiliation of mayors in some municipalities of the State of Veracruz 2007. Samahil and Timucuy are respectively the red and blue shaded areas. Data from the Mexican Research Center for Development (CIDAC).

Since our data on cooperation agreements is for 2008, we only use close elections from our first wave of elections (i.e., elections held from 2005 to 2008) when looking at the relationship between political alignment and inter-jurisdictional cooperation. When looking at violent crime, instead, we use all close elections from our elections waves (i.e., elections held from 2005 to 2012), so as to exploit variation from a larger sample.[10]

We estimate a non-parametric local linear regression focusing on the sample of municipalities with at least 50% of neighbors governed by the same party, and in which that party won

[10] A natural question is whether the municipalities included in our close election samples are substantially different from the ones excluded. In Table A.2 we report descriptive statistics for the municipalities in our restricted samples in the two RDD analyses (i.e., close elections). Following the related literature, we define as close election a municipal election with a vote margin below 5 percent. Top Panel focuses in the comparison between municipalities in our cooperation sample (276 close elections) and municipalities not included in this sample. In bottom panel we do the same comparison with focus on municipalities used in the crime analysis (574 close elections). Note that our cooperation sample is sub-sample of our crime sample. While in both panels in Table A.2 we find statistical differences in some variables, suggesting that places where election are especially competitive may differ from the rest of Mexican municipalities in some dimensions, these differences does not seem large and do not point to a particular direction that may question the external validity of the estimates presented below. Noteworthy, municipalities in our sample are 6 p.p. less likely to have a PRI affiliated governor and have a lower percentage of households with sewage in 2005.

or lost the election by a small margin. We follow two approaches to define a small margin (i.e., the bandwidth in our regression discontinuity design). First, we optimally choose bandwidth following a data-driven selection algorithm (i.e., mean-square-error selection) (Calonico et al., 2019). Second, following the related literature of close elections, we choose an ad-hoc bandwidth of 0.05. The following equation summarizes our empirical strategy:

$$y_{ist} = \alpha_0 + \alpha_1 NPwin_{is} + F(Sp_{is}) + \delta X'_{is} + \gamma_{st} + \varepsilon_{is} \quad (1)$$

where the subscript ist indicates municipality i located in state s during election year t; y_{ist} is the outcome of interest, i.e., a dummy variable for whether municipality i is part of an agreement with any of its neighbors, or homicide rates in the three years after the election; $NPwin_{is}$ is a dummy variable for whether the party governing 50% or more of i's neighbors won the election in municipality i; $F(\cdot)$ is a flexible function of Sp_{is} which is the difference between this party's vote share and that of its closer competitor; finally, X'_{is} is a vector of characteristics of municipality i in state s, including a range of socio-economic characteristics described above (i.e., demographic controls and state capacity indicators). In all regressions we include state-election year fixed-effects (γ_{st}), and cluster standard errors at the state-year level.

For our empirical strategy to correctly estimate the causal effect of political alignment two key assumption must be satisfied: i) the outcomes of interest must vary smoothly with respect to the margin of victory (or loss) of the party governing most of the municipality's neighbors, ii) only the treatment - that party's victory - must have an effect on the outcome of interest at the discontinuity (Caughey and Sekhon, 2011b). To shed light on this aspect, in Table 1 we report the differences in means between observations on each side of the discontinuity for all control variables included in the regressions and an extended set of political variables, and also present the results of simple regression discontinuity analyses (adjusting a linear trend on each side of the discontinuity for the relationship between each outcome and the vote spread) using each of the aforementioned variables as dependent variable. The fact that no

statistically significant difference in any but one of these characteristics is observed between municipalities in which the party ruling the majority of neighbors barely won or lost the election is reassuring of the fact that the municipalities in the two groups were not dissimilar *ex ante*. [11] [12] Finally, Figure A.3 plots a kernel density function for the margin of victory and a manipulation test using local polynomial density estimation. It shows no evidence of self-selection or nonrandom sorting of municipalities into control and treatment status.

4.2. Political alignment and inter-jurisdictional cooperation

We start by examining whether mayors affiliated to the same party are indeed more prone to encourage cooperative behavior and information-sharing by their respective municipal police departments. This could be due to closer personal connections between fellow party members operating in the same area, or to shared views regarding crime-reduction strategies and priorities. Party discipline is also likely to play a role particularly in a country like Mexico where politicians cannot run for re-election and have strong incentives to earn the support of party leaders who influence future nominations and appointments for higher offices (Sabet, 2012; Guillén López, 2006).To test the relationship between political alignment and horizontal cooperation we combine data on mayors' party affiliation and on the existence of cooperation agreements between neighboring municipalities.

Our analysis proceeds as follows. Based on the mayors' responses to the ENGSPJM's survey in 2009, we construct indicator variables for the existence of bilateral cooperation between each municipality and its neighboring municipalities. We identify agreements with any neighbor and with any neighbor of the same party (so-called "aligned municipality"). We also classified agreements by domain (i.e., any domain, public safety, water services, etc).

[11] The only two exemptions are pretreatment values of death rates in our cooperation sample and population density in our crime sample: both are higher for the municipalities in which the party ruling the majority of neighbors barely won the election. In any event, in all regressions presented below we control for the entire set of pre-treatment characteristics, though their inclusion does not affect our results.

[12] Figures A.4 and A.5 show the RDD plots for the covariates discussed in both panels of Table 1 on vote margin using a quartic polynomial to approximate the population conditional expectation functions for control and treated municipalities.

TABLE 1: POLITICAL ALIGNMENT, COOPERATION AND CRIME: SAMPLE STATISTICS

Panel A: Cooperation Sample

	Party ruling majority of neighbors won by less than 5 (1)	Party ruling majority of neighbors lost by less than 5 (2)	Difference (3)	t-stats on Mean Differences (4)	RD Estimate (5)	Std. Errors RD Estimate (6)
PAN affiliated governor	0.195	0.190	-0.004	-0.078	-0.028	[0.177]
PRI affiliated governor	0.568	0.571	0.004	0.051	0.004	[0.240]
PRD affiliated governor	0.237	0.238	0.001	0.013	0.024	[0.230]
Majority of Neighbors PAN	0.178	0.179	0.001	0.011	-0.147	[0.120]
Majority of Neighbors PRI	0.737	0.762	0.025	0.395	0.109	[0.131]
Majority of Neighbors PRD	0.076	0.060	-0.017	-0.460	0.017	[0.073]
PAN affiliated incumbent	0.305	0.298	-0.007	-0.113	-0.136	[0.137]
PRI affiliated incumbent	0.534	0.524	-0.010	-0.141	0.047	[0.177]
PRD affiliated incumbent	0.169	0.202	0.033	0.593	0.044	[0.173]
Area (sq km)	776.441	1166.025	389.584	1.554	-349.611	[397.897]
Population Density	168.867	165.934	-2.933	-0.044	138.241	[168.609]
Death Rate in 2003	457.346	393.524	-63.822	-2.357	137.547***	[52.242]
Human Development Index in 2005	0.755	0.747	-0.008	-0.887	0.007	[0.019]
Percentage of HH with no sewage in 2005	12.108	14.259	2.151	0.980	-3.212	[5.016]
Percentage of HH with no electricity in 2005	4.441	6.386	1.945	1.827	0.908	[1.956]
Percentage of HH with no water in 2005	16.492	18.949	2.457	0.901	2.016	[6.145]
Observations	118	84	202			

Panel B: Crime Sample

	Party ruling majority of neighbors won by less than 5 (1)	Party ruling majority of neighbors lost by less than 5 (2)	Difference (3)	t-stats on Mean Differences (4)	RD Estimate (5)	Std. Errors RD Estimate (6)
PAN affiliated governor	0.248	0.206	-0.041	-1.162	0.059	[0.159]
PRI affiliated governor	0.618	0.656	0.038	0.938	-0.116	[0.164]
PRD affiliated governor	0.180	0.206	0.026	0.784	-0.000	[0.141]
Majority of Neighbors PAN	0.208	0.162	-0.046	-1.396	0.046	[0.088]
Majority of Neighbors PRI	0.737	0.773	0.036	0.996	-0.062	[0.089]
Majority of Neighbors PRD	0.052	0.065	0.013	0.651	0.007	[0.047]
PAN affiliated incumbent	0.284	0.271	-0.013	-0.347	0.046	[0.088]
PRI affiliated incumbent	0.544	0.547	0.002	0.053	-0.077	[0.102]
PRD affiliated incumbent	0.153	0.166	0.013	0.424	-0.025	[0.092]
Area (sq km)	1137.139	1434.542	297.403	1.068	-524.586	[503.131]
Population Density	289.641	203.006	-86.634	-1.113	437.725**	[207.443]
Death Rate in 2003	423.829	414.351	-9.478	-0.613	37.860	[35.553]
Human Development Index in 2005	0.764	0.764	-0.000	-0.023	-0.004	[0.015]
Percentage of HH with no sewage in 2005	12.035	12.850	0.814	0.650	1.240	[3.732]
Percentage of HH with no electricity in 2005	4.415	5.464	1.049	1.693	1.098	[1.326]
Percentage of HH with no water in 2005	15.350	16.057	0.707	0.456	4.377	[4.275]
Observations	327	247	574			

Note: This table reports mean values for the variables used in the analyses respectively for municipalities in which the party ruling the majority of neighboring municipalities won and lost by a small margin, i.e. Bandwidth (columns 1 and 2). It also reports the t-stat on the difference in the means of each variable between the two samples (column 4), the respective regression discontinuity estimates (column 5) and the corresponding standard errors clustered at the state-year level (column 6). The RD estimate (local linear regression) is the coefficient of the Majority Wins variable in a regression of the variable listed at the left. Panel A shows the results for the sample of the main analysis of cooperation, which includes all municipal close elections (i.e less than five percent margin) between 2005 and 2008 in which the party that won or came second ruled the majority of neighboring municipalities (276 observations). Panel B presents the results for the sample for our crime main analysis. This sample considers all the municipal close elections (i.e less than five percent margin) in which the party that won or came second ruled the majority of neighboring municipalities (574 observations). *** p<0.01, ** p<0.05, * p<0.1.

Table 2 shows estimates of equation 1 using as dependent variables measures of cooperation with any neighboring municipality in any domain (column 1), with any aligned neighboring municipality in any domain (column 2) and, separately, in each of the four areas in which cooperation is more widespread, i.e., public safety (column 3), garbage collection (column 4), road maintenance (column 5), and water management (column 5). Panel A shows the results using a data-driven optimal bandwidth selection whereas Panel B shows the one for a 0.05 ad-hoc bandwidth. In Panel A we also report robust bias-corrected p-values accounting

for the bias involved in the estimation of the optimal bandwidth used.[13]

TABLE 2: PARTY ALIGNMENT AND INTER-MUNICIPAL COOPERATION

	Dependent variable: Dummy=1 if there is a cooperation agreement with a neighboring municipality					
	Any Municipality Any Domain (Mean: 0.54)	Aligned Municipality Any Domain (Mean: 0.40)	Aligned Municipality Public Safety (Mean: 0.086)	Aligned Municipality Garbage Collection (Mean: 0.063)	Aligned Municipality Road Paving (Mean: 0.008)	Aligned Municipality Water Services (Mean: 0.012)
Panel A: Optimal Bandwidth	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	0.111	0.386***	0.120**	0.106***	0.031***	0.027**
	[0.069]	[0.065]	[0.047]	[0.036]	[0.009]	[0.013]
Robust bias-corrected p-values	0.10	0.000	0.013	0.008	0.003	0.060
Opt Bandwidth	0.074	0.079	0.086	0.071	0.114	0.173
effective number observations left	112	110	112	98	155	202
effective number observations right	177	194	188	153	239	343
Panel B: Ad Hoc Bandwidth 0.05	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	0.063	0.312***	0.134**	0.110***	0.022	0.052
	[0.084]	[0.086]	[0.055]	[0.017]	[0.043]	[0.037]
effective number observations left	84	77	73	73	73	73
effective number observations right	118	116	107	107	107	107
State x Year FE	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y

Note: This table shows the results for the RDD exercises that study the relation between political alignment and inter-municipal agreements in 2008. The sample for this analysis includes municipalities that had elections in our first wave (between 2005 and 2008) in which the party ruling the majority of neighboring municipalities won and lost by small margin (i.e. Bandwidth). Majority wins is a dummy for whether the candidate of the party that governs the majority of neighboring municipalities is elected mayor. The dependent variables are different dummies that equal one if at least on agreement of certain type was reported for 2008. Column 1 presents the results for a dummy that equals one when the municipality reported an agreement for cooperation in any domain with a neighbor. Column 2 shows the results for a dummy that identify if there was an agreement, in any domain, with a politically-allied neighbor. Column 3, 4, 5 and 6 present the results for agreements in specific public services with politically-allied neighbors. Panel A and Panel B present the results of the estimations using an Optimal Bandwidth and an Ad Hoc Bandwidth of 0.05, respectively. Robust standard errors clustered at the state x year level in brackets. The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. *** p<0.01, ** p<0.05, * p<0.1.

Several patterns emerge from the results in Table 2.[14] First, our main qualitatively results are virtually unaffected by the approach followed for the definition of small margin (i.e., bandwidth). Second, for all the definitions of cooperation agreement with neighboring municipalities we find that political alignment with neighbors displays a positive effect on the likelihood of having an agreement. Third, political alignment with the majority of neighbors increases the likelihood that a municipality will participate in a cooperation agreement in any domain with its neighbors regardless of the political affiliation of the involved municipalities (column 1). Albeit not statistically significant under the standard levels of confidence (robust bias-corrected p-value = 0.101), point estimate in column 1 of Panel A in Table 2 suggests that the likelihood that a municipality will participate in a cooperation agreement with its neighbors in any domain increases by 10 percentage points. Fourth, the impact of politi-

[13] Since the optimal bandwidths in Panel A are estimated separately for each outcome, the number of observations may vary depending on the outcome under study.

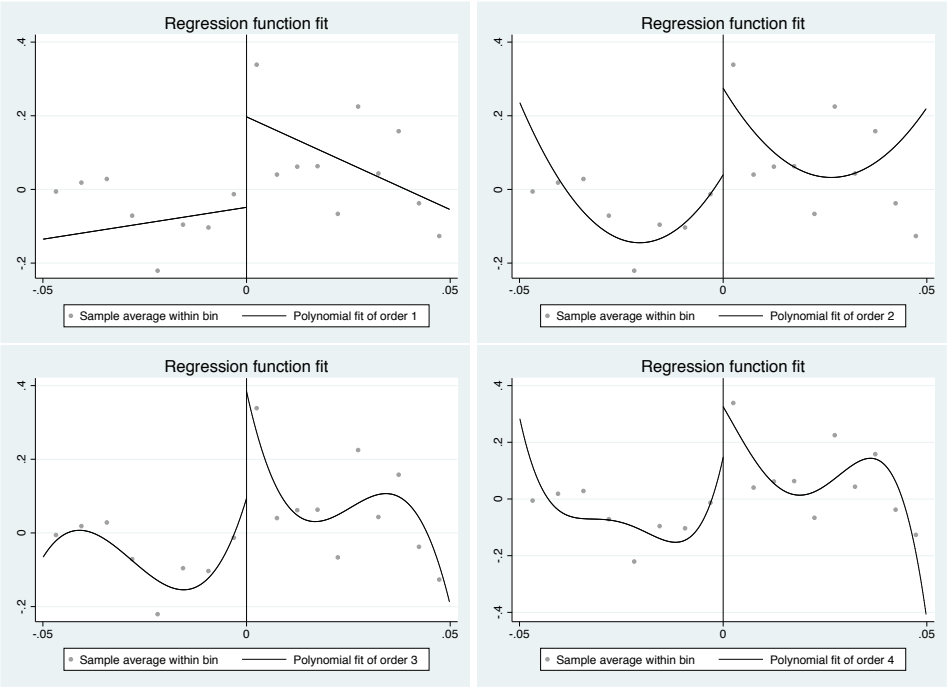
[14] For completeness, Table A.3 shows results from simple OLS regressions of cooperation agreements on a dummy indicating political alignment with the majority of neighbors while controlling for the full set of controls in equation 1.

cal alignment with the majority is stronger, and more precisely estimated, for cooperation agreements with politically aligned municipalities (columns 2 to 6). In particular, the likelihood of cooperation in any domain with a a politically aligned municipality increases by 38 percentage points when a municipality gets aligned with its neighbors after a close election. For most of the agreements the impacts are sizeable. For instance, the likelihood that a municipality will participate in a cooperation agreement with its neighbors in the area of law enforcement and public safety increases by 12 percentage points (column 3 in Panel A) when it is governed by the same party as the majority of them. Taking together, these results suggest that, by making coordination and information sharing less costly, shared party affiliation between mayors can facilitates inter-municipal cooperation, in general, and specifically in the area of public safety and law enforcement.

Figure 3 graphically summarizes our main result using the existence of cooperation agreements with political allies as dependent variable (column 2 in Table 2) and four different polynomial fits: linear, quadratic, cubic, and quartic.[15] All results confirm that the observed break at the discontinuity is robust to controlling flexibly for the relationship between vote spread and the outcomes of interest. Figure A.7 shows RDD point estimates for different combinations of the set of controls in Table 2 and reassures that the exclusion of these controls affects remarkably littler our results.

[15] Figures A.6 and A.8 show RDD plots of agreements on vote margin focusing on any agreement with any neighboring municipality and public safety agreements with politically aligned neighboring municipalities, respectively.

FIGURE 3: RDD GRAPHICAL ANALYSIS: POLITICAL ALIGNMENT AND COOPERATION



Note: The figures represent RDD plots of agreements with allies on vote margin for four different fits (represented clockwise): linear, quadratic , cubic, and quartic. The variable for agreements is a dummy that equals one when there was at least one agreement in any domain with a political ally in 2008. The set of controls from the main specification in the paper has been partialed out. The sample includes 1115 municipalities, with elections between 2005 and 2008 in which the party that won or came second ruled the majority of neighboring municipalities.

We next analyse potential sources of heterogeneity in Table 3 by rerunning our RDD estimations of equation 1 for different samples defined along a set of characteristics. We focus on cooperation agreements with politically aligned municipalities as dependent variable (thus the baseline estimate for comparison is the one in column 2 of Table 2). We next explore whether the impact of political alignment on cooperation with neighboring municipality is larger the higher the share of neighboring municipalities governed by the same party (in line with an explanation based on improved horizontal cooperation). Results in columns 1 and 2 of Table 3 show that the impact of political alignment on the likelihood of having an agreement with a politically aligned municipality is almost three times larger for the sample of municipalities with their fraction of majority in neighbors above its median value (i.e., 0.71). This result is consistent with the idea that the election of a mayor from a given party in a municipality is more likely to boost inter-jurisdictional cooperation (particularly with

municipalities of the same political color) the larger the share of neighboring mayors that belong to that party. Nonetheless, it is important to note that the impact of interest is still sizeable for the municipalities below the median value of reference (column 2): 18 percentage points increase in the likelihood of cooperation due to political alignment. Results in column 3 and 4 reveal that the main effect identified in Table 2 is not driven by the possibility that the majority of neighbors is politically aligned with government of the State. In fact, if anything, the results for the sample of municipalities not aligned with the state government is even larger that for those aligned (column 3). The same conclusion applies when we split, in columns 4 and 5, our analysis based on whether the neighboring majority belongs or not to the same party as the incumbent's. In columns 7 to 10 we consider whether the party ruling most of the neighbors being respectively the PRI or the PAN (in power at the federal level during the period of interest). Once again, all our results on the relationship between political alignment and inter-jurisdictional cooperation hold for all the different samples.[16] These findings suggest that our main results do not rely entirely on political alignment with the ruling party at the state or federal levels, further confirming the importance of horizontal over vertical cooperation.[17]

In sum, with the heterogeneity analysis presented above we documented that the effect of political alignment with neighbors on cooperation: (i) is larger the higher the share of neighboring municipalities governed by the same party (in line with an explanation based on improved horizontal cooperation); (ii) does not depend on whether the winning party is the incumbent; (iii) does not depend on whether the winning party is in power at the state level; (iv) does not depend on the identity of the winning party.

[16] We caution however that some of the specifications for these last 4 columns are based in a small number of observations.

[17] As shown in Table A.4 the approach followed for the definition of small margin does not play a crucial role for our results.

TABLE 3: PARTY ALIGNMENT AND COOPERATION: HETEROGENEITY

	Dep Variable: dummy=1 if there is any agreement with political aligned neighbor									
	Fraction Majority in Neighbors		Majority Governs State		Majority is Incumbent		Majority is PRI		Majority is PAN	
	Above Median	Bellow Median	Yes	No	Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Majority Wins	0.522***	0.182**	0.345***	0.601***	0.277***	0.618***	0.459***	0.345**	0.290	0.450***
	[0.100]	[0.093]	[0.096]	[0.100]	[0.100]	[0.094]	[0.075]	[0.150]	[0.191]	[0.071]
Robust bias-corrected p-values	0.000	0.083	0.001	0.000	0.012	0.000	0.000	0.064	0.202	0.000
Opt Bandwidth	0.062	0.072	0.070	0.062	0.075	0.052	0.054	0.045	0.062	0.060
effective number observations left	44	53	69	30	55	41	63	18	14	75
effective number observations right	64	99	114	46	92	56	93	28	26	115
State x Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note: The table shows the results for the RDD exercises that analyze heterogeneity in the effects of political alignment on cooperation. In The dependent variable is a dummy that equals one when the municipality reported that in 2008 there was at least one agreement, in any public service or domain, with a politically-allied neighbor. Columns 1 and 2 of the table show the results of exercises that study the effect of the treatment on municipalities where the fraction of neighbors governed by the majoritarian party is above and bellow the national median. Column 3, shows the effect on municipalities in which the majoritarian party was also the party governing the state, while column 4 shows the effect for those municipalities where this was not the case. Columns 5 and 6 present respectively the results of estimations of the effect in municipalities in which the majoritarian party was and was not, at the moment of election, the incumbent party. Finally, the last 4 columns shows the results of regressions that study the effect on municipalities for which PRI and PAN were and were not the party ruling the majority of the neighborhood. PRD analysis was excluded because of the number of observations. The sample includes municipalities that had elections in our first wave (between 2005 and 2008) in which the party ruling the majority of neighboring municipalities won and lost by small margin (i.e. Bandwidth).The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1.

4.3. POLITICAL ALIGNMENT AND CRIME

We next analyse whether political alignment helps to reduce crime. Table 4 shows different estimations of equation 1 for different transformations of homicides rates (i.e., total homicides per 100,000 people). For all the homicide variables we consider the number of homicides in each municipality in the three years following the relevant election. All specifications include state-election year fixed effects and the full set of controls.[18]

Table 4 reports the results for homicide rates.[19] In all specifications political alignment with neighbors displays a negative effect on homicide rate (always significant at least at the 1% level). Furthermore, the size of the coefficient remains quite stable regardless the bandwidth used in the estimation. In columns 1 and 2 we use the log of homicide rates + 1 as our dependent variable. This semi-log specification facilitates the interpretation of the point estimate for α_1 in equation 1 as a standard semi-elasticity, i.e. being politically aligned with the majority of neighboring municipalities has an effect of (exp($\hat{\alpha_1}$)-1)% on homicide rates. Point estimate from column 1 in Panel A suggests that municipalities that are politically aligned with their neighbors experience a 41% reduction in homicide rates. We find very similar

[18] The exclusion of the set of controls affects remarkably little our results. Figure A.7 in the appendix show the point estimates for different permutation of the set of controls.

[19] For completeness, Table A.5 shows point estimate from simple OLS regressions of crime on a dummy indicating political alignment with the majority of neighbors while controlling for the full set of controls in equation 1. All specifications deliver coefficients that are not statistically different from zero.

TABLE 4: PARTY ALIGNMENT AND CRIME

	Dep Variable: Homicide Rates during Mandate				
Panel A: Optimal Bandwidth	in logarithms		IHS Trans	Levels	1 if > National Median
	(1)	(2)	(3)	(4)	(5)
Majority Wins	-0.520***	-0.532***	-0.592***	-24.353***	-0.203***
	[0.173]	[0.063]	[0.202]	[3.487]	[0.050]
Robust bias-corrected p-values	0.002	0.000	0.003	0.000	0.000
Opt Bandwidth	0.064	0.037	0.064	0.052	0.051
effective number observations left	292	195	292	250	250
effective number observations right	405	252	405	339	332
Panel B: Ad Hoc Bandwidth 0.05	in logarithms		IHS Trans	Levels	1 if > National Median
	(1)	(2)	(3)	(4)	(5)
Majority Wins	-0.587***	-0.541***	-0.664***	-23.995***	-0.202***
	[0.189]	[0.057]	[0.220]	[3.440]	[0.050]
effective number observations left	247	247	247	247	247
effective number observations right	327	327	327	327	327
State x Year FE	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y
Population Weights	N	Y	N	Y	N

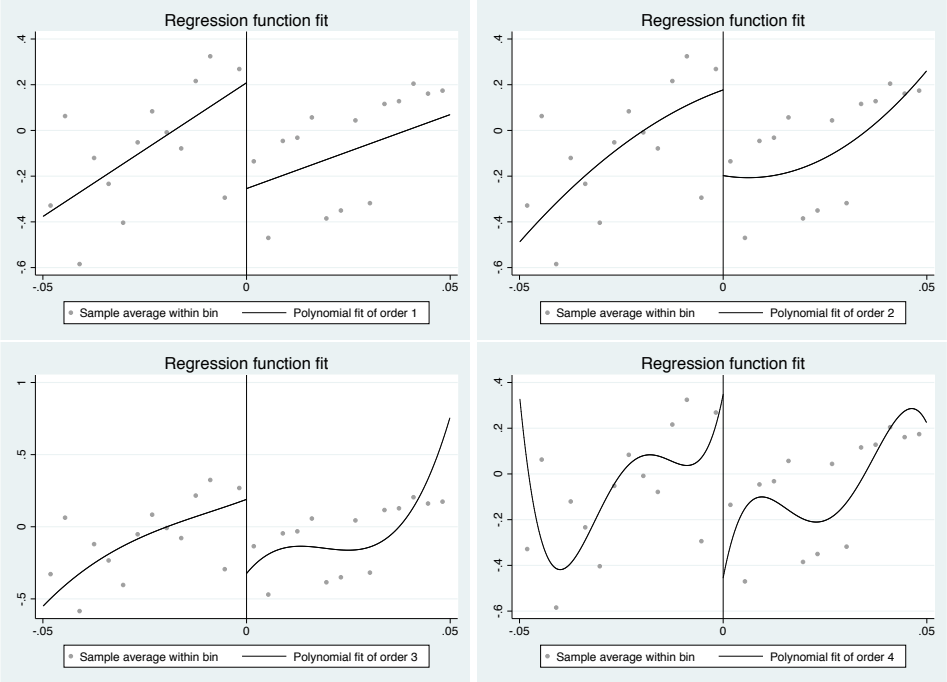
Note: The table shows the results for the RDD exercises that study the relation between political alignment and homicides at the municipal level. Majority wins is a dummy for whether the candidate of the party that governs the majority of neighboring municipalities is elected mayor. The dependent variables are variations of the homicide rates during the mandate (total homicides per 100,000 people). The dependent variable for the first two columns is the homicide rate during mandate in logarithms. Column 3 presents the results for estimations using as dependent variable an IHS transformation of the homicide rate, while column 4 shows the results for regressions when the variable of interest is the homicide rate without any transformation. Finally, in column 5 the dependent variable is a dummy that takes value equal to one, when the homicide rate of the municipality is above the national median. Panel A and Panel B present the results of the estimations using an Optimal Bandwidth and an Ad Hoc Bandwidth of 0.05, respectively. The sample includes municipalities where the party ruling the majority of neighboring municipalities won or lost by small margin (i.e. Bandwidth). The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1.

magnitudes when we weight our regressions by municipal population in column 2.[20] Additionally, point estimates in columns 3 and 4 show that our main results hold when we either use an hyperbolic sine inverse transformation of the dependent variable or no transformation at all, respectively. Remarkably, result in column 4 shows that political alignment reduces crime rates by 23 crimes per 100,000 people. This represents 15% and 35% of the mean and standard deviation of crime rates in our sample, respectively. Finally, point estimate in column 5 suggests that municipalities that are politically aligned with their neighbors are 20

[20] As discussed in Dell (2015) measurement error in homicide rates is likely to be more important in smaller municipalities. Therefore, weighting the regressions is a standard approach followed in the crime literature.

percent less likely to experience above-median homicide rates than municipalities that are not. Finally, Figure 4 depicts the fact that our main result on homicide rates do not qualitatively depend on the election of the degree of the polynomial used to construct the main point estimator.

FIGURE 4: RDD GRAPHICAL ANALYSIS: POLITICAL ALIGNMENT AND CRIME



Note: The figures represent RDD plots of homicides rate during mandate on vote margin for four different fits (represented clockwise): linear, quadratic , cubic, and quartic. The depicted variable is the homicide rate in logarithms. The set of controls from the main specification in the paper has been partialed out. The sample includes 2080 municipalities with elections in which the party that won or came second ruled the majority of neighboring municipalities.

To rule out the possibility that political alignment might be related to pre-existing crime patterns, in Table A.8 we replicate the analysis looking at the effect of political alignment on the homicide rate recorded in the three years prior to the election, which in principle should be affected by the posterior political shock. Indeed, we find no evidence of a relationship between pre-election homicide rate and post-election political alignment: in none of the specifications the coefficient of interest is significantly different from zero. This confirms that politically aligned municipalities experienced a decrease in homicide rate *after* the party

governing the majority of its neighbors had come to power, but not before.[21]

In Table A.7 we show that our results do not depend on the political affiliation of either the incumbent at the moment of the election or the mayor that wins the relevant election. Our coefficient of interest, which recovers the semi-elasticity political majority-homicide rates, ranges between -0.53 and -0.72 when either (or both) indicators of the political party of the incumbent or the elected major is controlled for. These magnitudes imply that municipalities that are politically aligned with their neighbors experience a reduction in homicide rates ranging between 41% and 52%.

Finally, in Table A.10 we explore two additional dimensions on the impact of political alignment on crime and cooperation in law enforcement and public safety: identities of the victims and judicial outcomes. We interpret these outcomes as alternative measures to understand the phenomenon under study. In column 1 to 3 we focus our analysis on crime by gender of the victim. Point estimates show that most of the reduction on homicide rates is explained by less men, specially young men (column 2) which are more prone to engage in criminal activities, getting killed. We do not find any evidence that political alignment affects domestic violence, a type of crime that is hardly affected by better cooperation between municipalities. We next show that political alignment positively affect the proportion of guilty-verdict homicide sentences over the total number of homicides (column 4) as well as the fraction of sentences reaches on homicide cases. These results may arguably point to an improvement in judicial performance when opportunities for inter-jurisdictional cooperation increase.

The results presented thus far indicate that municipalities that become politically aligned

[21] Figure 3 and point estimates in Table 2 can be interpreted as the first-stage in a fuzzy regression discontinuity design aiming at estimating the causal effect of agreements with politically aligned neighbors on crime. Noteworthy, a causal interpretation will require additional assumptions. Further, estimating the fuzzy regression discontinuity design would rely in smaller sample given that data on cooperation agreements is only available for the period of elections held from 2005 and 2008. Nonetheless, in Table A.9 we present estimates from the fuzzy regression discontinuity design. We focus in two treatment variables accounting for the existence of agreements with politically aligned neighboring municipalities: any type of agreement (columns 1 and 2) and public safety agreements (column 3 and 4). We find a strong impact of both type of agreements on homicide rates during mandate but, as expected, no significant impact on crime in previous mandate (odd columns in Table A.9). Importantly, the estimated coefficient for public safety agreement is twice as large than for any type of agreement.

with their neighbors experience significantly lower murder rates than those that do not. Although this pattern may be explained by the improved cooperation among local police forces when mayors of neighboring municipalities belong to the same party - documented above - it is also consistent with alternative explanations. For instance, if the party ruling most of a municipality's neighbors is also the incumbent, lower homicide rates may be due to more effective crime deterrence efforts by more experienced mayors rather than to improved cooperation. Alternatively, if the party that governs most of a municipality's neighbors is also in power at the state or at the federal level, lower crime might result from improved vertical cooperation of municipal police with state or federal authorities (as examined by Dell, 2015) rather than with municipal polices in neighboring jurisdictions. More in general, the close election of a mayor from a specific party may have an impact on crime prevention in a municipality for reasons other than better coordination with same-party neighboring mayors, e.g. because crime prevention is a priority for that party, or because it supports more effective anti-crime policies.

In order to rule out these alternative explanations we repeat the heterogeneity analysis implemented above for the case of cooperation agreements using homicide rates as dependent variable instead. Table 5 summarizes the results of this analysis. Results in columns 1 and 2 suggest that the negative impact of political alignment on crime is qualitatively similar regardless we focus on municipalities with the fraction of neighbors governed by the majoritarian party above or below its median value. Columns 3 and 4 reveal that the party ruling most of the neighbors also controlling the state government does not differentially affect the link between political alignment and crime. That is, our RDD point estimates are essentially identical regardless we perform our analysis with close elections in municipalities having the majority of neighbors aligned with the State government or not. An interesting pattern emerges when we take into account whether the party ruling most of the neighbors is the incumbent party in the municipality: while the negative link between political alignment holds regardless of this characteristic, the effect is substantially larger for the case in which the

challenger, instead of the incumbent, wins the election and becomes politically aligned with the majority of neighbors. In columns 7 to 10 of Table 5 we take into account whether the party ruling the majority of neighbors is the PRI (columns 7 and 8) or the PAN (columns 9 and 10). Two main patterns emerge: first, the point estimates confirm that the effect of political alignment with neighbors is not simply capturing alignment with the PAN - which at the time controlled the federal government - or with the other major party[22]. Second, while being aligned with the PAN does not determine our main results it does suggest a stronger effect of political alignment on crime when the majority is aligned with the Federal government (column 9). Indeed, our point estimate of interest is approximately 70% larger when we run our analysis with municipalities having neighbor majority aligned with the PAN than when such political alignment does not hold.[23]

Overall, these additional findings suggest that the impact of political alignment with neighbors on crime reduction is independent from the degree of political alignment with federal or state authorities, from the identity of the winning party, and from any incumbency effect, and further support the view that the observed reduction in crime mostly relates to improved horizontal rather than vertical cooperation.

5. Conclusion

To what extent should policy-making be decentralized in a federal system? And what are the contrasting forces that should be considered when determining the optimal degree of decentralization? The academic debate around these crucial questions has been traditionally

[22] That the effect of political alignment with neighbors remains qualitatively unchanged regardless the majority party being the PRI is especially reassuring. Indeed, since PRI mayors account for about two thirds of our sample, one potential concern is that political alignment with neighbors might be simply picking up the effect of having a mayor affiliated with the PRI. Our findings suggest, instead, that political alignment with neighbors is associated with a reduction in crime also in the sample of municipalities governed by other parties

[23] Note however that point estimates in columns 9 and 10 are not statistically different from each other mainly to the larger standard errors in the estimation of column 9 which relies in a substantially smaller sample size.

TABLE 5: PARTY ALIGNMENT AND CRIME: HETEROGENEITY

	Dep Variable: Homicide Rates during Mandate (in logarithms)									
	Fraction Majority in Neighbors		Majority Governs State		Majority is Incumbent		Majority is PRI		Majority is PAN	
	Above Median	Bellow Median	Yes	No	Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Majority Wins	-0.400*	-0.320	-0.548***	-0.455*	-0.262	-0.787***	-0.443***	-0.841***	-0.742***	-0.427***
	[0.218]	[0.202]	[0.156]	[0.261]	[0.211]	[0.275]	[0.165]	[0.284]	[0.284]	[0.154]
Robust bias-corrected p-values	0.044	0.118	0.001	0.069	0.197	0.006	0.007	0.001	0.001	0.005
Opt Bandwidth	0.064	0.079	0.069	0.073	0.069	0.067	0.066	0.076	0.087	0.066
effective number observations left	146	176	199	112	153	149	233	68	52	252
effective number observations right	190	259	286	154	219	212	302	130	117	325
State x Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note: The table shows the results for the RDD exercises that analyze heterogeneity in the effects of political alignment on homicides rates. The dependent variable is the homicide rate during mandate in logarithms. Columns 1 and 2 of the table show the results of exercises that study the effect of the treatment on municipalities where the fraction of neighbors governed by the majoritarian party is above and bellow the national median. Column 3, shows the effect on municipalities in which the majoritarian party was also the party governing the state, while column 4 shows the effect for those municipalities where this was not the case. Columns 5 and 6 present respectively the results of estimations of the effect in municipalities in which the majoritarian party was and was not, at the moment of election, the incumbent party. Finally, the last 4 columns shows the results of regressions that study the effect on municipalities for which PRI and PAN were and were not the party ruling the majority of the neighborhood. PRD analysis was excluded because of the number of observations. Panel A and Panel B present the results of the estimations using an Optimal Bandwidth and an Ad Hoc Bandwidth of 0.05, respectively. The sample includes municipalities where the party ruling the majority of neighboring municipalities won or lost by small margin (i.e. Bandwidth).The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1.

dominated by the fundamental trade-off between the necessity to adapt policies to local preferences, and the need to minimize possible inter-jurisdictional externalities (Oates, 1977). Any evaluation of the performance of a decentralized system, however, should also take into account how inter-jurisdictional cooperation - or the lack of it thereof - can make the local provision of public goods more or less effective. This aspect, however, has been largely disregarded in the literature.

This paper attempts to fill this gap by investigating the impact of horizontal inter-jurisdictional cooperation in one policy area in which this aspect is especially important: law-enforcement. In particular, we look at the context of Mexico and apply a Regression Discontinuity Design (RDD) to examine whether improved opportunities for cooperation in crime prevention among neighboring municipalities - proxied by their degree of political alignment between mayors - facilitates crime deterrence and results in lower crime rates. Our empirical strategy exploits the arguably exogenous discontinuity in the identity of the ruling party in a municipality given by its victory in a close election. To estimate the causal effect of political alignment, we compare the evolution of crime rates in municipalities where the party governing most of the municipality's neighbors won the election by a small margin to those in which it lost by a small margin. We find that municipalities that are politically aligned with their neighbors experience significantly lower homicide rates in the years following

the election. This effect is sizeable - 25 to 40% reduction in murder rates - robust to various specifications and, crucially, appears to be independent from the identity of the party in power in the neighboring municipalities. Furthermore, political alignment appears to have no impact on murder rates prior to the election, confirming that the treatment variable is not correlated with pre-election crime incidence. Finally, our findings do not provide support for alternative explanations based on the importance of political alignment with the ruling party at the state or federal levels, further confirming the importance of horizontal over vertical cooperation.

Our research contributes to the economic literature on crime by providing novel evidence that the effectiveness of decentralized law enforcement systems may crucially depend on the degree of inter-jurisdictional cooperation that can be supported under decentralization, and by emphasizing how this aspect can be crucial to determine whether a single state or national police force may be preferable to multiple uncoordinated local ones.

The evidence presented above also contributes to the broader debate on decentralization by raising awareness that a thorough evaluation of the costs and benefits of decentralization should not only take into account the potential inefficiencies due to the presence of geographic spillover effects, but also those related to the potential lack of horizontal cooperation. Indeed, our findings suggest that, unless proper instruments to foster horizontal inter-jurisdictional cooperation are put in place, a (non-cooperative) decentralized system might be inferior to a centralized one. To this regard, our contribution exemplifies the importance of using a network-based approach to study public good provision in decentralized systems (Acemoglu et al., 2013).

Finally, our research provides new insights with regard to the role of political parties in democratic systems by documenting how, in certain cases, by favoring coordination between local policy-makers, party discipline can contribute to mitigate the inefficiencies of poorly designed decentralized systems.

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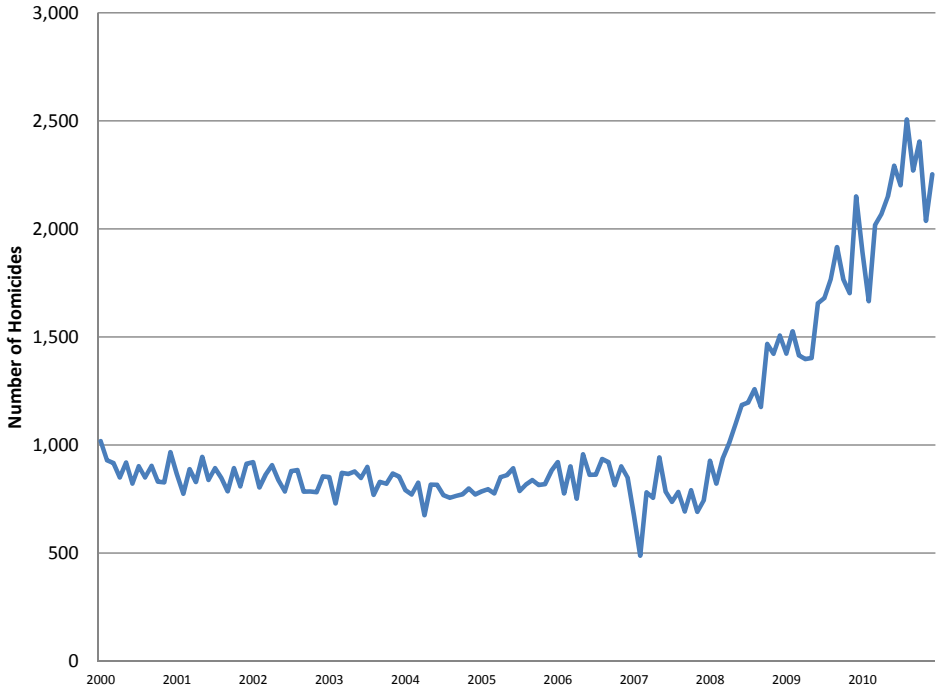
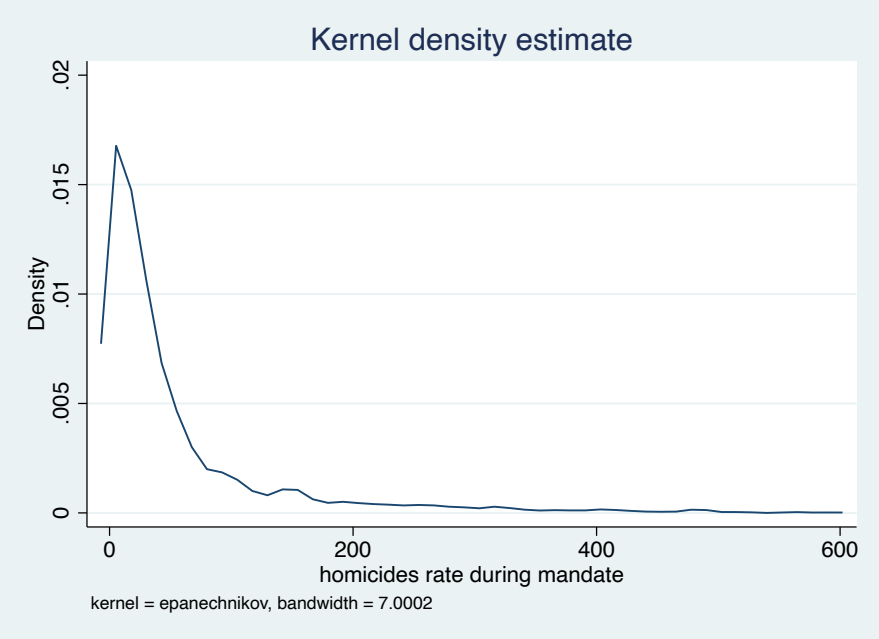
APPENDIX

FIGURE A.1: TOTAL MONTHLY HOMICIDES IN MEXICO (2000-2010)



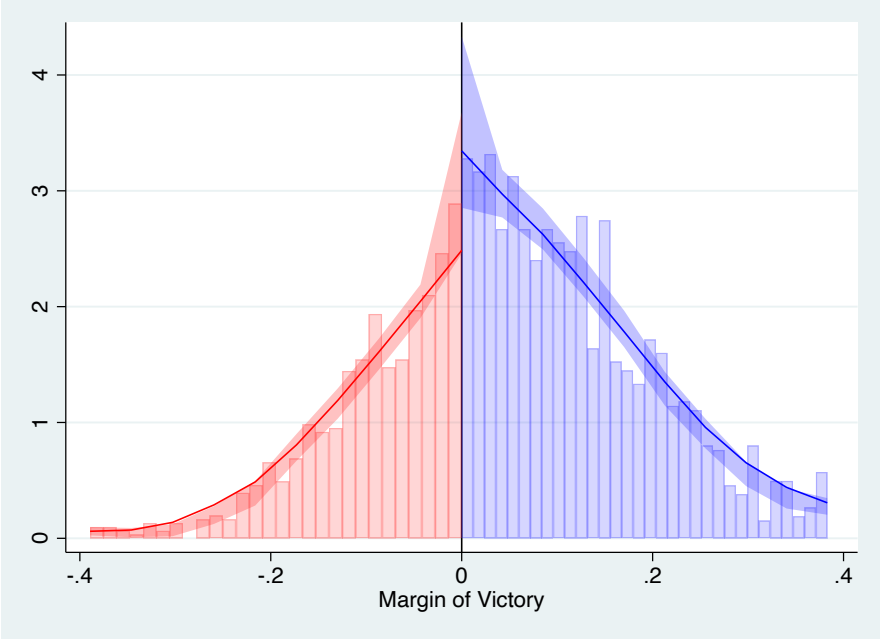
Note: The figure depicts the evolution of the monthly number of homicides recorded in Mexico between 2000 and 2010. Data from the Mexican Institute for Statistics and Geography (INEGI).

FIGURE A.2: DISTRIBUTION OF MUNICIPALITIES BY HOMICIDE RATE



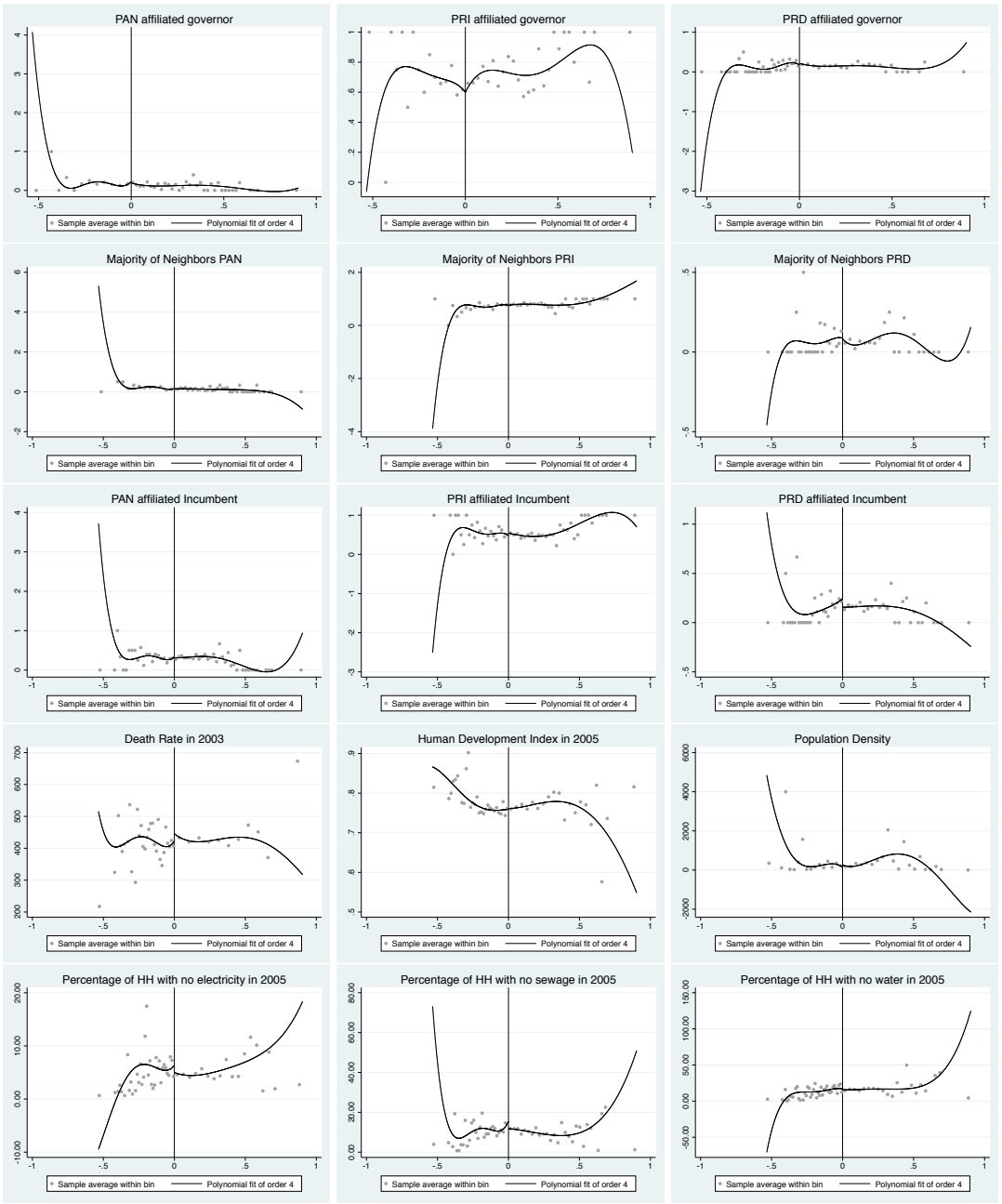
Note: The figure shows the kernel density estimation for the homicides rate during the three years mandate. Data from the Mexican Institute for Statistics and Geography (INEGI).

FIGURE A.3: MANIPULATION TEST



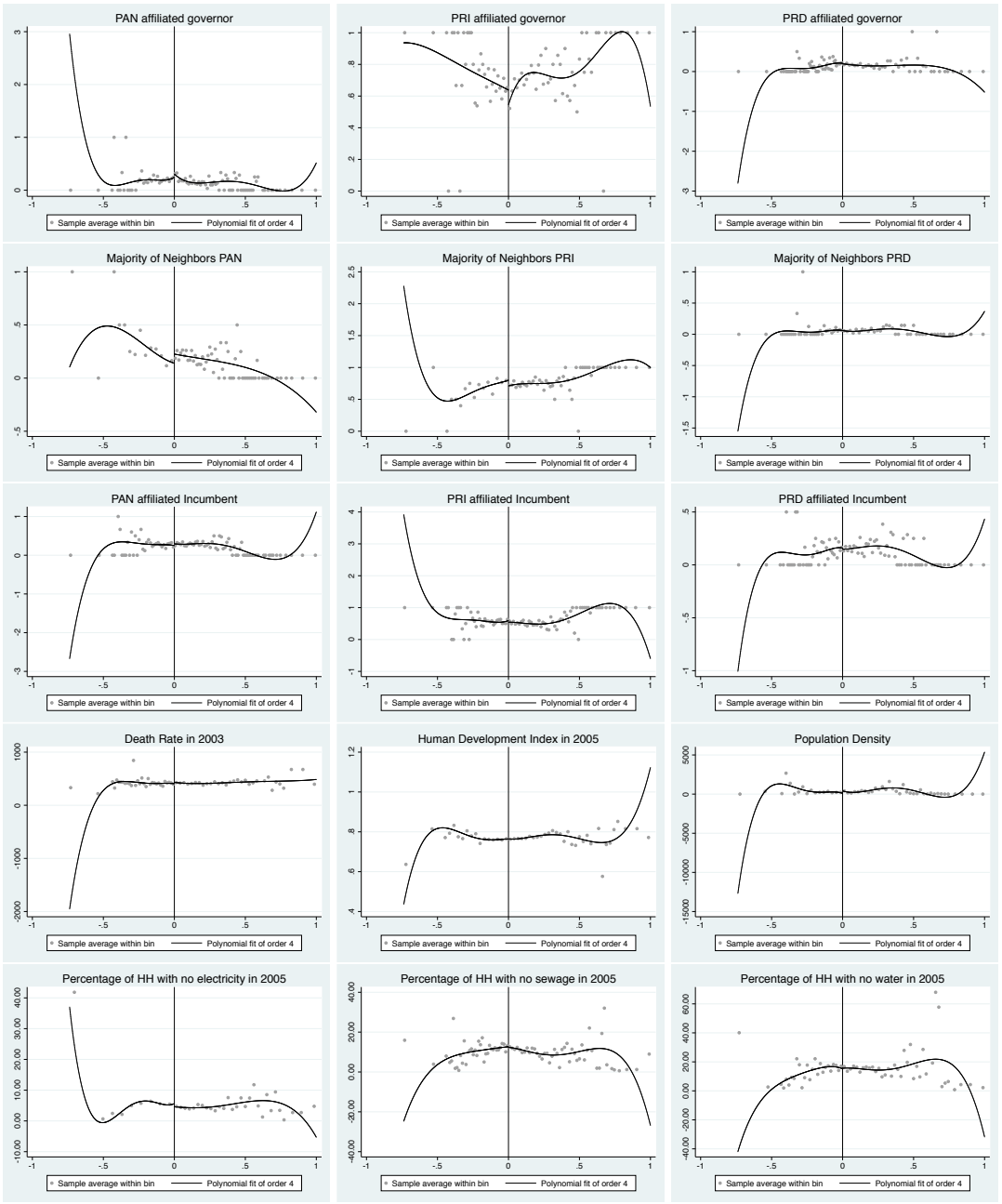
Note: The figure plots a kernel density function for margin of victory and manipulation testing using local polynomial density estimation. The sample includes all municipal elections in which the party that won or came second ruled the majority of neighboring municipalities. Data from the Mexican Research Center for Development (CIDAC).

FIGURE A.4: RDD FIGURES FOR COVARIATES: POLITICAL ALIGNMENT AND COOPERATION



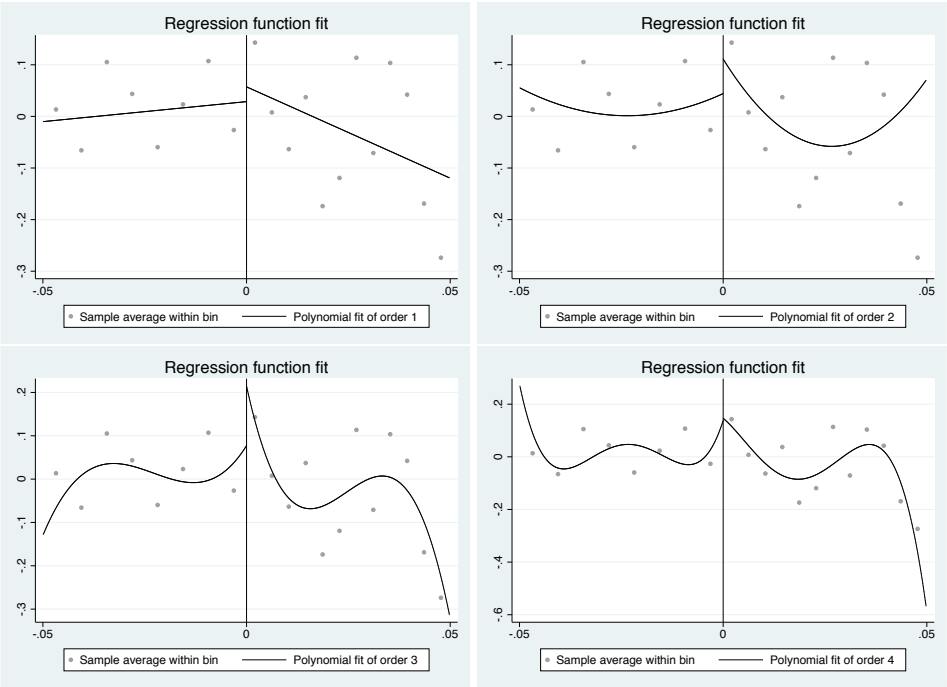
Note: The figures represent RDD plots of a set of different covariates (listed on the figure) on vote margin using a quartic polynomial to approximate the population conditional expectation functions for control and treated units. This sample includes 1115 municipalities, with elections between 2005 and 2008 in which the party that won or came second ruled the majority of neighboring municipalities.

FIGURE A.5: POLITICAL ALIGNMENT AND CRIME: RDD FIGURES FOR COVARIATES



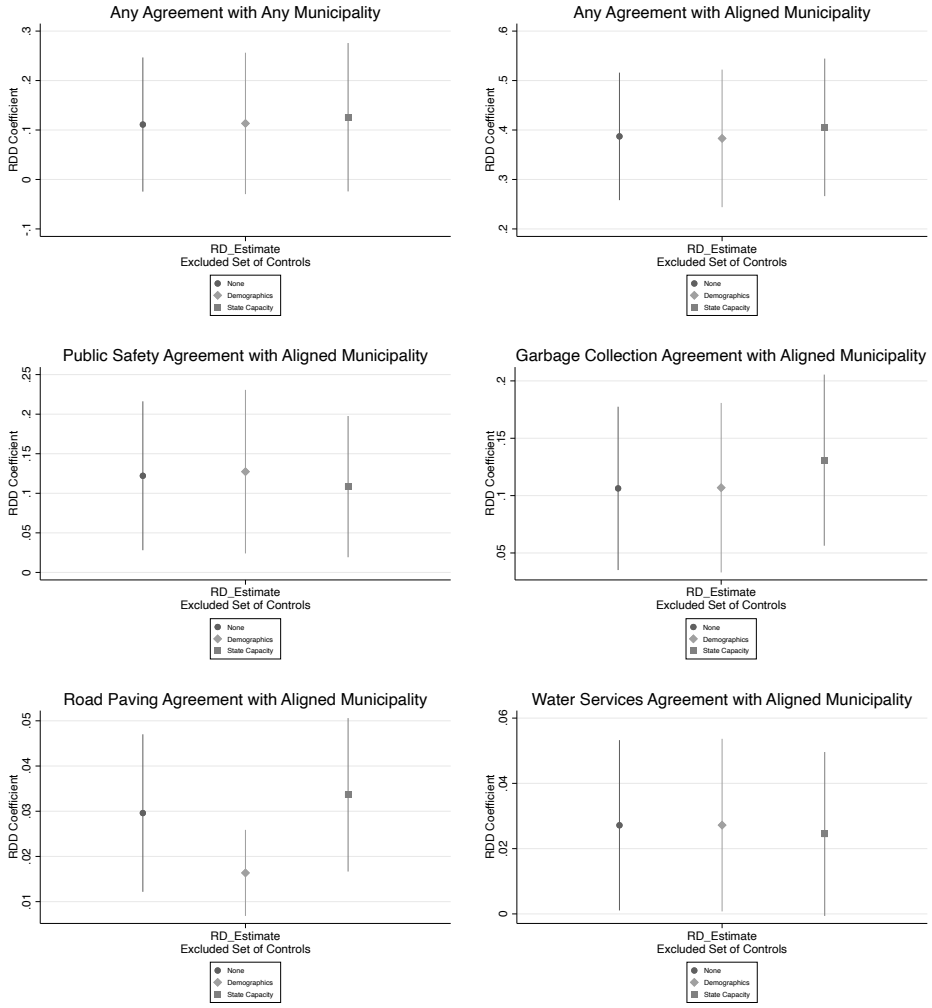
Note: The figures represent RDD plots of a set of different covariates (listed on the figure) on vote margin using a quartic polynomial to approximate the population conditional expectation functions for control and treated units. The sample includes 2080 municipalities with elections in which the party that won or came second ruled the majority of neighboring municipalities.

FIGURE A.6: RDD. GRAPHICAL ANALYSIS: POLITICAL ALIGNMENT AND GENERAL COOPERATION



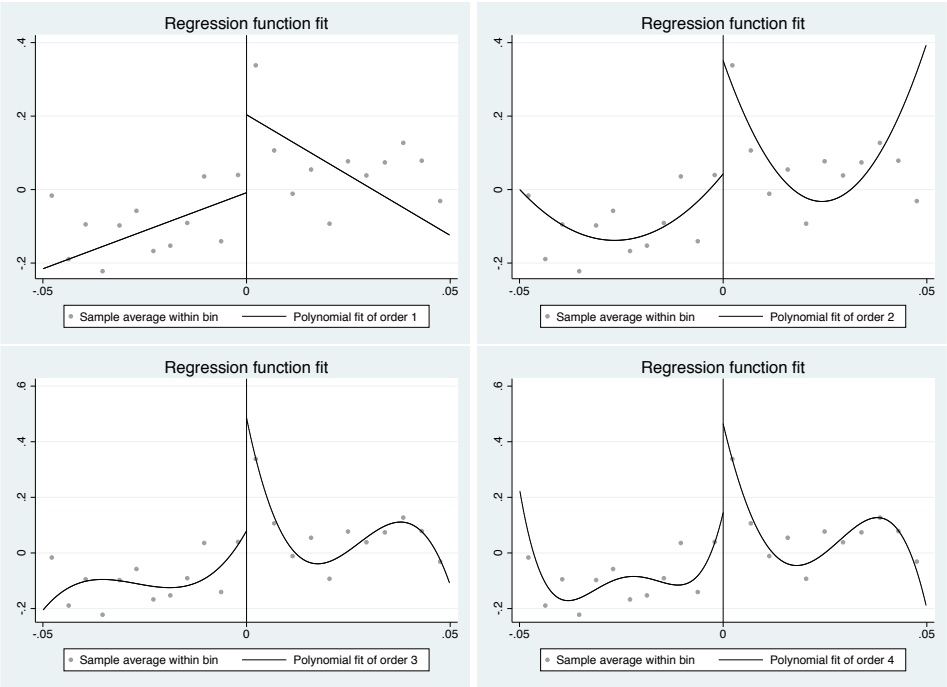
Note: The figures represent RDD plots of inter-municipal agreements on vote margin for four different fits: linear (Fig. A), quadratic (Fig. B), cubic (Fig. C), and quartic (Fig. D). The variable for agreements is a dummy that equals one when there was at least one agreement with any neighbor in 2008. The set of controls from the main specification in the paper has been partialed out. The sample includes 1115 municipalities, with elections between 2005 and 2008 in which the party that won or came second ruled the majority of neighboring municipalities.

FIGURE A.7: ROBUSTNESS TO EXCLUSION OF CONTROLS (COOPERATION)



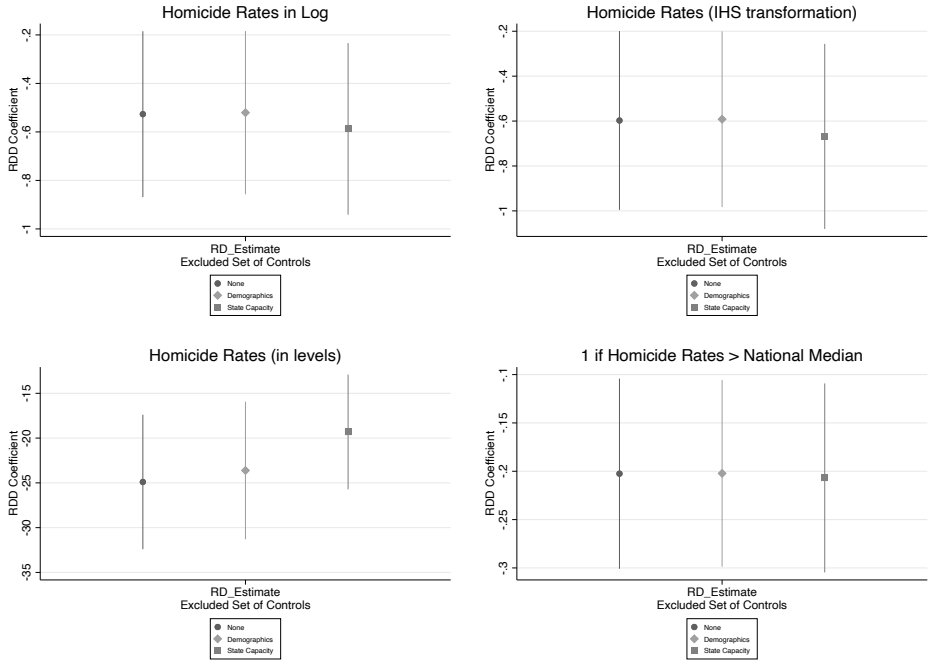
Note: Figures plot the RDD coefficients and the 95% confidence intervals from separate regressions when omitting one set of controls at a time for our cooperation analysis. Estimations use an optimal bandwidth. Each figure shows the robustness analysis for a different outcome variable

FIGURE A.8: RDD. GRAPHICAL ANALYSIS: POLITICAL ALIGNMENT AND COOPERATION IN PUBLIC SAFETY



Note: The figures represent RDD plots of public safety cooperation with political allies on vote margin for four different fits: linear (Fig. A), quadratic (Fig. B), cubic (Fig. C), and quartic (Fig. D). The variable for agreements is a dummy that equals 1 when there was at least one agreement in public safety with a political ally in 2008. The set of controls from the main specification in the paper has been partialed out. The sample includes 1115 municipalities, with elections between 2005 and 2008 in which the party that won or came second ruled the majority of neighboring municipalities.

FIGURE A.9: ROBUSTNESS TO EXCLUSION OF CONTROLS (CRIME)



Note: Figures plot the RDD coefficients and the 95% confidence intervals from separate regressions when omitting one set of controls at a time for our crime analysis. Estimations use an optimal bandwidth. Each figure shows the robustness analysis for a different outcome variable

TABLE A.1: YEARS OF ELECTIONS BY STATE

State	Years
Aguascalientes	2007 / 2010
Baja California	2007 / 2010
Baja California Sur	2008 / 2011
Campeche	2006 / 2009
Coahuila de Zaragoza	2005 / 2009
Colima	2006 / 2009
Chiapas	2007 / 2010
Chihuahua	2007 / 2010
Distrito Federal	2006 / 2009
Durango	2007 / 2010
Guanajuato	2006 / 2009
Guerrero	2008 / 2012
Hidalgo	2008 / 2011
Jalisco	2006 / 2009
Mexico	2006 / 2009
Michoacan de Ocampo	2007 / 2011
Morelos	2006 / 2009
Nayarit	2008 / 2011
Nueva Leon	2006 / 2009
Puebla	2007 / 2010
Queretaro	2007 / 2010
Quintana Roo	2008 / 2010
San Luis Potosi	2006 / 2009
Sinaloa	2007 / 2010
Sonora	2006 / 2009
Tabasco	2006 / 2009
Tamaulipas	2007 / 2010
Tlaxcala	2007 / 2010
Veracruz de Ignacio de la Llave	2007 / 2010
Yucatan	2007 / 2010
Zacatecas	2007 / 2010

The table shows the set of elections that we study for the municipalities of each state. Oaxaca is excluded from the analysis. The samples for our main analyses are conformed by a subset of these municipal elections, i.e. those in which the party that won or came second ruled the majority of neighboring municipalities.

TABLE A.2: POLITICAL ALIGNMENT, COOPERATION AND CRIME: SAMPLE AND NON SAMPLE COMPARISON

Panel A: Cooperation Sample

	Mean Sample (1)	Mean Non Sample (2)	Difference (3)	t -stat on Mean Differences (4)
Homicide Rates Previous Mandate (per 100,000)	32.695	36.848	4.153	0.986
Homicide Rates During Mandate (per 100,000)	45.093	71.039	25.946	2.519
Logs of Homicide Rates Previous Mandate (per 100,000)	2.442	2.646	0.204	1.958
Logs of Homicide Rates During Mandate (per 100,000)	2.745	3.090	0.345	3.116
1 if homicide rates in previous mandate >national median in previous mandate	0.464	0.509	0.045	1.396
1 if homicide rates during mandate >national median during mandate	0.500	0.522	0.022	0.689
PAN affiliated governor	0.156	0.188	0.032	1.283
PRI affiliated governor	0.645	0.702	0.057	1.929
PRD affiliated governor	0.199	0.157	-0.042	-1.753
Majority of Neighbors PAN	0.145	0.205	0.060	2.342
Majority of Neighbors PRI	0.779	0.738	-0.041	-1.440
Majority of Neighbors PRD	0.072	0.055	-0.018	-1.171
PAN affiliated incumbent	0.312	0.271	-0.041	-1.422
PRI affiliated incumbent	0.518	0.549	0.031	0.970
PRD affiliated incumbent	0.181	0.147	-0.034	-1.453
Area (sq km)	1225.233	1233.477	8.244	0.043
Population Density	198.044	361.896	163.852	1.823
Death Rate in 2003	428.256	413.360	-14.896	-1.248
Human Development Index in 2005	0.760	0.770	0.009	2.210
Percentage of HH with no sewage in 2005	12.222	10.812	-1.410	-1.624
Percentage of HH with no electricity in 2005	5.250	4.834	-0.415	-0.844
Percentage of HH with no water in 2005	16.342	15.398	-0.944	-0.799
Observations	276	1804	2080	

Panel B: Crime Sample

	Mean Sample (1)	Mean Non Sample (2)	Difference (3)	t -stat on Mean Differences (4)
Homicide Rates Previous Mandate (per 100,000)	39.471	35.078	-4.393	-1.374
Homicide Rates During Mandate (per 100,000)	69.470	66.860	-2.611	-0.333
Logs of Homicide Rates Previous Mandate (per 100,000)	2.562	2.641	0.078	0.992
Logs of Homicide Rates During Mandate (per 100,000)	3.040	3.045	0.005	0.062
1 if homicide rates in previous mandate >national median in previous mandate	0.483	0.511	0.028	1.145
1 if homicide rates during mandate >national median during mandate	0.516	0.521	0.005	0.204
PAN affiliated governor	0.230	0.166	-0.064	-3.375
PRI affiliated governor	0.634	0.718	0.084	3.713
PRD affiliated governor	0.192	0.152	-0.040	-2.186
Majority of Neighbors PAN	0.188	0.201	0.012	0.634
Majority of Neighbors PRI	0.753	0.740	-0.012	-0.571
Majority of Neighbors PRD	0.057	0.057	-0.000	-0.034
PAN affiliated incumbent	0.279	0.275	-0.004	-0.175
PRI affiliated incumbent	0.545	0.545	-0.000	-0.006
PRD affiliated incumbent	0.159	0.149	-0.009	-0.519
Area (sq km)	1265.115	1219.907	-45.208	-0.314
Population Density	252.361	373.678	121.317	1.777
Death Rate in 2003	419.751	413.656	-6.095	-0.672
Human Development Index in 2005	0.764	0.770	0.006	1.906
Percentage of HH with no sewage in 2005	12.386	10.469	-1.917	-2.911
Percentage of HH with no electricity in 2005	4.866	4.899	0.032	0.086
Percentage of HH with no water in 2005	15.654	15.474	-0.180	-0.200
Observations	574	1506	2080	

Note: This table reports mean values for the used variables both for the sample of our main analysis (Column 1, Mean Sample) and for the rest of the municipalities in which the party that won or came second in the election ruled the majority of neighboring municipalities (Column 2, Mean Non Sample). It also reports the difference in the means of each variable between these two groups and the t-stat on this difference (Column 3 and 4 respectively). Panel A shows the results for the sample used in our analysis of cooperation, which includes all municipal close elections (i.e less than five percent margin) between 2005 and 2008 in which the party that won or came second ruled the majority of neighboring municipalities (276 observations). Panel B reports the values obtained for the sample used in our crime analysis, which considers all the municipal close elections (i.e less than five percent margin) in which the party that won or came second ruled the majority of neighboring municipalities (574 observations). *** p<0.01, ** p<0.05, * p<0.1.

TABLE A.3: PARTY ALIGNMENT AND INTER-MUNICIPAL COOPERATION: OLS REGRESSIONS

Dependent variable: Dummy=1 if there is an agreement with a neighbor						
	Any Area Any Neighbor	Any Area Aligned	Public Safety Aligned	Water Services Aligned	Road Paving Aligned	Garbage Collection Aligned
	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	-0.024	0.257***	0.058***	0.019	0.011*	0.034*
	[0.034]	[0.050]	[0.021]	[0.012]	[0.005]	[0.019]
R-squared	0.320	0.297	0.180	0.108	0.039	0.080
Observations	833	808	744	744	744	744

Note: The table shows the results for the OLS regressions that study the effect of political alignment in cooperation between municipalities during 2008. The sample includes all the elections from our first wave (between 2005 and 2008 - excluding Municipalities from the State of Oaxaca).Majority wins is a dummy for whether the candidate of the party that governs the majority of neighboring municipalities is elected mayor. The dependent variables are different dummies that equal one if at least on agreement of certain type was reported for 2008. Column 1 presents the results for a dummy that equals one when the municipality reported an agreement for cooperation in any domain with a neighbor. Column 2 shows the results for a dummy that identify if there was an agreement, in any domain, with a politically-allied neighbor. Column 3, 4, 5 and 6 present the results for agreements in specific public services with politically-allied neighbors. The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1.

TABLE A.4: PARTY ALIGNMENT AND COOPERATION: HETEROGENEITY (0.05 AD HOC BANDWIDTH)

	Dep Variable: dummy=1 if there is any agreement with political aligned neighbor									
	Fraction Majority in Neighbors		Majority Governs State		Majority is Incumbent		Majority is PRI		Majority is PAN	
	Above Median	Bellow Median	Yes	No	Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Majority Wins	0.401***	0.100	0.281***	0.740***	0.200	0.623***	0.442***	0.292**	0.373*	0.413***
	[0.113]	[0.106]	[0.100]	[0.077]	[0.124]	[0.094]	[0.072]	[0.147]	[0.213]	[0.064]
effective number observations left	37	40	53	24	38	39	58	19	14	63
effective number observations right	50	66	79	37	62	54	85	31	21	95
State x Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note: The table shows the results for the RDD exercises that analyze heterogeneity in the effects of political alignment on cooperation. In The dependent variable is a dummy that equals one when the municipality reported that in 2008 there was at least one agreement, in any public service or domain, with a politically-allied neighbor. Columns 1 and 2 of the table show the results of exercises that study the effect of the treatment on municipalities where the fraction of neighbors governed by the majoritarian party is above and bellow the national median. Column 3, shows the effect on municipalities in which the majoritarian party was also the party governing the state, while column 4 shows the effect for those municipalities where this was not the case. Columns 5 and 6 present respectively the results of estimations of the effect in municipalities in which the majoritarian party was and was not, at the moment of election, the incumbent party. Finally, the last 4 columns shows the results of regressions that study the effect on municipalities for which PRI and PAN were and were not the party ruling the majority of the neighborhood. PRD analysis was excluded because of the number of observations. The sample includes municipalities that had elections in our first wave (between 2005 and 2008) in which the party ruling the majority of neighboring municipalities won and lost by small margin (i.e. Bandwidth).The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1.

TABLE A.5: PARTY ALIGNMENT AND CRIME:OLS REGRESSIONS

	Dep Variable: Homicide Rates during Mandate				
	in logarithms		IHS Trans	Levels	1 if > National Median
	(1)	(2)	(3)	(4)	(5)
Majority Wins	0.027	0.040	0.033	9.438	-0.022
	[0.080]	[0.058]	[0.092]	[6.060]	[0.024]
R-squared	0.490	0.687	0.470	0.323	0.378
Observations	2072	2072	2072	2072	2072
State x Year FE	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y
Population Weights	N	Y	N	Y	N

Note: The table shows the results for the OLS regressions that study the effect of political alignment in crime. Majority wins is a dummy for whether the candidate of the party that governs the majority of neighboring municipalities is elected mayor. The dependent variables are variations of the homicide rates during the mandate (total homicides per 100.000 people). The dependent variable for the first four columns is the homicide rate during mandate in logarithms. Column 5 presents the results for estimations using as dependent variable an IHS transformation of the homicide rate, while column 6 shows the results for regressions when the variable of interest is the homicide rate without any transformation. Finally, in column 7 the dependent variable is a dummy that takes value equal to one, when the homicide rate of the municipality is above the national median. The sample of analysis is a subset of all municipal elections between 2005 and 2010, i.e. those in which the party that won or came second ruled the majority of neighboring municipalities. Municipalities from the State of Oaxaca are excluded. The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1..

TABLE A.6: PARTY ALIGNMENT AND CRIME: HETEROGENEITY (0.05 AD HOC BANDWIDTH)

	Dep Variable: Homicide Rates during Mandate (in logarithms)									
	Fraction Majority in Neighbors		Majority Governs State		Majority is Incumbent		Majority is PRI		Majority is PAN	
	Above Median	Bellow Median	Yes	No	Yes	No	Yes	No	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Majority Wins	-0.293	-0.624***	-0.601***	-0.728**	-0.404*	-0.981***	-0.421**	-1.489***	-1.708***	-0.428**
	[0.230]	[0.216]	[0.174]	[0.366]	[0.241]	[0.284]	[0.193]	[0.212]	[0.258]	[0.179]
effective number observations left	120	127	162	85	120	127	191	56	40	207
effective number observations right	154	173	215	112	167	160	241	86	68	259
State x Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note: The table shows the results for the RDD exercises that analyze heterogeneity in the effects of political alignment on homicides rates. The dependent variable is the homicide rate during mandate in logarithms. Columns 1 and 2 of the table show the results of exercises that study the effect of the treatment on municipalities where the fraction of neighbors governed by the majoritarian party is above and bellow the national median. Column 3, shows the effect on municipalities in which the majoritarian party was also the party governing the state, while column 4 shows the effect for those municipalities where this was not the case. Columns 5 and 6 present respectively the results of estimations of the effect in municipalities in which the majoritarian party was and was not, at the moment of election, the incumbent party. Finally, the last 4 columns shows the results of regressions that study the effect on municipalities for which PRI and PAN were and were not the party ruling the majority of the neighborhood. PRD analysis was excluded because of the number of observations. The sample includes municipalities where the party ruling the majority of neighboring municipalities won or lost by small margin (i.e. Bandwidth).The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1.

TABLE A.7: PARTY ALIGNMENT AND CRIME: INCUMBENT AND WINNING PARTY FIXED EFFECTS

Dep Variable: Homicide Rates during Mandate (in logarithms)				
Panel A: Optimal Bandwidth	(1)	(2)	(3)	(4)
Majority Wins	-0.527***	-0.539***	-0.643***	-0.657***
	[0.174]	[0.169]	[0.175]	[0.167]
Robust bias-corrected p-values	0.002	0.001	0.000	0.000
Opt Bandwidth	0.063	0.063	0.058	0.061
effective number observations left	292	292	273	283
effective number observations right	400	402	369	387
Panel B: Ad Hoc Bandwidth 0.05	(1)	(2)	(3)	(4)
Majority Wins	-0.587***	-0.607***	-0.680***	-0.718***
	[0.189]	[0.183]	[0.182]	[0.176]
effective number observations left	247	247	247	247
effective number observations right	327	327	327	327
State x Year FE	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y
Incumbent Party FE	N	Y	N	Y
Winning Party FE	N	N	Y	Y

Note: The table shows the results for the RDD exercises that study the effect of political alignment in crime controlling for the political affiliation of the incumbent at the moment of the election and of the mayor that wins the relevant election. The second and third columns respectively show the results of regressions with fixed effects for each one of these characteristics. The last uses both variables as fixed effects simultaneously. The dependent variable is the homicide rate during the mandate (in logarithms). Panel A and Panel B present the results of the estimations using an Optimal Bandwidth and an Ad Hoc Bandwidth of 0.05, respectively. The sample includes municipalities where the party ruling the majority of neighboring municipalities won or lost by small margin (i.e. Bandwidth). The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets *** p<0.01, ** p<0.05, * p<0.1.

TABLE A.8: PARTY ALIGNMENT AND PREVIOUS-MANDATE CRIME: REGRESSION DISCONTINUITY DESIGN

Dep Variable: Homicide Rates during Previous Mandate (in logarithms)				
	(1)	(2)	(3)	(4)
Majority Wins	-0.185	0.147	-0.282	0.160
	[0.149]	[0.197]	[0.191]	[0.301]
Robust bias-corrected p-values	0.190	0.524		
Opt Bandwidth	0.0899	0.0870	0.05	0.05
effective number observations left	370	167	247	111
effective number observations right	549	275	327	165
State x Year FE	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y
Election Wave	All	First	All	First

Note: The table shows the results for the RDD exercises that study the effect of political alignment during mandate in the homicide rates in the previous administration. The dependent variable is the homicides rate during the three-years previous mandate (in logarithms). The sample of elections for the first and third column is the sample for our main RDD crime analysis, which considers all the municipal elections in which the party that ruled the majority of neighboring municipalities won or lost by small margin (i.e Bandwidth). In the second and fourth columns we show the results just for the first wave of elections of the crime sample, i.e. those which took place between 2005 and 2008. The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage,electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets. *** p< 0.01, ** p< 0.05, * p< 0.1.

TABLE A.9: COOPERATION AND CRIME: FUZZY REGRESSION DISCONTINUITY DESIGN

	Dep Variable: Homicide Rates (in logarithms)			
	During Mandate	Previous Mandate	During Mandate	Previous Mandate
Panel A: Optimal Bandwidth	(1)	(2)	(3)	(4)
Agreement with Politically Aligned	-2.600***	-0.384	-6.954**	-0.876
	[0.681]	[0.709]	[2.984]	[2.371]
Robust bias-corrected p-values	0.00	0.584	0.038	0.741
Opt Bandwidth	0.0688	0.0807	0.0765	0.0809
effective number observations left	98	111	103	108
effective number observations right	165	198	172	181
Panel B: Ad Hoc Bandwidth 0.05	(1)	(2)	(3)	(4)
Agreement with Politically Aligned	-3.269***	-0.291	-7.264*	-0.294
	[1.058]	[1.186]	[3.924]	[3.028]
effective number observations left	77	77	73	73
effective number observations right	116	116	107	107
Type of Agreement	Any		Public Safety	
State x Year FE	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y

Note: The table shows the results for the fuzzy RDD exercises that study the effect of having an agreement with aligned municipalities in homicide rates during mandate (odd columns) and in the previous administration (eve columns). The dependent variable is computed taking three-years periods. Agreement with Politically Aligned takes value of 1 if at least one agreement with a neighboring municipality of the same party is operative. The set of demographic controls includes population density, human development index in 2005, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage,electricity, and water in 2005. Robust standard errors clustered at the state x year level in brackets. *** p< 0.01, ** p< 0.05, * p< 0.1.

TABLE A.10: PARTY ALIGNMENT AND CRIME: VICTIMS AND SENTENCES

	Homicide rates in logarithms				Guilty Sentences	Sentences
	Young Men	Men	Women	Domestic Violence	per Homicides	per prosecutions
Panel A: Optimal Bandwidth	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	-0.612***	-0.523***	-0.157	-0.023	0.186**	0.221***
	[0.176]	[0.168]	[0.098]	[0.067]	[0.073]	[0.082]
Robust bias-corrected p-values	0.000	0.002	0.122	0.720	0.012	0.011
Opt Bandwidth	0.053	0.063	0.079	0.077	0.057	0.054
effective number observations left	258	292	329	335	196	184
effective number observations right	349	397	472	481	264	249
Panel B: Ad Hoc Bandwidth 0.05	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	-0.610***	-0.576***	-0.195	-0.017	0.171**	0.207**
	[0.180]	[0.186]	[0.125]	[0.082]	[0.075]	[0.086]
effective number observations left	247	247	247	247	177	173
effective number observations right	327	327	327	327	233	229
State x Year FE	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y

Note: This table shows the results for the exercises that study the effect of political alignment on specific types of homicides and on the judicial process of homicides. The first three columns of Panel A present respectively the effect of alignment in the rates of homicides in which the victim was a young man, a man of any age and a woman. The dependent variables for these columns is the pertinent homicide rate in logarithms. The fourth column shows the effect of alignment in the rate of homicides with domestic violence (in logarithms). Finally, columns five and six respectively show the effect of alignment on the number of guilty-verdict homicide sentences divided by the total number of homicides, and on the number of homicides sentences divided by the number of homicide prosecutions. Panel B presents the results for an Ad Hoc Bandwidth of 0.05. Robust standard errors clustered at the state x year level in brackets. The sample includes municipalities where the party ruling the majority of neighboring municipalities won or lost by small margin (i.e. Bandwidth). The set of demographic controls includes population density, human development index in 2003, death rates in 2003, and total area of municipality. State capacity controls are dummies for access to sewage, electricity, and water in 2005.*** p<0.01, ** p<0.05, * p<0.1.