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Party politics, inter-jurisdictional cooperation and law enforcement: Evidence from Mexico☆

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HIGHLIGHTS

- Investigates how partisan politics shapes inter-jurisdictional cooperation and local public goods in federal systems, focusing on law enforcement in Mexico.
- Uses Regression Discontinuity Design (RDD) in close municipal elections to identify causal effects of party control on cross-municipal cooperation.
- Key finding: municipalities whose neighboring party in power barely won vs. barely lost show higher cooperation on law enforcement with neighbors.
- The boost in cooperation is strongest during periods of widespread violence, suggesting that urgency amplifies cross-border collaboration.
- Increased neighborly cooperation leads to improved crime prevention and a significant reduction in homicide rates.

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ABSTRACT

We study how partisan politics affect inter-jurisdictional cooperation and public good provision in federal systems. We focus on law enforcement in Mexico, a country marked by high violent crime and strong partisan cleavages. Using a Regression Discontinuity Design in close municipal elections, we show that municipalities where the party in power in most neighbors barely won are more likely to cooperate with their neighbors on law enforcement than those where it barely lost, especially during periods of widespread violence. Such cooperation, in turn, improves crime prevention and significantly reduces homicide rates, with effects increasing the more neighbors are governed by the same party. These results hold regardless of party identity, incumbency, or cooperation with federal or state authorities. Overall, our findings indicate that while horizontal cooperation can improve local public goods in the presence of geographical spillovers, partisan divisions may hinder this process.

«[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 14, 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

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spillovers (Oates, 1977, 1999, Gonzalez-Navarro, 2013, Knight, 2013).[1]

One aspect that can alter the terms of this trade-off relates to possible synergies from *horizontal* inter-jurisdictional cooperation, that is, between jurisdictions at the same administrative level. Indeed, in the presence of spatial spillovers, cooperation among local authorities can enhance the provision of local public goods, while its absence may exacerbate the inefficiencies associated with decentralization.

In competitive democracies, however, party loyalty can push politicians to prioritize actions that mainly serve their own party's constituents. When opportunities for collaboration arise whose benefits may extend to jurisdictions governed by other parties, leaders may fail to take them, leading to under-provision. This concern is especially relevant today, given the rise of political polarization and partisan animosity in many countries (Iyengar et al., 2019; Wagner, 2024).

One area where this risk is especially acute is law enforcement. Indeed, in fragmented public security systems, effective crime reduction hinges on coordination and information-sharing among local police forces. This need is particularly pressing in countries where policing is highly decentralized, such as the US, compared to more centralized systems, such as France or Brazil, where law enforcement is largely handled by national or state-level forces. Mexico, the country our study focuses on, stands out for its exceptionally decentralized policing system, with over 3000 distinct forces (Solar, 2012). In such a fragmented context, the lack of cooperation among mayors from rival parties can have serious consequences.

The benefits of inter-jurisdictional cooperation, and their implications for law enforcement, have been widely examined in the criminal justice and public administration literature (McDavid, 1974; Ostrom et al., 1978; Parks, 2009), but largely overlooked by economists. A notable exception is Loeper's theoretical work on coordination in federal systems (Loeper, 2011).[2]

In this paper, we examine how political alignment between neighboring jurisdictions can foster horizontal cooperation and, in turn, improve public goods provision. Our focus is on municipal governments in Mexico and cooperation in law enforcement. We first show that neighboring municipalities governed by the same party were more likely to cooperate, particularly during periods of intense crime. We then document that such cooperation significantly reduced homicide rates, especially between 2006 and 2012, when violence in Mexico escalated sharply.

Studying the effect of party alignment between neighbors on cooperation, and its consequences for public good provision is challenging because these outcomes are likely correlated with unobservable factors. To address this concern, we adapt standard regression discontinuity techniques to a spatial setting. Specifically, we exploit quasi-random variation in party alignment between neighboring municipalities by using a Regression Discontinuity Design (RDD) in close elections (Imbens and Lemieux, 2008; Lee and Lemieux, 2010). In practice, we compare the evolution of cooperation and violent crime (i.e., homicides) between municipalities where the party governing 50 % or more of a municipality's neighbors (henceforth labeled as the "Neighbor-Majority-Party", or NMP) barely won and those where it barely lost. The key intuition is that, in a highly polarized political environment such as Mexico, cooperation in law enforcement is more likely among municipalities ruled by the same party, and that such cooperation can help reduce violent crime.

As with any RDD, our identification strategy rests on the assumption that random factors–such as unexpected news events or election-day weather–can influence electoral outcomes in a municipality at the margin. In elections decided by a narrow margin, the victory of the NMP is thus as good as random, and provides arguably exogenous variation in political alignment with neighbors, and, consequently, in the potential for local cooperation. The spatial nature of our application requires one additional assumption. Specifically that, conditional on a close election in a given municipality, whether the NMP barely wins or loses is uncorrelated with electoral dynamics in neighboring municipalities; this ensures that each close election constitutes a separate quasi-experiment. We provide evidence consistent with this assumption in the empirical analysis.

We apply this approach to close municipal elections held between 2000 and 2012. We first show that municipalities where the NMP narrowly won were significantly more likely to cooperate with neighbors than those where it narrowly lost. Party alignment raises the probability of inter-municipal cooperation particularly in the domains of public safety, waste collection, and water management. The effect is sizable: a close NMP victory increases the likelihood of a formal cooperation agreement with politically aligned neighbors in any domain by about 38 percentage points. For public safety, the effect is especially pronounced between 2006 and 2012, when homicide rates in Mexico rose sharply, arguably increasing the returns to cooperation in this area. These results hold regardless of which party constitutes the NMP, suggesting they are not driven by party-specific factors. We also explore how horizontal cooperation interacts with vertical cooperation, i.e., with state and federal governments. The evidence points to both complementarities and substitutabilities across levels: vertical alignment fosters overall cooperation within a local majority, whereas its absence pushes municipalities to form agreements with aligned neighbors, particularly in public safety.

We next turn to the impact of party alignment on crime. Results indicate that municipalities where the NMP candidate barely won experienced significantly lower homicide rates in the following mandate than those where the NMP barely lost. The effect is large: alignment with the majority of neighbors reduces homicide rates by about 24 %, equivalent to 15 fewer homicides per 100,000 people, or roughly 30 % of a standard deviation in our sample. Importantly, party alignment with neighbors is uncorrelated with pre-election crime rates and other socio-economic outcomes. Additional evidence supports the view that the effect operates through improved horizontal cooperation. First, the decline in homicide rates is larger the greater the share of neighbors governed by the same party. Second, it does not depend on the identity of the NMP, on whether the winning candidate is an incumbent, or on political alignment with state or federal authorities.

Taken together, our findings highlight the benefits of horizontal cooperation for effective public goods provision in decentralized settings with spatial spillovers. They also suggest that while party alignment can foster cooperation, partisan cleavages may hinder valuable opportunities for collaboration, particularly in highly polarized political environments.

Our work contributes to several strands of literature. First, it adds to the study of decentralization by showing that, in the presence of geographic spillovers, horizontal cooperation can enhance local public good provision, echoing evidence from other contexts (Acemoglu et al., 2015; Tricaud, 2025).

Second, it complements prior work on inter-jurisdictional coordination in crime-reduction policies (Dell, 2015; Soares and Viveiros, 2017), which has focused on vertical cooperation–i.e., between central or state authorities, on the one hand, and local authorities, on the other–but has overlooked the potential of horizontal cooperation between local police forces.

Third, it expands on previous studies on horizontal cooperation in different policy domains–including land-use planning (Gerber et al., 2013), emergency management (Song et al., 2018), and coastal

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

[2] Loeper models a pure coordination game and highlights the external cost a jurisdiction faces when diverging from others. His framework, however, does not allow for actual cooperation and ignores the spatial dimension–namely, that cooperation with neighbors may be more valuable than with non-neighbors.

development (Magontier et al., 2024)–by studying its implications for crime prevention, a domain where spatial spillovers are substantial and coordination is especially critical.[3,4]

Finally, from a methodological standpoint, our paper contributes to the large body of work using close-elections RDD.[5] Specifically, it incorporates a spatial dimension to allow studying cooperation between neighboring jurisdictions, and clarifies why common concerns regarding the non-randomness of close elections are less relevant in this type of setting (Snyder, 2005; Caughey and Sekhon, 2011; Grimmer et al., 2012; Eggers et al., 2015).

The remainder of the paper is organized as follows. Section 2 provides background information on the Mexican political and institutional context. Section 3 describes the data. Section 4 sets out the empirical strategy and presents the main results. Section 5 concludes.

2. Background on Mexico

The Mexican context is particularly well-suited to study the impact of cooperation among local police forces on violent crime. During the period we study (2000–2012), homicide rates in Mexico rose sharply. As shown in Fig. A.1, the number of monthly homicides remained relatively stable at around 1000 until 2006, but began to climb steadily thereafter, surpassing 2000 per month by the end of 2010. This unprecedented surge in violent crime in Mexico has been the focus of a large body of literature in the social sciences, to which this paper attempts to contribute.

Many observers have attributed the rise in homicides to the federal government's strategy against drug-related organized crime which focused on neutralizing cartel leaders and triggered violent struggles among rival factions for territorial control (Guerrero-Gutiérrez, 2011; Dell, 2015). In this paper, we do not attempt to identify the causes of the surge in violent crime; instead, we ask whether improved coordination among local police forces helped to contain it.

Poor coordination is particularly problematic in Mexico's highly fragmented security apparatus where a large number of local police forces coexist. Municipal police play a central role, accounting for over 40 % of all law enforcement officers (Guerrero-Gutiérrez, 2011). A report by the Directorate General for the Coordination and Development of State and Municipal Police, leaked to the press in 2010, revealed that 2008 of Mexico's 2445 municipalities had their own police force.[6] The Mexican constitution (as amended in 1983 and 1999) establishes that public safety responsibilities are shared between federal, state, and municipal governments "within their competences", and explicitly assigns "preventive policing" to municipalities. As head of the municipal government, the mayor is the highest authority in the area of public security. Mayors appoint and can dismiss all top officials, including the local police chief and the director of the local prison system, and preside over all agreements of cooperation with other municipalities. In addition, the constitution explicitly recognizes the possibility for municipal governments to cooperate in the provision of local public goods, including law enforcement. Such cooperation usually takes the form of inter-municipal councils, where officials share information and coordinate their strategies. In some states, the creation and functioning of these councils are formally regulated by law; in others, they have emerged spontaneously and operate according to largely informal procedures.

As anecdotal evidence suggests, the mayor's party affiliation can considerably impact the functioning, priorities, and even policing style of municipal forces.[7] More importantly, in Mexico's highly polarized political landscape, partisan divisions between mayors of neighboring municipalities can hinder inter-jurisdictional cooperation, and in some cases have even led to open confrontations between local police forces (Davis, 2006; Tapia, 2006, 2009). In the empirical section, we document that partisan differences between neighbors are indeed associated with lower cooperation in various policy areas, particularly in law enforcement.

In light of the fragmentation and scarce coordination across Mexican police forces, it is not surprising that an animated debate on the opportunity of reforming the Mexican security apparatus has emerged among Mexican policy-makers, including at the highest level. In October 2010, for example, 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 against crime. Andrés Manuel López Obrador's strategy for combating 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 more effectively.

Previous studies on the determinants of 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 study. Mexico is a multi-party competitive democracy

[3] Related to the issue of horizontal cooperation, Lipscomb and Mobarak (2017) find that pollution spillovers across municipal borders in Brazil are lower when neighbors are governed by the same party.

[4] The importance of spatial spillovers in crime–including cross-border ones–has been documented, among others, by Di Tella and Schargrodsky (2004); Gonzalez-Navarro (2013); Knight (2013); Dube et al. (2013); Di Tella and Schargrodsky (2004); Chalfin and McCrary (2018), and Dube et al. (2013).

[5] 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 (2009); Cellini et al. (2010); Gerber and Hopkins (2011); Boas and Hidalgo (2011); Folke and Snyder (2012); Gagliarducci and Paserman (2012).

[6] Of the 417 municipalities without municipal police, 362 were located in Oaxaca, with the remainder spread across 17 states. Since Oaxaca is excluded from our sample for other reasons (discussed later in this section), almost all municipalities in our analysis had a local police force during the period of interest.

[7] Solar (2012) reports a vivid example of how the mayor's party affiliation can impact even the most basic aspects of local police organization: "PAN administrations argue that police around the world often 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."

in which, until 2012, 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).[8] With regard to the parties' ideological positions, 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 we analyze, 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 largest 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 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.[9] For this reason, we exclude municipalities in 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 of 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 border.

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 mayor 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 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–i.e., those in which the NMP either won or came in second–and the number of close elections–i.e., those with a victory margin below a given threshold. For each municipality in each year, the data include the total number of votes cast, and the number of votes for each party. For each election we identify the two parties with the most votes and compute the gap in vote share between the winner and the runner-up. From the outcome of the previous elections, we also identify the incumbent's party affiliation.

Fig. 1 represents, for example, the distribution of the ruling parties across Mexican municipalities in 2008. While some areas are largely controlled by a single party, there is considerable spatial heterogeneity in party 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 that did not hold elections in the same year, we consider the party in power at the time of the election.

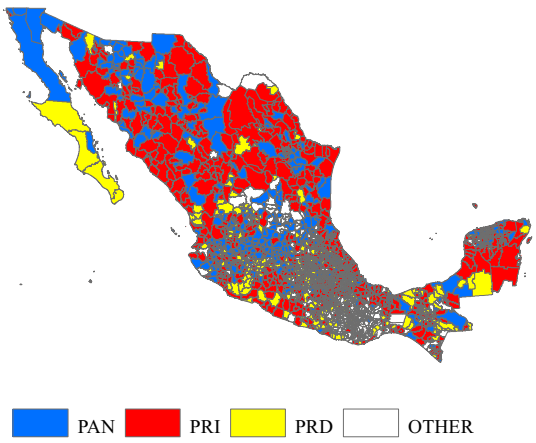


Fig. 1. Municipalities by mayor's party affiliation (2008). *Notes:* The figure shows the party affiliation of mayors in Mexican municipalities as of 2008. Data from the Mexican Research Center for Development (CIDAC).

We examine two sets of outcomes: cooperation and crime. Since the data for each of these sets of outcomes differ in terms of the exact time periods covered, we analyze them separately. To examine the relationship between mayors' shared party affiliation and inter-municipal cooperation, we use data from two surveys: (1) the National Survey of Municipal Governments (Encuesta Nacional de Gobiernos Municipales, ENGM) conducted by the Ministry of Social Development (Secretaría de Desarrollo Social, SEDESOL) in 2004 and (2) the National Survey of Municipal Government, Public Safety and Justice (ENGSPJM) in 2009. Both surveys aimed to gather information about the management and performance of municipal institutions and surveyed all mayors who were in office at the time of the survey. Crucially for the purpose of our analysis, the surveys contain information on whether each municipality participates in any cooperation agreement with other municipalities the year before the interview, with which ones, and in what policy domain (e.g., public safety, water management, schooling, etc.).

For crime outcomes, we consider the number of homicides in each municipality in the three 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 2015. 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 on prosecutions for homicides and homicide sentences. Finally, we use data on a variety of socio-economic variables at the municipal level which we include as controls. These variables, all measured in pre-treatment periods, are: the human development index, available from the United Nations Development Program, and the share of households with access to sewage, electricity, and running water, available from the Marginalization Index constructed by the National Council of Population (Consejo Nacional de la Población, CONAPO).

We look at different sample periods for the two sets of outcomes. For the analysis of cooperation, we focus on elections held between 2000 and 2008; this period includes the three-year period before 2003 and before 2008, i.e., the two years for which data on inter-municipal agreements are available. For the analysis of crime, we consider instead elections held between 2005 and 2012, when violent crime increased sharply. In both cases, starting from the universe of relevant municipal elections in all states (except Oaxaca), we construct the RDD sample as follows. First, we retain municipalities where 50 % or more neighbors are governed by a single party (i.e., the NMP). Second, we keep

[8] 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 significant (and 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.

[9] 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).

those cases where the NMP ranked first or second in the local election. Third, we focus on close elections–those decided by a margin of less than 5 percentage points or by less than the optimal bandwidth (Calonico et al., 2019).[10] Finally, we retain only those municipalities for which the relevant outcome variables–existence of cooperation agreements, or homicide rate–are not missing. Table A.2 summarizes the steps described above for both the cooperation and the crime analysis and the resulting samples.

4. Empirical results

We aim to examine the link between political alignment, on the one hand, and inter-jurisdictional cooperation and crime reduction, on the other. To overcome possible identification challenges, we exploit exogenous variation in party alignment due to close elections in 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 inter-jurisdictional cooperation and on crime prevention. One potential source of bias, for example, stems from the fact that voters' political preferences–and hence electoral outcomes–may be influenced by the ability of mayors to establish cooperation agreements, or by the baseline level of violent crime. Another 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 isolate the causal impact of political alignment on cooperation and violence, we use an RDD. Specifically, 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.

Our application requires adapting the standard RDD framework to a context where the treatment is defined relative to a municipality's neighbors. Since we are interested in the degree of political alignment of a municipality with all its neighbors, we focus on those municipalities for which 50 % or more of neighboring municipalities are controlled by the same party (i.e., the NMP), and, among these, on those where that party won or lost by a small margin.[11] The idea is that, around the discontinuity, municipalities where the NMP barely wins experience an exogenous positive shock in party alignment–and thus in the potential for cooperation with their neighbors–relative to municipalities where the NMP barely loses.

Fig. 2 illustrates the intuition behind this strategy. It depicts two municipalities in the state of Veracruz that held 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 then governed by the PRI (i.e., the NMP), one by the PAN, and one by a minor party. However, while in Samahil the PRI won over the PAN by a small margin, in Timucuy the PRI lost to the PAN 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–which did not.

The key identifying assumption is that, conditional on the identity of the NMP, the electoral outcome in a municipality is as-good-as-random around the threshold. Crucially, this assumption does not require electoral outcomes in neighboring municipalities to be uncorrelated with

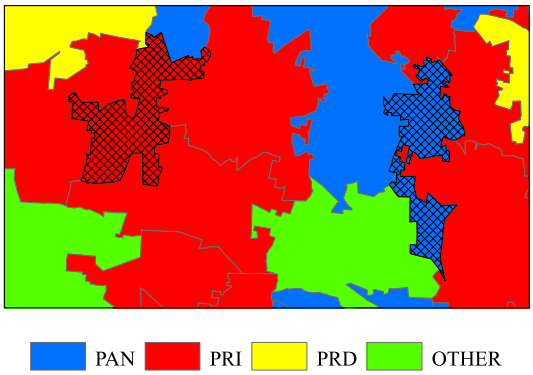


Fig. 2. Example of political alignment with neighboring municipalities. *Notes:* The figure shows the party affiliation of mayors in some municipalities of the State of Veracruz in 2007. Samahil and Timucuy are respectively the red and blue shaded areas. Data from the Mexican Research Center for Development (CIDAC).

whether a municipality experiences a close election; but, rather, that, *conditional on a close election*, the victory or defeat of the NMP is uncorrelated with electoral outcomes in neighboring municipalities and is as good as random. We are therefore implicitly assuming that neighboring municipalities' election outcomes are conditionally independent at the threshold. We present various pieces of evidence supporting the plausibility of this assumption.

As explained above, the cooperation analysis focuses on the 2000–2008 period, while the crime analysis focuses on the 2005–2012 period. The RDD sample consists of 495 observations for the cooperation analysis and 591 for the crime analysis.[12]

We estimate a non-parametric local linear regression on the sample of municipalities for which the NMP won or lost the election by a small margin. We define such a margin as the optimal bandwidth based on Calonico et al. (2019)'s mean-square-error selection algorithm, or alternatively, following the literature on close elections, as 0.05.

The following equation summarizes our empirical strategy:

$$y_{ist} = \alpha_0 + \alpha_1 NMPwin_{ist} + F(Sp_{ist}) + \delta X_{is} + \gamma_{st} + \epsilon_{is} \quad (1)$$

where the subscript ist indicates municipality i located in state s during election year t; y_{ist} is the outcome of interest, e.g., 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; $NMPwin_{ist}$ is a dummy variable for whether the NMP won the election in municipality i; $F(\cdot)$ is a flexible function of Sp_{ist} which is the difference between the NMP's vote share and that of its closest competitor (the runner-up if the NMP is the winner, and the winner if the

[10] We use the optimal bandwidth as our baseline approach, and the 5 % margin for robustness.

[11] In our baseline approach, we define the NMP as the party ruling 50 % or more of a municipality's neighbors, thus using a simple majority rule and equal weights for all neighbors. We later explore the robustness of our findings by using different majority thresholds and alternative weighting choices.

[12] Regarding the question of how municipalities in the RDD sample compare to others, in Table A.3 we report descriptive statistics for three groups of municipalities, separately for the cooperation analysis (top panel) and the crime analysis (bottom one): 1) the RDD sample, i.e., municipality-elections in which the NMP ranked first or second and either won or lost by less than 5 % (column 1); 2) municipality-elections in which the NMP ranked first or second and either won or lost by more than 5 % (column 2); 3) municipality-elections for which a NMP does not exist, or it exists but did not rank first or second (column 3). Columns 4 and 5 report the difference between columns 1 and 2, and 1 and 3, respectively. The results indicate that municipalities in the RDD are broadly comparable to those in group 2 while those in group 3 differ more substantially. Importantly, crime rates both before and after the election are similar for groups 1 and 2. Also worth noting, the small differences in the average margin of victory in neighbors' elections, though statistically significant, indicate that municipalities in the RDD samples are not disproportionately surrounded by strongholds or uncompetitive clusters.

Table 1
Political alignment, cooperation and crime: sample statistics.

Panel A: cooperation sample						
	Party ruling majority of neighbors			*t*-stats on	RD	Std. errors
	won by < 5 (1)	lost by < 5 (2)	Difference (3)	Mean differences (4)	Estimate (5)	RD estimate (6)
Homicide Rates Prev. Mandate (per 100 k)	29.743	31.937	2.194	0.514	8.059	[9.617]
Average Margin of Victory for Neighbors	0.125	0.129	0.004	0.826	−0.008	[0.012]
PAN affiliated governor	0.238	0.265	0.027	0.702	−0.114	[0.133]
PRI affiliated governor	0.602	0.611	0.010	0.217	0.051	[0.158]
PRD affiliated governor	0.192	0.154	−0.038	−1.105	0.066	[0.120]
Majority of Neighbors PAN	0.130	0.103	−0.028	−0.956	−0.135*	[0.075]
Majority of Neighbors PRI	0.759	0.833	0.075*	2.056	0.063	[0.104]
Majority of Neighbors PRD	0.107	0.064	−0.043	−1.704	0.061	[0.079]
PAN affiliated incumbent	0.238	0.218	−0.020	−0.518	−0.079	[0.084]
PRI affiliated incumbent	0.648	0.620	−0.028	−0.641	0.071	[0.105]
PRD affiliated incumbent	0.103	0.154	0.050	1.681	0.022	[0.069]
Area (sq km)	940.972	1031.983	91.011	0.471	−530.048	[371.170]
Number of Neighboring Municipalities	5.854	5.761	−0.094	−0.523	0.883**	[0.346]
Population Density	152.901	236.380	83.480	1.454	−143.696	[192.902]
Death Rate	408.586	401.428	−7.158	−0.469	70.383**	[34.212]
Human Development Index	0.724	0.727	0.003	0.367	−0.031	[0.022]
Percentage of HH with no sewage	17.337	16.513	−0.824	−0.551	2.094	[3.658]
Percentage of HH with no electricity	7.304	7.911	0.608	0.684	−0.885	[1.885]
Percentage of HH with no water	17.876	18.106	0.230	0.128	0.251	[4.073]
Observations	261	234	495			
Panel B: crime sample						
	Party ruling majority of neighbors			*t*-stats on	RD	Std. errors
	won by < 5 (1)	lost by < 5 (2)	Difference (3)	Mean differences (4)	Estimate (5)	RD estimate (6)
Homicide Rates Prev. Mandate (per 100 k)	36.878	43.054	6.176	0.907	21.071	[15.329]
Average Margin of Victory for Neighbors	0.128	0.126	−0.002	−0.386	−0.006	[0.012]
PAN affiliated governor	0.235	0.211	−0.024	−0.684	−0.002	[0.139]
PRI affiliated governor	0.622	0.656	0.034	0.854	−0.070	[0.153]
PRD affiliated governor	0.192	0.203	0.011	0.333	0.020	[0.135]
Majority of Neighbors PAN	0.173	0.115	−0.058*	−1.972	0.028	[0.080]
Majority of Neighbors PRI	0.742	0.805	0.062	1.785	−0.079	[0.092]
Majority of Neighbors PRD	0.082	0.080	−0.001	−0.060	0.042	[0.070]
PAN affiliated incumbent	0.279	0.264	−0.014	−0.390	0.054	[0.091]
PRI affiliated incumbent	0.564	0.517	−0.046	−1.124	−0.033	[0.096]
PRD affiliated incumbent	0.130	0.176	0.046	1.551	−0.052	[0.072]
Area (sq km)	1170.790	1466.779	295.989	1.083	−372.830	[513.056]
Number of Neighboring Municipalities	5.661	5.709	0.048	0.290	0.284	[0.382]
Population Density	214.344	151.226	−63.117	−1.257	64.291	[86.208]
Death Rate	422.360	412.086	−10.273	−0.684	27.094	[34.479]
Human Development Index	0.761	0.762	0.001	0.197	−0.015	[0.015]
Percentage of HH with no sewage	13.356	13.307	−0.049	−0.038	4.551	[4.294]
Percentage of HH with no electricity	4.650	5.492	0.842	1.344	2.263*	[1.289]
Percentage of HH with no water	16.961	15.830	−1.130	−0.701	8.626	[5.250]
Observations	330	261	591			

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 RDD estimate (local linear regression) is the coefficient of the Majority Wins variable in a regression of the variable listed at the left. Panel A presents results for the sample used in our analysis of cooperation, which includes municipality elections between 2000 and 2008. Panel B presents results for the crime analysis sample, covering municipality elections during the period 2005–2012. ***$p<0.01$, **$p<0.05$, *$p<0.1$.

NMP is the runner-up); finally, X_{is} is a vector of characteristics of municipality i in state s, including the set of demographic controls and state capacity indicators described in Section 3.[13] All regressions include state × election year fixed effects (γ_{st}). We cluster standard errors at the state-election year level, which accounts for correlated shocks across municipalities in the same state voting in the same year, and addresses spatial correlation that might otherwise bias our estimates of the standard errors.

We ran several tests to ensure that the conditions needed for identification hold in our setting.

First, 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 for a large set of political variables. In the same table, we also show the results of simple regression discontinuity

[13] The set of controls includes: population density, human development index, death rates, total number of neighboring municipalities, and area. State capacity controls include the shares of households with no access to sewage, electricity, and water. All time-varying controls are measured in the pre-treatment period.

Table 2
Party alignment and inter-municipal cooperation.

	Extensive margin of cooperation			Intensive margin of cooperation			
	Dummy = 1 if there is a cooperation agreement with			Any neighbor		Aligned municipality	
	Any municipality (Mean: 0.32)	Any neighbor (Mean: 0.29)	Aligned municipality (Mean: 0.2)	Count (Mean: 0.57)	Share of neighbors (Mean: 10.4)	Count (Mean: 0.33)	Share of neighbors (Mean: 6.1)
Panel A: optimal bandwidth	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Majority Wins	0.113**	0.178***	0.283***	0.358***	8.164***	0.553***	10.02***
	(0.0508)	(0.0537)	(0.0469)	(0.119)	(2.625)	(0.0840)	(1.676)
Robust bias-corrected p-values	0.05	0.00	0.00	0.01	0.00	0.00	0.00
Opt Bandwidth	0.0834	0.0695	0.0720	0.0771	0.0749	0.0808	0.114
Effective number observations left	343	304	302	333	323	329	438
Effective number observations right	433	370	374	406	392	421	565
Panel B: ad hoc bandwidth 0.05	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Majority Wins	0.155**	0.191***	0.302***	0.396***	8.734***	0.660***	14.23***
	(0.0630)	(0.0611)	(0.0551)	(0.153)	(3.159)	(0.0911)	(2.393)
Effective number observations left	234	234	225	234	234	225	225
Effective number observations right	261	261	259	261	261	259	259
Observations	1850	1850	1815	1850	1850	1815	1815
State × Year FE	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	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 2003 and 2008. The sample for this analysis includes municipalities that had elections taking place within 3 years before the two cooperation agreement surveys and in which the party ruling the majority of neighboring municipalities won and lost by a 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 measures of the intensive and extensive margin of agreement of a certain type as reported in the two surveys. Columns 1 to 3 present the results for a dummy that equals one when the municipality reported an agreement for cooperation in any domain with any municipality, a neighboring municipality, and a politically-allied neighbor, respectively. Focusing only on neighboring municipalities, in columns 4 to 7, we look at the number of municipalities (even columns) and the share of neighbors (odd columns) with cooperation agreements in any domain. 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 × year level in brackets. The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. ***$p<0.01$, **$p<0.05$, *$p<0.1$. When using optimal bandwidth selection, significance levels are based on the reported robust bias-corrected p-values.

analyses–i.e., fitting a linear trend on each side of the discontinuity–using each of the aforementioned variables as the dependent variable. Figs. A.2 and A.3 present flexible RDD estimates graphically. The fact that, except for one variable, there is no significant difference in observables between municipalities in which the NMP barely won and those where it barely lost is reassuring of the fact that these two groups were similar *ex ante*.[14] Notably, there are no significant differences between the two groups in the homicide rate recorded in the three years before the election, which, in principle should not be affected by the subsequent political shock. This confirms that political alignment is unrelated to pre-existing crime patterns.[15] Moreover, the margin of victory in neighboring municipalities does not vary discontinuously at the threshold in any of our samples, lending credibility to our identification strategy.

Second, we implement a McCrary-type manipulation test, reported in Fig. A.4, and find no evidence of bunching or strategic sorting around the cutoff (p-values of 0.87 and 0.33 for the cooperation and crime samples, respectively).

Finally, Fig. A.5 presents the results of a traditional regression discontinuity analysis, using the margin of victory of a given party (PRI or PAN) as the treatment variable. The outcome variables are, respectively, a dummy for whether that party governs the majority of neighbors (panels A and C) and the share of neighbors it governs (panels B and D).[16,17] Reassuringly, there is no discernible discontinuity at the threshold for either outcome.

Taken together, these findings support the credibility of our methodology, which offers a novel way to leverage local electoral discontinuities to study the causal impact of cross-border political alignment on horizontal cooperation. At the same time, while the validation tests are reassuring about internal validity, the inherently local nature of RDD estimates warrants caution in generalizing our results.

4.2. Political alignment and inter-jurisdictional cooperation

We begin by examining whether mayors from the same party are in fact more likely to cooperate, focusing in particular on public security agreements and information-sharing between municipal police departments. Such cooperation may stem from closer personal ties among co-partisans in the same area, or from shared views on crime-reduction strategies and priorities. Party discipline is also likely to matter, especially in Mexico, where politicians cannot seek re-election and therefore have strong incentives to secure the backing of party leaders who influence future nominations and appointments to higher office (Solar, 2012;

[14] When looking at the regression discontinuity estimates in column 5 of Table 1, the only statistically significant differences are a lower probability of the majority of neighbors to be governed by the PAN, a slightly higher number of neighbors, and a somewhat higher overall death rate in the pre-treatment period though only for the cooperation sample. Notably, no such statistical differences emerge in our crime sample. In any event, while these differences seem to be economically small, in all regressions presented below we control for the entire set of pre-treatment characteristics, though their inclusion does not affect our results.

[15] Figs. A.2 and A.3 show the RDD plots for the residualized covariates (i.e., after controlling for state × year fixed effects to approximate our main specification) discussed in both panels of Table 1 on vote margin using a quadratic polynomial to approximate the population conditional expectation functions for control and treated municipalities.

[16] Table A.4 reports the corresponding regression results.

[17] The number of close elections involving the PRD is unfortunately too small to conduct the same exercise for this party.

Table 3
Party alignment and inter-municipal cooperation by type of agreement.

	Dependent variable: Dummy = 1 if there is a cooperation agreement with a neighboring municipality							
	Public safety		Garbage collection		Road maintenance		Water services	
	Any municip. (Mean: 0.07)	Aligned municip. (Mean: 0.05)	Any municip. (Mean: 0.05)	Aligned municip. (Mean: 0.03)	Any municip. (Mean: 0.01)	Aligned municip. (Mean: 0.01)	Any municip. (Mean: 0.02)	Aligned municip. (Mean: 0.01)
Panel A: optimal bandwidth	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Majority Wins	0.0299	0.0783***	0.0635**	0.0599***	0.0164**	0.00806**	0.0307***	0.0174**
	(0.0323)	(0.0294)	(0.0316)	(0.0226)	(0.00817)	(0.00408)	(0.0116)	(0.00775)
Robust bias-corrected *p*-values	0.41	0.02	0.04	0.01	0.07	0.07	0.01	0.04
Opt Bandwidth	0.108	0.0835	0.0675	0.0763	0.0792	0.164	0.108	0.154
Effective no. observations left	410	326	279	312	322	521	410	512
Effective no. observations right	517	412	340	383	397	724	517	698
Panel B: ad hoc bandwidth 0.05	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Majority Wins	0.0714	0.111***	0.0632*	0.0584**	0.00786	0.00456	0.0621**	0.0318
	(0.0479)	(0.0349)	(0.0368)	(0.0264)	(0.00956)	(0.00947)	(0.0258)	(0.0194)
Effective no. observations left	220	220	220	220	220	220	220	220
Effective no. observations right	250	250	250	250	250	250	250	250
Observations	1745	1745	1745	1745	1745	1745	1745	1745
State × Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	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 2003 and 2008 by type of agreement. The sample for this analysis includes municipalities that had elections taking place within 3 years before the two cooperation agreement surveys and in which the party ruling the majority of neighboring municipalities won and lost by a 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 one agreement of a certain type was reported in surveys. 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 × year level in brackets. The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. ***$p<0.01$, **$p<0.05$, *$p<0.1$. When using optimal bandwidth selection, significance levels are based on the reported robust bias-corrected *p*-values.

Guillén López, 2006). To test the link between political alignment and horizontal cooperation, we combine data on mayors' party affiliation with information on the existence of cooperation agreements between municipalities.

Our analysis proceeds as follows. Using responses from the ENGM survey (2004) and the ENGSPJM survey (2009), we construct indicators for the existence of bilateral cooperation agreements between each municipality and its neighbors. We distinguish between agreements with any municipality, with neighboring municipalities, and with aligned neighbors (i.e., those governed by the same party). We also classify agreements by domain, e.g., public safety, water services, etc.

Table 2 reports estimates of Eq. (1) using alternative measures of cooperation, considering both the extensive and intensive margin. Panel A presents results using the data-driven optimal bandwidth, while Panel B uses a fixed 0.05 bandwidth. In Panel A, we also report robust bias-corrected *p*-values to account for bias in the estimation of the optimal bandwidth.[18] In columns 1–3, the dependent variable is a dummy equal to one if the municipality reported at least one cooperation agreement in any domain with: (i) any municipality (regardless of proximity), (ii) any neighbor, and (iii) any aligned neighbor. In columns 4–7 we focus on cooperation with neighbors and consider, respectively, the number of neighbors (even columns) and the share of neighbors with cooperation agreements (odd columns).

Several patterns emerge. First, the similarity of the results in Panels A and B indicate that the main qualitative findings are robust to alternative definitions of "closeness" of elections (i.e., bandwidth choice). Second, looking at the extensive margin, horizontal political alignment significantly increases the probability of cooperating with any municipality (column 1) and with any neighbor regardless of political affiliation (column 2); yet, the effect is stronger for cooperation with neighbors governed by the same party (column 3). In terms of magnitude, the coefficient in column 2 of Panel A indicates that political alignment with neighbors increases the likelihood that a municipality enters any cooperation agreement with its neighbors by about 18 percentage points. For agreements with politically aligned neighbors the effect is larger: 28 and 30 percentage points (column 3). Looking at the intensive margin, we find that alignment with neighbors increases the number and share of neighbors with which the municipality has a cooperation agreement by 8–14 percentage points (columns 5 and 7).[19]

[18] Because optimal bandwidths are estimated separately for each outcome, the number of observations varies across specifications.

[19] Because neighboring municipalities in different states may hold elections at different times, the identity of the majority party at the time of the election may not perfectly match that at the time cooperation agreements are reported. While the direction of the potential bias is unclear, Table A.5 shows that our main results hold when restricting the sample to municipalities whose neighbors are all within the same state.

Table 4
Party alignment and inter-municipal cooperation by period.

	Dependent var: Dummy = 1 if there is a cooperation agreement with neighboring municip.					
	Any municipality		Aligned municipality			
	Any domain		Any domain		Public safety	
	(Mean: 0.31)	(Mean: 0.53)	(Mean: 0.19)	(Mean: 0.39)	(Mean: 0.02)	(Mean: 0.09)
Panel A: optimal bandwidth	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	0.157**	0.175***	0.160***	0.410***	0.0189	0.144***
	(0.0766)	(0.0657)	(0.0603)	(0.0685)	(0.0280)	(0.0461)
Robust bias-corrected *p*-values	0.06	0.01	0.02	0.00	0.73	0.00
Opt Bandwidth	0.0765	0.0764	0.0849	0.0679	0.0806	0.0742
Effective number observations left	210	119	215	99	213	103
Effective number observations right	219	183	238	155	227	157
Panel B: ad hoc bandwidth 0.05	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	0.240***	0.141	0.254***	0.365***	0.0439	0.161***
	(0.0787)	(0.0947)	(0.0720)	(0.0816)	(0.0309)	(0.0546)
Effective number observations left	149	85	148	77	147	73
Effective number observations right	148	113	148	111	147	103
Year of Survey	2004	2009	2004	2009	2004	2009
Observations	1028	822	1020	795	1012	733
State × 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 by survey year. The sample for this analysis includes municipalities that had elections (within 3 years before the survey) in which the party ruling the majority of neighboring municipalities won or lost by a 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 one agreement of a certain type was reported in surveys. Columns 1 and 2 present the results for a dummy that equals one when the municipality reported an agreement for cooperation in any domain with a neighbor. Columns 3 and 4 show the results for a dummy that identifies if there was an agreement, in any domain, with a politically-allied neighbor. Columns 5 and 6 present the results for agreements in public safety 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 × year level in brackets. The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. ***$p<0.01$, **$p<0.05$, *$p<0.1$. When using optimal bandwidth selection, significance levels are based on the reported robust bias-corrected *p*-values.

In Table 3 we examine how political alignment with neighbors affect cooperation in different policy areas, looking at all neighbors (odd columns) and at politically aligned neighbors only (even columns).[20] Overall, we find that the effect is positive, generally significant, and quite sizable for most areas. In the area of public safety, for instance, a close victory of the NMP increases the likelihood that a municipality enters a cooperation agreement with its neighbors by 8 to 11 percentage points (column 2 in panels A and B). This corresponds to an increase of 150 % to 200 % of the sample mean. In contrast, the effect is small and not statistically significant for cooperation in public safety with all neighbors (column 1).

This suggests that, in the area of public safety, political alignment with neighbors may actually reduce the likelihood of cooperating with non-aligned municipalities. However, this dichotomy does not apply to the other domains, where alignment with neighbors increases cooperation across the board. Taken together, these results indicate that, by lowering the cost of coordination and information sharing, shared party affiliation between mayors can foster inter-municipal cooperation in general, and particularly so in the area of public safety and law enforcement.

We test the robustness of the results on cooperation to alternative specifications. Fig. A.6 shows that the results are similar when including all controls, excluding demographic controls, and excluding state capacity controls. Table A.6 confirms that the coefficients are robust to controlling more flexibly for the running variable using higher-order polynomials. Fig. A.7 shows the results with different sets of party fixed effects, namely the party of the winner, the party of the incumbent, and the party of the majority of neighbors. Once again, the results are remarkably stable.

Next, we examine how the effect of political alignment varied over time. Incentives for cooperation-particularly in public safety-likely shifted after the sharp rise in homicide rates triggered by the federal government's anti-drug strategy in late 2006. Indeed, the raw data indicate that between the 2003 and 2008 surveys, the share of municipalities cooperating with any neighbor rose from 31 % to 53 %, while cooperation with politically aligned neighbors doubled overall and more than quadrupled in the area of public safety. Table 4 shows that the RDD estimate for cooperation with aligned neighbors nearly triples between 2003 and 2008 (from 0.16 to 0.41; columns 3–4, Panel A). For public safety agreements, the effect is small and insignificant in 2003 but rises to a highly significant 14.4 percentage points in 2008 (column 6, Panel A). Fig. A.8 confirms that the effect of alignment is substantially larger in 2008.[21]

[20] The discrepancy between the number of observations in Table 2 (1850) and Table 3 (1745) arises because, in a small number of cases, mayors reported that their municipality had cooperation agreements but did not specify with which municipalities. As a result, we cannot determine whether those partners were neighbors, or whether they were politically aligned.

[21] It would be interesting to examine how quickly political alignment leads to cooperation agreements, what they entail, and to what extent they are implemented. Unfortunately, none of the waves of the National Survey of Municipal

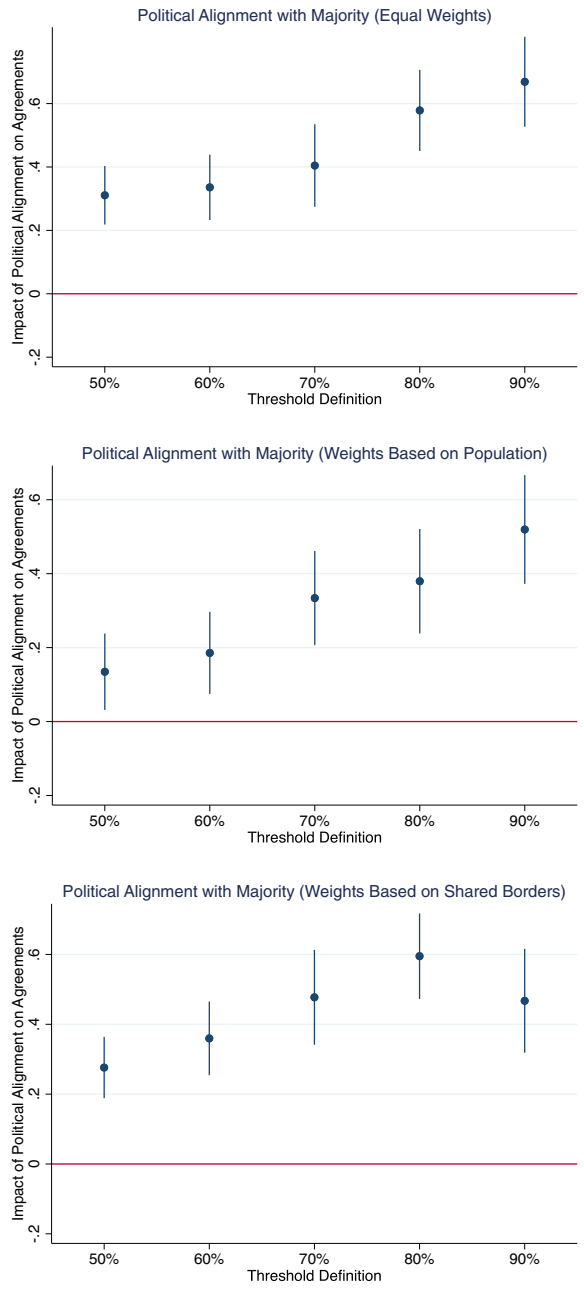


Fig. 3. Alternative metrics to defining majority. *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions using different treatment definitions (thus also different samples) based on two dimensions: the weights assigned to each neighboring municipality and the threshold defining majority. Top panel assigns equal weight to each neighboring municipality (as in Table 2), middle panel assigns weights based on neighboring population, whereas the bottom panel assigns weight based on the length of shared borders. The dependent variable in each regression is a dummy that equals one when there was at least one agreement in any domain with a politically aligned neighbor. Estimations use an optimal bandwidth.

We then verify that our findings are robust to alternative definitions of majority. In our baseline, we defined the majority as 50 % or more of neighbors governed by the same party, weighting all neighbors equally. Fig. 3 reports results using alternative thresholds to define neighbors' majority (from 50 % to 90 %) and different weighting schemes (equal weights, by population, and by length of shared borders). Interestingly, the effect of political alignment grows steadily with higher majority thresholds, consistent with lower costs to cooperate as the share of aligned neighbors increases. The use of different weighting schemes has, instead, little impact on the results.[22]

In the first four columns of Table 5 we examine how the effect of political alignment with neighbors interacts with vertical alignment–i.e., with state and federal governments. Panels A, B, and C report results for any cooperation, cooperation with aligned neighbors, and cooperation with aligned neighbors in public safety, respectively. Columns 2 and 3 of Panel A show that the effect of horizontal alignment on cooperation with any neighbor is weaker for municipalities not aligned with the state government, whereas lack of alignment with the federal government does not alter the baseline effect. Regarding cooperation with aligned neighbors (Panel B), the effect for municipalities not aligned with the state government is similar to that in the overall sample. In contrast, it is about 35 % larger for those not aligned with the federal government, and even greater for municipalities unaligned with both state and federal governments, though this result is based on a limited sample. Finally, for cooperation with aligned neighbors in public safety (Panel C), the effect is about twice as large as the baseline for municipalities not aligned with the state government, and nearly three times larger for those not aligned with the federal government. The effect is even greater for municipalities unaligned with both levels of government, yet with the caveat of small sample size. Taken together, these findings suggest that vertical and horizontal cooperation may act as substitutes, particularly in domains such as law enforcement where the returns to cooperation are especially high.[23]

Finally, the last two columns of Table 5 examine whether the effect of horizontal alignment on cooperation with neighbors differs depending on whether the NMP was the incumbent or the challenger. Across all three panels, the results indicate that alignment with the majority of neighbors leads to greater cooperation when the winner was a challenger rather than an incumbent.

4.3. Political alignment and crime

Having established that political alignment fosters inter-municipal cooperation, particularly in public safety, we now examine whether this translates into lower levels of violent crime, specifically homicide rates.[24]

As our baseline measure of post-election crime, we use the total number of homicides per 100,000 people recorded in each municipality in the three years after a close election (i.e., the length of the mayor's mandate). In Table 6 we estimate our main RDD specification, using as dependent variable alternative transformations of this measure: (i) logarithms (columns 1–2), (ii) inverse hyperbolic sine (IHS) transformation (3–4), (iii) levels (5–6), and (iv) a dummy for whether the homicide rate exceeds the national median (7–8). All regressions include state-election year fixed effects and the full set of controls described above, and weight observations by population.[25] In the even-numbered columns we also control for crime rates in the three years prior to the election.

Government include information on the timing, content, or implementation of cooperation agreements.

[22] Figs. A.9 and A.10 present analogous results for any type of agreement and for agreements in public safety and law enforcement, respectively.

[23] Table A.7 shows that the heterogeneity results are similar when using a different small-margin threshold.

[24] We focus on violent crime for two reasons. First, as noted in the introduction, our study period coincides with a sharp rise in violence in Mexico, which plausibly created strong incentives for cooperation. Second, data on violent crimes–crucial for assessing the effectiveness of law enforcement at the local level–are readily available and of good quality in Mexico. This is not the case for other public goods such as garbage collection, road maintenance, or water services.

[25] As discussed by Dell (2015), measurement error in homicide rates is likely more significant in smaller municipalities. For this reason, weighting regressions

Table 5
Party alignment and cooperation: heterogeneity.

	Dependent variable: Dummy = 1 if there is a cooperation agreement					
Panel A: cooperation with any neighboring municipality, any domain						
		Not vertically aligned			Incumbency	
	Baseline (1)	with State Gov. (2)	with National Gov. (3)	None (4)	No (5)	Yes (6)
Majority Wins	0.178***	0.0511	0.178***	0.0615	0.288***	0.125**
	(0.0537)	(0.0820)	(0.0690)	(0.0661)	(0.0913)	(0.0572)
Robust bias-corrected *p*-values	0.00	0.35	0.00	0.25	0.00	0.03
Opt Bandwidth	0.0695	0.0480	0.0640	0.0622	0.0579	0.0610
Effective no. observations left	304	79	115	43	105	169
Effective no. observations right	370	76	161	45	135	183
Panel B: cooperation with politically aligned neighboring municipality, any domain						
		Not vertically aligned			Incumbency	
	Baseline (1)	with State Gov. (2)	with National Gov. (3)	None (4)	No (5)	Yes (6)
Majority Wins	0.283***	0.249***	0.376***	0.446***	0.372***	0.210***
	(0.0469)	(0.0905)	(0.0575)	(0.0837)	(0.0935)	(0.0507)
Robust bias-corrected *p*-values	0.00	0.00	0.00	0.00	0.00	0.00
Opt Bandwidth	0.0720	0.0572	0.0689	0.0607	0.0651	0.0772
Effective no. observations left	302	96	116	41	102	202
Effective no. observations right	374	90	170	44	154	227
Panel C: cooperation with politically aligned neighboring municipality, public safety						
		Not vertically aligned			Incumbency	
	Baseline (1)	with State Gov. (2)	with National Gov. (3)	None (4)	No (5)	Yes (6)
Majority Wins	0.0783***	0.133**	0.193***	0.292***	0.133**	0.0411
	(0.0294)	(0.0517)	(0.0502)	(0.0850)	(0.0657)	(0.0332)
Robust bias-corrected *p*-values	0.02	0.01	0.02	0.02	0.07	0.28
Opt Bandwidth	0.0835	0.0620	0.0666	0.0653	0.0929	0.0638
Effective no. observations left	326	95	110	42	139	166
Effective no. observations right	412	97	155	45	196	182
State × 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: The table shows the results for the RDD exercises that analyze heterogeneity in the effects of political alignment on cooperation. The dependent variable is a dummy that equals one when the municipality reported that there was at least one cooperation agreement, in any domain with any neighboring municipality (Panel A), with a politically-allied neighbor in any domain (Panel B) or in Public Safety (Panel C). Column 1 shows our baseline result (i.e., using the whole sample). Columns 2 to 4 show the main effect for the sample of municipalities for which the majoritarian party was not the party (1) governing the state, (2) governing the federal government (i.e., PRI before 2007 and PAN after 2006), and (3) was neither aligned with the State government nor the National government, respectively. 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. The sample includes municipalities that had elections in which the party ruling the majority of neighboring municipalities won or lost by a small margin (i.e. Bandwidth). The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. Robust standard errors clustered at the state × year level are in brackets $^{***}p<0.01$, $^{**}p<0.05$, $^{*}p<0.1$. Significance levels are based on the reported robust bias-corrected *p*-values.

Across all specifications, the results clearly indicate that political alignment with neighbors is associated with a tangible reduction in homicide rates after the election (always significant at the 1 % level or more). The effect is remarkably similar when using the optimal bandwidth and the ad-hoc 5 % one. In terms of magnitude, according to the results in levels (column 4 of panel A) political alignment reduces crime rates by 15 crimes per 100,000 people, which corresponds to 12.5 % of the sample mean and 30 % of the standard deviation. According to the point estimates in column 2–interpretable as a standard semi-elasticity–municipalities that are politically aligned with their neighbors experience a 24 % reduction in homicide rates. Furthermore, the coefficient on the dummy (column 8) indicates that municipalities politically aligned with their neighbors are about 10 % less likely to experience homicide rates above the national median, compared to municipalities that are not aligned. In all instances the size and significance of the coefficients are minimally affected by the inclusion of pre-election homicide rates, which confirms that the effect of political alignment is not driven by pre-existing trends in crime.

Regarding the evolution of the effect, Fig. 4 shows the RDD plots–for the log of homicide rate and for the dummy for rates above the national median–separately for the periods before and after the start of Calderón's presidency in 2005. For both measures the effect of horizontal alignment on crime is notably stronger after 2005, consistent with inter-municipal cooperation becoming more valuable following the surge in violence triggered by the crackdown on drug cartels.

by population is standard practice in the crime literature. That said, unweighted regressions yield, if anything, slightly larger coefficients.

Table 6
Party alignment and crime.

Panel A: optimal bandwidth	Dep variable: homicide rates during mandate							
	in logarithms		IHS Trans		Levels		1 if > National median	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Majority Wins	−0.301***	−0.276***	−0.326***	−0.300***	−17.67***	−15.02***	−0.123***	−0.0960***
	(0.0697)	(0.0618)	(0.0766)	(0.0684)	(3.767)	(3.355)	(0.0369)	(0.0328)
Robust bias-corrected *p*-values	0.000	0.000	0.00	0.000	0.000	0.000	0.001	0.002
Opt Bandwidth	0.0423	0.0408	0.0431	0.0417	0.0452	0.0376	0.0367	0.0365
Effective number observations left	228	222	230	225	238	204	203	202
Effective number observations right	278	274	282	277	296	254	249	247
Panel B: ad hoc bandwidth 0.05	in logarithms		IHS Trans		Levels		1 if > National median	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Majority Wins	−0.269***	−0.244***	−0.292***	−0.267***	−15.90***	−11.38***	−0.165***	−0.121***
	(0.0669)	(0.0586)	(0.0738)	(0.0651)	(3.591)	(3.005)	(0.0360)	(0.0335)
Effective number observations left	261	261	261	261	261	261	261	261
Effective number observations right	330	330	330	330	330	330	330	330
State × Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y	Y	Y
Crime in Previous Mandate	N	Y	N	Y	N	Y	N	Y

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 the mandate in logarithms. Columns 3 and 4 present the results for estimations using an IHS transformation of the homicide rate as the dependent variable, while columns 5 and 6 show the results for regressions when the dependent variable is the homicide rate without any transformation. Finally, in columns 7 and 8, 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 a small margin (i.e., Bandwidth). We consider all elections for the period 2005–2012. The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. Specifications in even columns include the previous mandate's dependent variable as a control. Robust standard errors clustered at the state × year level in brackets ***$p<0.01$, **$p<0.05$, *$p<0.1$. When using optimal bandwidth selection, significance levels are based on the reported robust bias-corrected *p*-values. Regressions are weighted by municipal population.

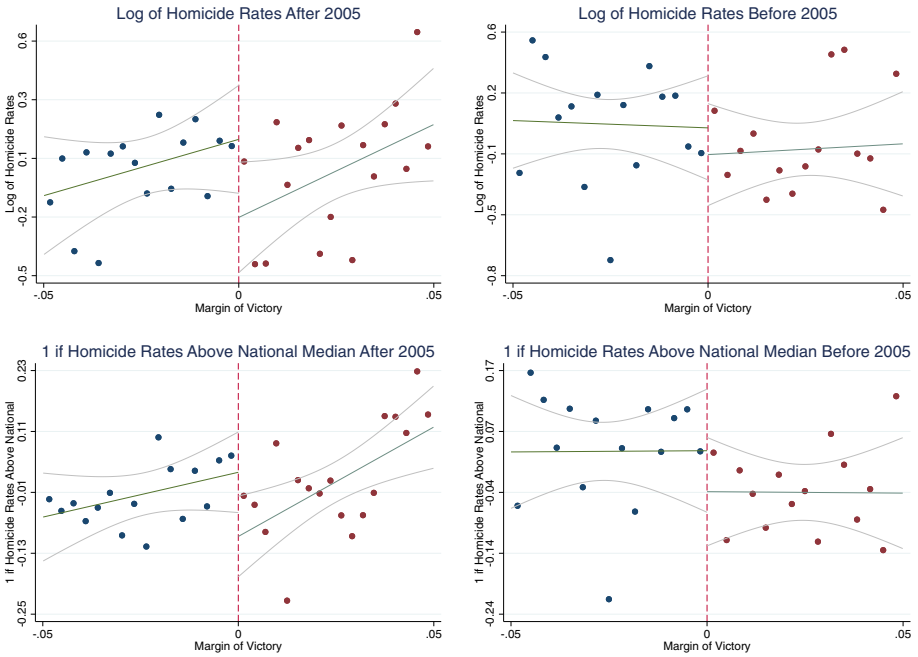


Fig. 4. RDD graphical analysis: political alignment and crime. *Notes:* The figures represent RDD plots of homicides measures during mandate on vote margin. Top panel focuses on homicide rate in logarithms for the periods 2005–2012 (left) and 2000–2004 (right). Bottom panel focuses on a dummy indicating whether homicide rate in the municipality was above the national median for the periods 2005–2012 (left) and 2000–2004 (right). The set of controls from the main specification in the paper has been partialed out. The sample used for the left panels is the same as in Table 6.

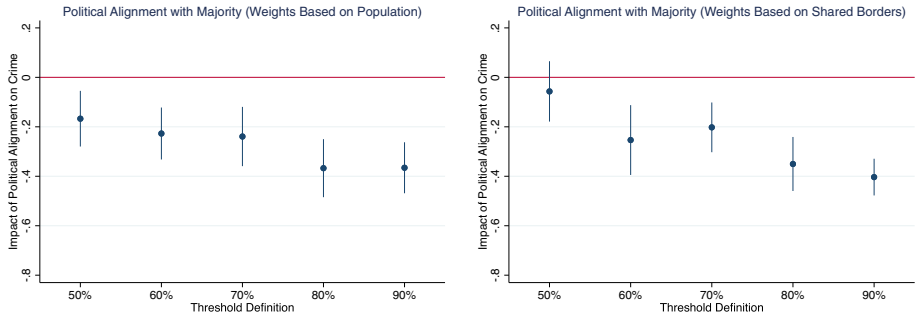


Fig. 5. RDD graphical analysis: political alignment and cooperation. *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions using different treatment definitions (thus also different samples) based on two dimensions: the weights assigned to each neighboring municipality and the threshold defining majority. Left panel assigns weights based on neighboring population whereas in right panel is based on shared borders. The dependent variable in each regression is homicide rates during mandate in logarithms. Estimations use an optimal bandwidth.

Table 7
Party alignment and crime: heterogeneity.

	Dependent variable: homicide rates during mandate (in logarithms)					
		Not vertically aligned			Incumbency	
	Baseline	with State Gov.	with National Gov.	None	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	−0.276***	−0.0693	−0.598***	−0.577***	−0.478***	0.126
	(0.0618)	(0.159)	(0.0542)	(0.219)	(0.0539)	(0.0775)
Robust bias-corrected *p*-values	0.00	0.50	0.00	0.00	0.00	0.19
Opt Bandwidth	0.0408	0.0578	0.0504	0.0532	0.0414	0.0494
Effective number observations left	222	104	98	37	109	129
Effective number observations right	274	130	135	31	131	174
State × 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: The table shows the results for the RDD exercises that analyze heterogeneity in the effects of political alignment on homicides. The dependent variable is the homicide rate during the mandate in logarithms. Column 1 shows our baseline result (i.e., using the whole sample). Columns 2 to 4 show the main effect for the sample of municipalities for which (1) the majoritarian party was not the party governing the state, (2) PAN (the party in the National Government) was not the party ruling the majority of the neighborhood, and (3) the majoritarian party was neither aligned with the State government nor the National government, respectively. 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. The sample includes municipalities that had elections in which the party ruling the majority of neighboring municipalities won and lost by a small margin (i.e., Bandwidth) for the period 2005–2012. The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. Robust standard errors clustered at the state × year level in brackets ***$p<0.01$, **$p<0.05$, *$p<0.1$. Significance levels are based on the reported robust bias-corrected *p*-values.

Next we present the results of a placebo test and a range of robustness checks. First, we replicate the RDD analysis using as dependent variable the homicide rate in the three years before the election (i.e., during the previous mayor's mandate), which should not be affected by the subsequent political shock. As shown in Fig. A.11, there is no evidence of a discontinuity at the threshold, confirming the absence of any systematic relationship between pre-election crime rates and post-election political alignment.

We then test the robustness of the RDD estimates to excluding different sets of controls. Fig. A.12 presents the results graphically for the four homicide rates measures under four alternative specifications: (i) including the full set of controls, (ii) excluding demographic controls, (iii) excluding state capacity controls, and (iv) without controlling for crime in the previous mandate. Overall, the RDD estimates remain statistically significant and fairly stable across all specifications. Next, in Table A.8 we confirm that the effect of political alignment on homicide rates is robust to controlling more flexibly for the running variable using higher-order polynomials. This holds across all specifications, regardless of the specific outcome variables used.

Fig. A.13 shows RDD estimates from specifications with different sets of party fixed effects. This exercise addresses the concern that a mayor's party affiliation may influence post-election crime outcomes for reasons unrelated to cooperation with neighbors–for instance, because some parties place greater emphasis on crime prevention or adopt distinct enforcement strategies. The results indicate that the estimated effect does not depend on the party of the incumbent or of the winning

candidate, nor on the identity of the NMP.[26] As for cooperation, we want to verify how the results for crime vary depending on the way the neighbors' majority is defined or on how neighbors are weighted. To this end, Fig. 5 reports the RDD estimates using alternative majority threshold (from 50 % to 90 %) and weighting neighbors by either population (left panel) or length of shared borders (right panel). The results show that the estimated effect tends to increase with the share of aligned neighbors, while the choice of weighting scheme has little influence on its magnitude or significance.

In Table A.9 we tackle two additional questions: (i) which types of homicides are mostly affected by political alignment with neighbors, and (ii) whether such alignment also improves judicial outcomes. The first four columns show that the overall reduction in homicides is driven primarily by a decline in male victims (column 1)–particularly young men (column 2)–while there is no significant effect on homicide involving female victims (column 3) or on domestic violence (column 4). This pattern is consistent with cooperation reducing crime-related homicides, which disproportionately involve male victims. The last two columns show that political alignment with neighbors increases both the share of guilty verdicts in homicide cases (column 5) and the proportion of homicide cases solved (column 6), suggesting that inter-municipal cooperation can also strengthen judicial performance.

In Table 7 we explore how the effect of horizontal alignment on crime varies with alignment with state and federal governments, and incumbency status. Column 1 reports the baseline estimates. Column 2 shows that the effect of horizontal alignment on crime is smaller for municipalities not aligned with the state government, consistent with cooperation with state police playing an important role in crime prevention. By contrast, Column 3 shows that the crime-reducing effect of horizontal alignment is substantially larger for municipalities not aligned with the federal government. This pattern may in part reflect party-specific dynamics, most notably the rise in drug-related violence in PAN-controlled municipalities after the PAN assumed the presidency in 2006 (Dell, 2015). Nonetheless, these dynamics do not affect our main conclusion, since–as documented in Fig. A.13–the effect of horizontal alignment on crime is independent of the identity of the party. Finally, consistent with the finding that alignment with neighbors increased cooperation especially for victorious challengers, Columns 5 and 6 of Table 7 document that the crime-reducing effect of horizontal alignment is likewise driven by these challengers rather than by incumbents retaining office.

5. Conclusion

To what extent should policy-making be decentralized in a federal system? And what are the main forces that determine the optimal degree of decentralization? The academic debate around these questions has traditionally focused on the trade-off between tailoring policies to local preferences and internalizing inter-jurisdictional externalities (Oates, 1977). Yet, any evaluation of a decentralized system should also consider how cooperation across jurisdictions–or the lack thereof–affects the local provision of public goods. This dimension has so far received relatively little attention in the literature.

This paper contributes to filling this gap by investigating the impact of horizontal inter-jurisdictional cooperation in the provision of public goods in the presence of spatial spillovers. We focus on law enforcement, a policy area where coordination across jurisdictions is particularly crucial. Using data from Mexico, we employ a spatial regression discontinuity design (RDD) to study how political alignment between mayors of neighboring municipalities affects inter-municipal cooperation and, ultimately, crime outcomes. The key idea is that mayors aligned with the party governing most neighboring municipalities face stronger incentives and lower costs to cooperate on issues of shared interest, such as law enforcement.

To estimate the causal effect of political alignment, we compare the prevalence of cooperation agreements and the evolution of crime rates in municipalities where the party governing most neighbors narrowly won the election with those where it narrowly lost. We find that municipalities politically aligned with their neighbors are substantially more likely to cooperate–by around 30 percentage points overall and by 10–15 percentage points in public safety during periods of high crime–and experience significantly lower homicide rates in subsequent years. This effect is sizable–around a 25 % reduction in murder rates–robust to a range of specifications, and independent of the identity of the parties involved. Moreover, alignment has no effect on pre-election homicide rates, confirming that our treatment is not correlated with prior crime trends. The results also hold when accounting for political alignment with state or federal governments, underscoring the distinct role of horizontal and vertical cooperation. At the same time, our analysis reveals interesting complementarities and substitutabilities between the two: while vertical alignment tends to promote overall cooperation, in the domain of public safety the absence of vertical alignment appears to encourage cooperation among aligned neighbors.

Our findings contribute to the economics of crime by providing new evidence that the effectiveness of decentralized law enforcement systems crucially depends on the extent of inter-jurisdictional cooperation they can sustain. More broadly, they enrich the debate on decentralization by highlighting that the evaluation of its costs and benefits must consider not only spillover-induced inefficiencies but also the potential lack of horizontal coordination. Indeed, our results suggest that without mechanisms fostering inter-jurisdictional cooperation, a decentralized system may perform worse than a centralized one. In this sense, our work illustrates the value of adopting a network-based approach to studying public good provision in decentralized settings (Acemoglu et al., 2015).

Finally, while our analysis establishes credible reduced-form evidence of the aggregate relationship between political alignment, cooperation, and crime, it cannot disentangle the specific mechanisms through which these effects operate. Identifying the relative contribution of these channels–such as shared information systems or joint enforcement actions–remains an important direction for future research.

Finally, our study also offers broader insights into the role of political parties in democratic systems: by facilitating coordination among local policymakers, party structures and party discipline can, under certain conditions, help mitigate the inefficiencies of fragmented decentralized governance.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

[26] The stability of our results irrespective of whether the majority party is the PRI is particularly reassuring, given that PRI mayors account for about two-thirds of the sample.

Appendix A. Additional tables and figures

Table A.1
Years of elections by state.

STATE	Election year	# Municipalities with majority	# Close elections	STATE	Election year	# Municipalities with majority	# Close elections
AGUASCALIENTES	2001	6	1	MORELOS	2003	12	5
	2004	9	3		2006	10	5
	2007	5	3		2009	17	3
	2010	11	2	NAYARIT	2002	16	2
BAJA CALIFORNIA	2001	5	2		2005	20	5
	2004	4	3		2008	15	2
	2007	5	3		2011	14	3
	2010	5	1	NUEVO LEON	2003	47	8
BAJA CALIFORNIA	2002	2	0		2006	44	5
SUR	2005	4	0		2009	43	18
	2008	5	0	PUEBLA	2001	153	45
	2011	1	1		2004	121	35
CAMPECHE	2003	7	4		2007	158	36
	2006	5	2		2010	76	32
	2009	8	5	QUERETARO	2003	8	2
COAHUILA	2002	31	7		2006	8	1
	2005	71	14		2009	10	1
	2009	36	4	QUINTANA ROO	2002	6	1
COLIMA	2003	3	0		2005	5	1
	2006	8	5		2008	6	1
	2009	7	1		2010	3	1
CHIAPAS	2001	78	21	SAN LUIS POTOSI	2003	34	7
	2004	56	14		2006	25	6
	2007	42	16		2009	19	3
	2010	25	7	SINALOA	2001	14	1
CHIHUAHUA	2001	57	14		2004	14	2
	2002	1	1		2007	17	4
	2004	44	12		2010	10	2
	2007	55	19	SONORA	2003	40	12
	2010	47	15		2006	38	14
CIUDAD DE MEXICO	2003	13	1		2009	43	17
	2006	15	0	TABASCO	2003	12	4
	2009	8	0		2006	8	4
DURANGO	2001	30	9		2009	9	2
	2004	22	6	TAMAULIPAS	2001	37	5
	2007	36	8		2004	43	3
	2010	17	5		2007	39	8
GUANAJUATO	2003	20	5		2010	36	5
	2006	27	5	TLAXCALA	2001	28	12
	2009	24	5		2002	1	0
GUERRERO	2002	48	14		2004	14	4
	2005	50	22		2007	10	1
	2008	32	10		2010	12	6
	2012	44	16	VERACRUZ	2000	107	43
HIDALGO	2002	54	14		2004	66	28
	2005	41	14		2007	158	28
	2008	53	9		2010	84	23
	2011	36	11	YUCATAN	2001	89	26
JALISCO	2003	58	16		2004	78	28
	2006	71	18		2007	68	20
	2009	58	24		2010	78	27
MEXICO	2003	65	20	ZACATECAS	2001	24	8
	2006	45	11		2004	19	9
	2009	103	17		2007	19	5
MICHOACAN	2001	60	21		2010	15	2
	2004	58	21				
	2007	43	16				
	2011	40	11				

Note: 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 composed of a subset of these municipal elections, i.e., those in which the party that won or came second ruled the majority of neighboring municipalities (the number of such elections by state is reported in the column labeled as number of municipalities with majority).

Table A.2
From all observations to RDD samples.

Analysis:	Cooperation	Crime
Election terms:	2000–2008	2005–2012
1. All municipality/election observations	4912	5149
2. Excluding Oaxaca	3772	4009
3. Majority (≥50 %) of neighbors ruled by one party	2520	2475
4. Neighbor-majority party is winner or runner-up	2272	2200
5. Close elections (margin <5 p.p.; RDD sample)	495	591
6. Close elections won by neighbor-majority party	261	330

Note: Each row applies the restriction to the sample defined in the previous row. Row 5 corresponds to the final RDD estimation sample, consisting of elections where the party governing the majority of neighbors (Neighbor-Majority-Party, NMB) either won or lost by a small margin. Figures in rows 5 and 6 are based on a 5 % margin cutoff; in the analysis, sample sizes can alternatively be based on the optimal bandwidth algorithm.

Table A.3
Political alignment, cooperation and crime: samples comparison.

Panel A: cooperation sample	NMP in top 2 & close election (1)	NMP in top 2 & non-close election (2)	Others (3)	Difference (2)-(1) (4)	Difference (3)-(1) (5)
Homicide Rate Previous Mandate (per 100,000)	30.780	31.240	40.173	0.460	9.393**
Homicide Rate During Mandate (per 100,000)	32.553	36.213	37.314	3.660	4.761
Average Margin of Victory for Neighbors	0.127	0.141	0.116	0.014***	−0.012**
Log Homicide Rate Previous Mandate (per 100,000)	2.481	2.604	2.595	0.123	0.114
Log Homicide Rate During Mandate (per 100,000)	2.538	2.633	2.493	0.095	−0.045
Dummy for homicide rates in previous mandate > national median	0.448	0.490	0.522	0.042	0.074**
Dummy for homicide rates during mandate > national median	0.497	0.486	0.516	−0.011	0.019
PAN governor	0.253	0.241	0.174	−0.012	−0.079***
PRI governor	0.603	0.654	0.702	0.051*	0.099***
PRD governor	0.175	0.142	0.139	−0.034	−0.036*
Majority of Neighbors PAN	0.117	0.120	0.030	0.003	−0.087***
Majority of Neighbors PRI	0.794	0.806	0.081	0.012	−0.713***
Majority of Neighbors PRD	0.087	0.073	0.025	−0.014	−0.062***
PAN incumbent	0.228	0.235	0.130	0.007	−0.098***
PRI incumbent	0.628	0.592	0.372	−0.036	−0.256***
PRD incumbent	0.125	0.137	0.148	0.012	0.023
Area (sq km)	983.995	1244.144	460.384	260.149	−523.611***
Number of Neighboring Municipalities	5.810	5.791	5.775	−0.019	−0.035
Population Density	192.364	360.360	194.738	167.996*	2.374
Death Rate	405.202	405.943	468.267	0.741	63.065***
Human Development Index	0.726	0.741	0.718	0.015**	−0.007
Percentage households with no sewage	16.947	15.243	14.254	−1.705*	−2.693***
Percentage households with no electricity	7.591	7.470	7.955	−0.121	0.364
Percentage households with no water	17.984	16.603	19.395	−1.381	1.410
Observations	495	1777	2640	2272	3135
Panel B: crime sample	(1)	(2)	(3)	(4)	(5)
Homicide Rate Previous Mandate (per 100,000)	39.606	35.208	36.710	−4.398	−2.896
Homicide Rate During Mandate (per 100,000)	67.938	64.276	46.434	−3.662	−21.504***
Average Margin of Victory for Neighbors	0.127	0.137	0.110	0.010**	−0.017***
Log Homicide Rate Previous Mandate (per 100,000)	2.574	2.657	2.491	0.083	−0.082
Log Homicide Rate During Mandate (per 100,000)	3.009	3.037	2.695	0.029	−0.314***
Dummy for homicide rates in previous mandate > median	0.504	0.526	0.503	0.022	−0.001
Dummy for homicide rates during mandate > national median	0.536	0.538	0.490	0.002	−0.046*
PAN governor	0.224	0.175	0.354	−0.050**	0.129***
PRI governor	0.637	0.701	0.495	0.064**	−0.142***
PRD governor	0.197	0.157	0.396	−0.040*	0.199***
Majority of Neighbors PAN	0.147	0.158	0.032	0.011	−0.115***
Majority of Neighbors PRI	0.770	0.773	0.083	0.003	−0.686***
Majority of Neighbors PRD	0.081	0.066	0.016	−0.015	−0.065***
PAN incumbent	0.272	0.264	0.155	−0.008	−0.118***
PRI incumbent	0.543	0.530	0.345	−0.013	−0.198***
PRD incumbent	0.151	0.145	0.163	−0.005	0.013
Area (sq km)	1301.506	1280.465	496.991	−21.042	−804.515***
Number of Neighboring Municipalities	5.682	5.791	5.797	0.109	0.115
Population Density	186.469	370.279	200.347	183.810**	13.877
Death Rate	417.823	408.344	484.955	−9.479	67.132***
Human Development Index	0.762	0.771	0.743	0.009**	−0.019***
Percentage households with no sewage	13.334	10.983	10.073	−2.352***	−3.261***
Percentage households with no electricity	5.022	5.026	5.938	0.004	0.916*
Percentage households with no water	16.462	15.602	19.204	−0.860	2.743**
Observations	591	1609	2949	2200	3540

Note: The table reports mean values for covariates in different samples. Column 1 includes municipalities where the party ruling the majority of neighbors (Neighbor-Majority-Party, or NMP) won or lost by less than 5 %. Column 2 includes only municipalities where the NMP won or lost by 5 % or more. Column 3 includes all municipalities not included in columns 1 and 2. Columns 4 and 5 report the differences in means between observations in Column 1 and those in Columns 2 and 3, respectively. Panel A refers to the sample used in the analysis of cooperation, which includes elections held between 2000 and 2008. Panel B refers to the sample used in the analysis of crime, which includes elections held between 2005 and 2012. ***$p<0.01$, **$p<0.05$, *$p<0.1$.

Table A.4
Close election and party dominance.

Panel A: optimal bandwidth	Party X: PRI		Party X: PAN	
	Party X is majority (1)	Share of neighbors ruled by Party X (2)	Party X is majority (3)	Share of neighbors ruled by party X (4)
Party X Wins	0.0296	0.00819	0.0336	0.0107
	(0.0496)	(0.0267)	(0.0400)	(0.0298)
Robust bias-corrected *p*-values	0.432	0.643	0.434	0.686
Observations	6238	6237	4232	4232
Opt Bandwidth	0.127	0.129	0.151	0.146
Effective number observations left	1841	1859	1482	1454
Effective number observations right	2097	2110	1452	1429
Panel B: ad hoc bandwidth 0.05	(1)	(2)	(3)	(4)
Party X Wins	0.0319	0.00223	0.00742	−0.00567
	(0.0577)	(0.0310)	(0.0546)	(0.0408)
Observations	6238	6237	4232	4232
Effective number observations left	943	943	573	573
Effective number observations right	900	899	656	656

Note: This table shows the results for the RDD exercises that study the relation between winning a close election and the political dominance of the winning party in neighboring municipalities. We focus in all elections between 2000 and 2012 in which PRI (columns 1 and 2) and PAN (columns 3 and 4) won or lost by small margin (i.e. Bandwidth). The dependent variable Party X (either PRI or PAN) is majority a dummy for whether party X governs the majority of neighboring municipalities. The dependent variable Share of Neighbors Ruled by Party X represents the fraction of neighboring municipalities that are governed by Party X in the year of the election. 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 × year level in brackets. ***$p<0.01$, **$p<0.05$, *$p<0.1$. When using optimal bandwidth selection, significance levels are based on the reported robust bias-corrected *p*-values.

Table A.5
Party alignment and inter-municipal cooperation (Excluding border municipalities).

	Extensive margin of cooperation			Intensive margin of cooperation			
	Dummy = 1 if there is a cooperation agreement with			Any neighbor		Aligned municipality	
	Any municipality (Mean: 0.32)	Any neighbor (Mean: 0.29)	Aligned municipality (Mean: 0.2)	Count (Mean: 0.57)	Share of neighbors (Mean: 10.4)	Count (Mean: 0.33)	Share of neighbors (Mean: 6.1)
Panel A: optimal bandwidth	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Majority Wins	0.160***	0.217***	0.243*	6.624**	0.316***	0.515***	12.27***
	(0.0587)	(0.0578)	(0.135)	(3.240)	(0.0530)	(0.0997)	(2.577)
Robust bias-corrected *p*-values	0.01	0.00	0.09	0.05	0.00	0.00	0.00
Opt Bandwidth	0.0822	0.0671	0.0894	0.0817	0.0744	0.0863	0.0802
Effective number observations left	223	193	237	223	202	219	213
Effective number observations right	284	230	305	283	254	295	278
Panel B: ad hoc bandwidth 0.05	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Majority Wins	0.186***	0.205***	0.312*	6.949*	0.334***	0.628***	14.28***
	(0.0624)	(0.0603)	(0.182)	(3.970)	(0.0627)	(0.124)	(3.121)
Effective number observations left	160	160	160	160	154	154	154
Effective number observations right	173	173	173	173	171	171	171
Observations	1166	1166	1166	1166	1143	1143	1143
State × Year FE	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	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 2003 and 2008 when excluding municipalities with neighbors in other states. The sample for this analysis includes municipalities that had elections taking place within 3 years before 2003 or 2008, and in which the party ruling the majority of neighboring municipalities won or lost by a 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 measures of the intensive and extensive margin of agreement of a certain type as reported in the two surveys. Columns 1 to 3 present the results for a dummy that equals one when the municipality reported an agreement for cooperation in any domain with any municipality, a neighboring municipality, and a politically-allied neighbor, respectively. Focusing only on neighboring municipalities, in columns 4 to 7, we look at the number of municipalities (odd columns) and the share of neighbors (even columns) with cooperation agreements in any domain. 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 × year level in brackets. The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. ***$p<0.01$, **$p<0.05$, *$p<0.1$. When using optimal bandwidth selection, significance levels are based on the reported robust bias-corrected *p*-values.

Table A.6
Party alignment and inter-municipal cooperation: different polynomial degrees.

	Dependent variable: Dummy = 1 if there is an agreement with a neighbor								
	Any neighbor			Politically aligned					
	Any domain			Any domain			Public safety		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Majority Wins	0.178***	0.156**	0.181**	0.283***	0.250***	0.264***	0.0783***	0.0841**	0.0969**
	(0.0537)	(0.0620)	(0.0856)	(0.0469)	(0.0539)	(0.0664)	(0.0294)	(0.0385)	(0.0458)
Robust bias-corrected *p*-values	0.00	0.02	0.05	0.00	0.00	0.00	0.02	0.04	0.03
Opt Bandwidth	0.0695	0.136	0.141	0.0720	0.136	0.176	0.0835	0.137	0.167
Polynomial degree	1	2	3	1	2	3	1	2	3
Effective number observations left	304	508	512	302	493	543	326	486	522
Effective number observations right	370	653	676	374	647	800	412	619	734
State × Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note: The table shows the results for the RDD exercises on cooperation when using different polynomial degrees to approximate the population conditional expectation functions for control and treated municipalities. The set of demographic controls includes population density, human development index in 2005, death rates in 2003, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. Robust standard errors clustered at the state × year level in brackets ***$p<0.01$, **$p<0.05$, *$p<0.1$. Significance levels are based on the reported robust bias-corrected *p*-values.

Table A.7
Party alignment and cooperation: heterogeneity.

	Dependent variable: Dummy = 1 if there is a cooperation agreement					
Panel A: cooperation with any neighboring municipality, any domain						
		Not vertically aligned			Incumbency	
	Baseline	with State Gov.	with Nat. Gov.	None	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	0.191***	0.0528	0.160**	0.252***	0.244**	0.147**
	(0.0611)	(0.0809)	(0.0786)	(0.0727)	(0.0990)	(0.0611)
Effective # obs. left	234	86	90	35	97	137
Effective # obs. right	261	79	121	34	111	150
Panel B: cooperation with politically aligned neighboring municipality, any domain						
		Not vertically aligned			Incumbency	
	Baseline	with State Gov.	with Nat. Gov.	None	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	0.302***	0.262***	0.356***	0.579***	0.351***	0.271***
	(0.0551)	(0.0970)	(0.0614)	(0.0783)	(0.103)	(0.0696)
Effective # obs. left	225	83	84	33	92	133
Effective # obs. right	259	78	119	33	110	149
Panel C: cooperation with politically aligned neighboring municipality, public safety						
		Not vertically aligned			Incumbency	
	Baseline	with State Gov.	with Nat. Gov.	None	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)
Majority Wins	0.111***	0.192***	0.240***	0.403***	0.149*	0.0618*
	(0.0349)	(0.0554)	(0.0524)	(0.0750)	(0.0815)	(0.0368)
Effective # obs. left	220	79	83	32	90	130
Effective # obs. right	250	75	113	31	105	145
State × 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: The table shows the results for the RDD exercises that analyze heterogeneity in the effects of political alignment on cooperation. The dependent variable is a dummy that equals one when the municipality reported that there was at least one cooperation agreement, in any domain with any neighboring municipality (Panel A), with a politically-allied neighbor in any domain (Panel B) or in Public Safety (Panel C). Column 1 shows our baseline result (i.e., using the whole sample). Columns 2 to 4 show the main effect for the sample of municipalities for which the majoritarian party was not the party (1) governing the state, (2) governing the federal government (i.e., PRI before 2007 and PAN after 2006), and (3) was neither aligned with the State government nor the National government, respectively. 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. The sample includes municipalities that had elections in which the party ruling the majority of neighboring municipalities won or lost by a small margin (i.e., within a 5 % bandwidth). The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. Robust standard errors clustered at the state × year level in brackets ***$p<0.01$, **$p<0.05$, *$p<0.1$. Significance levels are based on the reported robust bias-corrected *p*-values.

Table A.8
Party alignment and crime: different polynomial degrees.

	Dependent variable: homicide rates during mandate								
	In logarithms			Levels			1 if > National median		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Majority Wins	−0.276***	−0.382***	−0.374***	−15.02***	−18.60***	−21.98***	−0.0960***	−0.137**	−0.145*
	(0.0618)	(0.0753)	(0.0914)	(3.355)	(5.650)	(7.376)	(0.0328)	(0.0494)	(0.0650)
Robust bias-corrected *p*-values	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06
Opt Bandwidth	0.0408	0.0843	0.117	0.0376	0.0648	0.0891	0.0365	0.0670	0.0899
Polynomial degree	1	2	3	1	2	3	1	2	3
Effective number observations left	222	385	515	204	316	407	202	323	412
Effective number observations right	274	530	713	254	426	558	247	437	567
State × Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Demographic Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
State Capacity Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Previous Mandate Crime	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note: The table shows the results for the RDD exercises on crime when using different polynomial degrees to approximate the population conditional expectation functions for control and treated municipalities. The set of demographic controls includes population density, human development index, death rates, number of neighboring municipalities, and total area of municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. Robust standard errors clustered at the state × year level in brackets ***$p<0.01$, **$p<0.05$, *$p<0.1$. Significance levels are based on the reported robust bias-corrected *p*-values. Regressions are weighted by municipal population.

Table A.9
Party alignment and crime: victims and sentences.

	Homicide rates in logarithms				Guilty sentences	
	Men	Young men	Women	Domestic violence	per homicide	per prosecution
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: optimal bandwidth						
Majority Wins	−0.316***	−0.302***	0.00163	−0.0498	0.218***	0.253***
	(0.0771)	(0.0780)	(0.0639)	(0.118)	(0.0417)	(0.0406)
Robust bias-corrected *p*-values	0.00	0.00	0.98	0.42	0.00	0.00
Opt Bandwidth	0.0375	0.0408	0.0610	0.0469	0.0857	0.0520
Effective number observations left	204	222	305	244	390	184
Effective number observations right	253	274	400	305	539	246
Panel B: ad hoc bandwidth 0.05						
Majority Wins	−0.290***	−0.292***	0.0986	−0.0877	0.208***	0.255***
	(0.0722)	(0.0758)	(0.0663)	(0.125)	(0.0416)	(0.0403)
Effective number observations left	261	261	261	261	261	181
Effective number observations right	330	330	330	330	330	232
State × 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 are the pertinent homicide rate in logarithms. The fourth column shows the effect of alignment on the rate of homicides with domestic violence (in logarithms). Finally, columns 5 and 6 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 homicide 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 × year level are in brackets. The sample includes municipalities where the party ruling the majority of neighboring municipalities won or lost by a small margin (i.e., Bandwidth). The set of demographic controls includes population density, human development index, death rates, and the total area of the municipality. State capacity controls represent the shares of households with no access to sewage, electricity, and water. ***$p< 0.01$, **$p< 0.05$, *$p< 0.1$. When using optimal bandwidth selection, significance levels are based on the reported robust bias-corrected *p*-values. Regressions are weighted by municipal population.

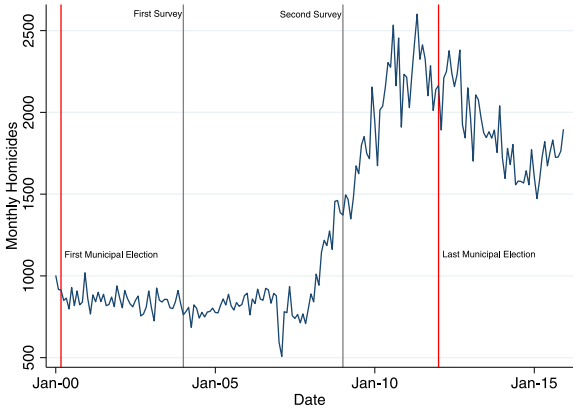
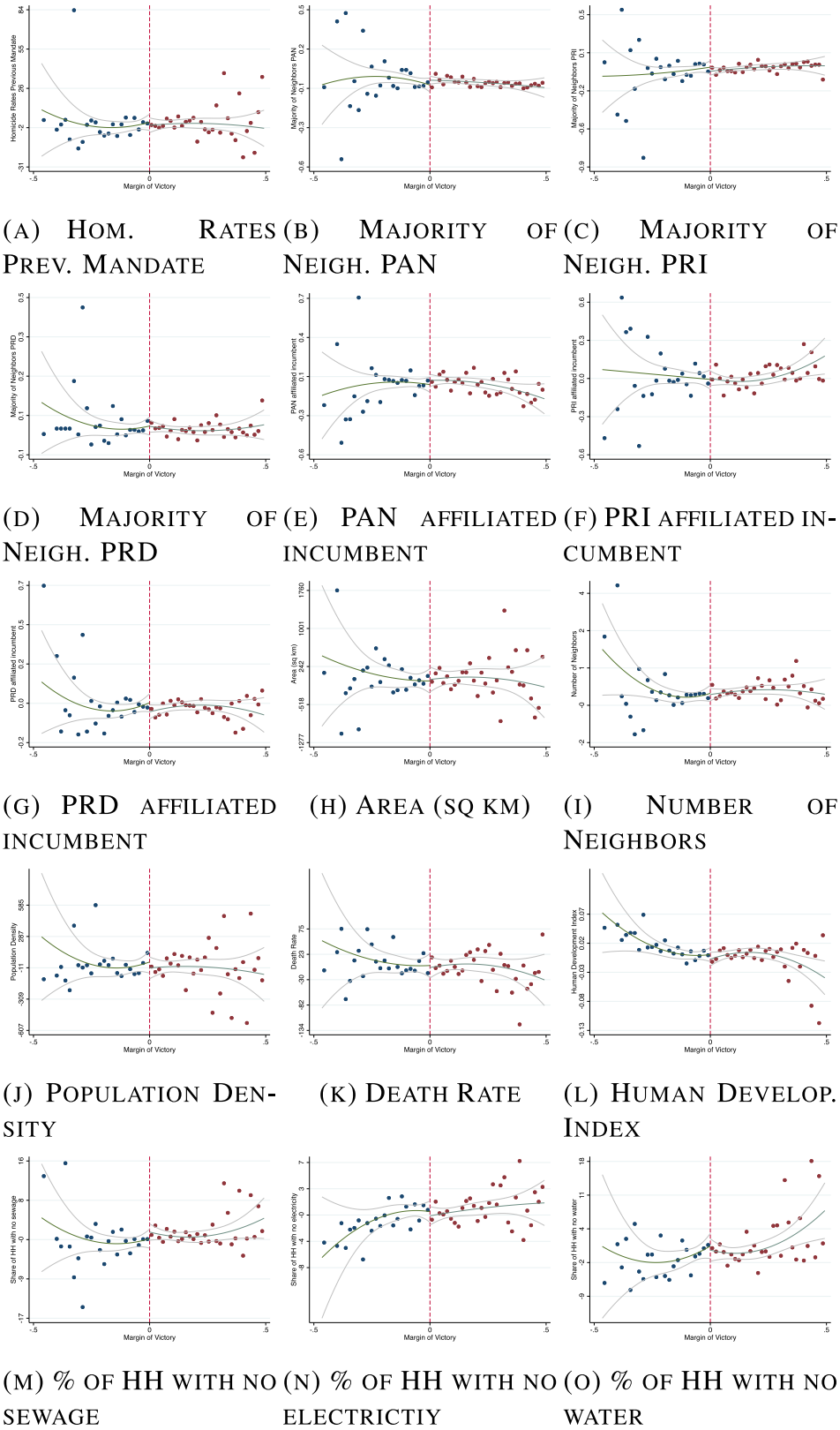


Fig. A.1. Total monthly homicides in Mexico (2000–2015). *Notes:* The figure depicts the evolution of the monthly number of homicides recorded in Mexico for the period 2000–2015. Vertical red bars denote the timing of the first and last municipal election used in our analysis. Vertical black lines denote the timing of the surveys on municipal cooperation we used in our analysis. Data from the Mexican Institute for Statistics and Geography (INEGI).



(A) HOM. RATES PREV. MANDATE (B) MAJORITY OF NEIGH. PAN (C) MAJORITY OF NEIGH. PRI

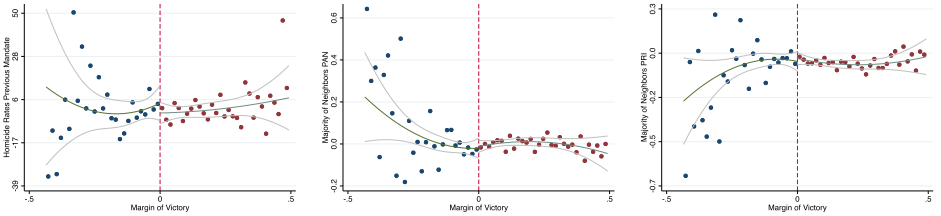
(D) MAJORITY OF NEIGH. PRD (E) PAN AFFILIATED INCUMBENT (F) PRI AFFILIATED INCUMBENT

(G) PRD AFFILIATED INCUMBENT (H) AREA (SQ KM) (I) NUMBER OF NEIGHBORS

(J) POPULATION DENSITY (K) DEATH RATE (L) HUMAN DEVELOP. INDEX

(M) % OF HH WITH NO SEWAGE (N) % OF HH WITH NO ELECTRICTIY (O) % OF HH WITH NO WATER

Fig. A.2. RDD figures for covariates: cooperation sample. *Notes:* The figures represent RDD plots of a set of different covariates (listed on the figure and residualized from state × year fixed effects to approximate the specification in the main empirical analysis) on vote margin using a quadratic polynomial to approximate the population conditional expectation functions for control and treated units.



(A) Hom. Rates Prev. Mandate (B) Majority of Neigh. PAN (C) Majority of Neigh. PRI

(D) Majority of Neigh. PRD (E) PAN affiliated incumbent (F) PRI affiliated incumbent

(G) PRD affiliated incumbent (H) Area (sq km) (I) Number of Neighbors

(J) Population Density (K) Death Rate (L) Human Develop. Index

(M) % of HH with no sewage (N) % of HH with no electricty (O) % of HH with no water

Fig. A.3. RDD figures for covariates: crime sample. *Notes:* The figures represent RDD plots of a set of different covariates (listed on the figure and residualized from state × year fixed effects to approximate the specification in the main empirical analysis) on vote margin using a quadratic polynomial to approximate the population conditional expectation functions for control and treated units.

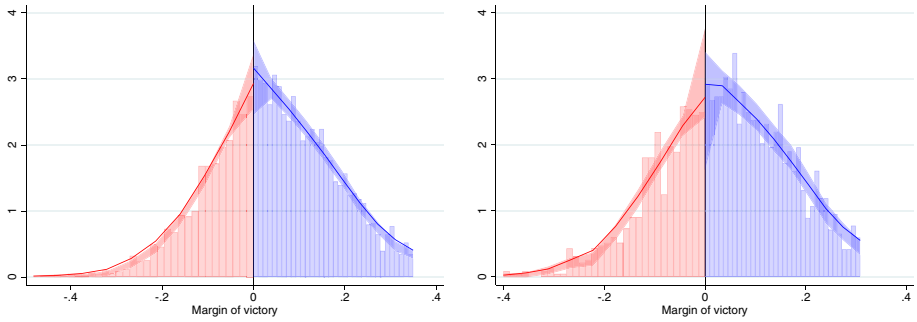
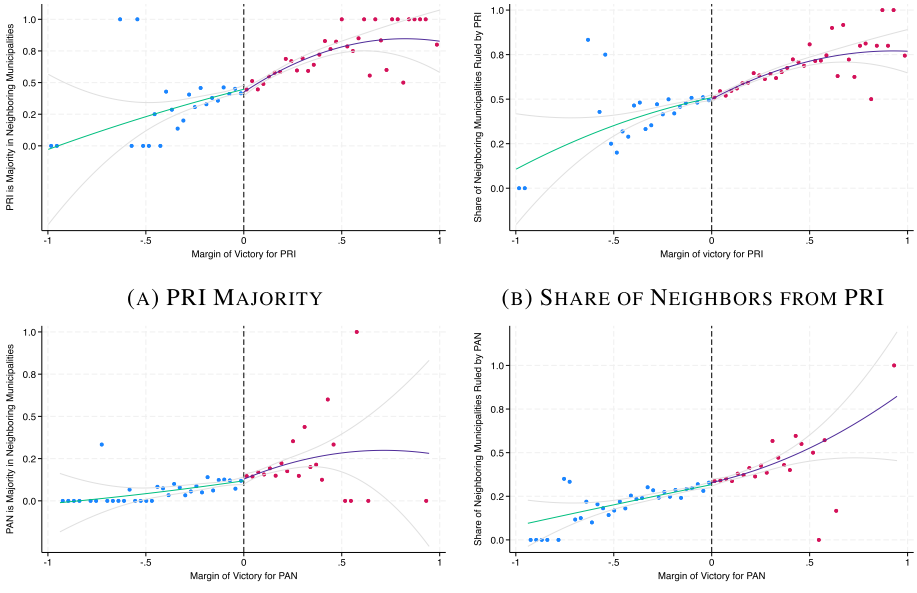


Fig. A.4. Manipulation tests. *Notes:* The figures plots the kernel density functions for margin of victory and manipulation testing using local polynomial density estimation. The sample includes all municipal elections in which the party that won or came second ruled the majority of neighboring municipalities. The left figure uses observations from our main crimen sample, while the right figure uses observations from our cooperation sample. Data from the Mexican Research Center for Development (CIDAC).



(A) PRI MAJORITY (B) SHARE OF NEIGHBORS FROM PRI

(C) PAN MAJORITY (D) SHARE OF NEIGHBORS FROM PAN

Fig. A.5. Winning a close election and party dominance. *Notes:* The figures display RDD plots illustrating the relationship between winning a close election and the political dominance of the winning party in neighboring municipalities. We focus on all elections between 2000 and 2012 where either PRI (upper panels) or PAN (lower panels) won or lost by a small margin. The dependent variable, Party X (either PRI or PAN), is a dummy indicating whether party X governs the majority of neighboring municipalities. The variable Share of Neighbors Ruled by Party X represents the proportion of neighboring municipalities governed by Party X in the year of the election.

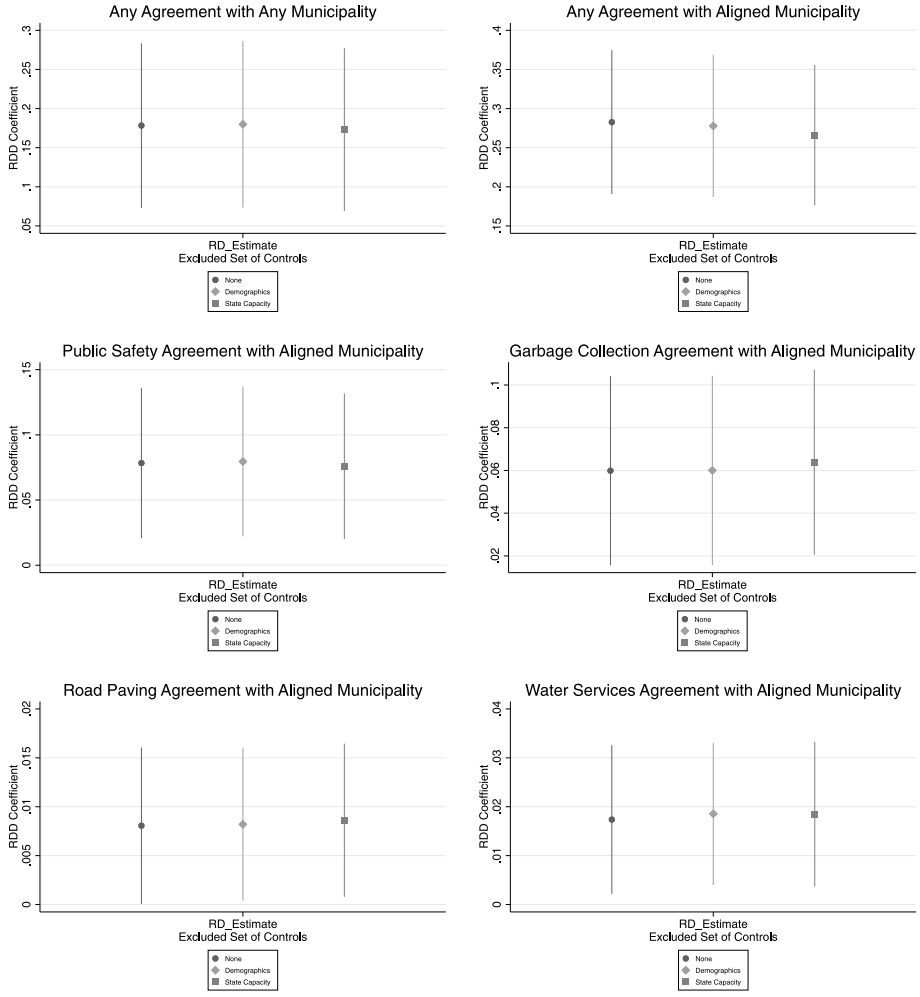


Fig. A.6. Robustness to exclusion of controls (Cooperation). *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions when omitting one set of controls at a time for our cooperation analysis. Estimations use an optimal bandwidth. Each figure shows the robustness analysis for a different outcome variable.

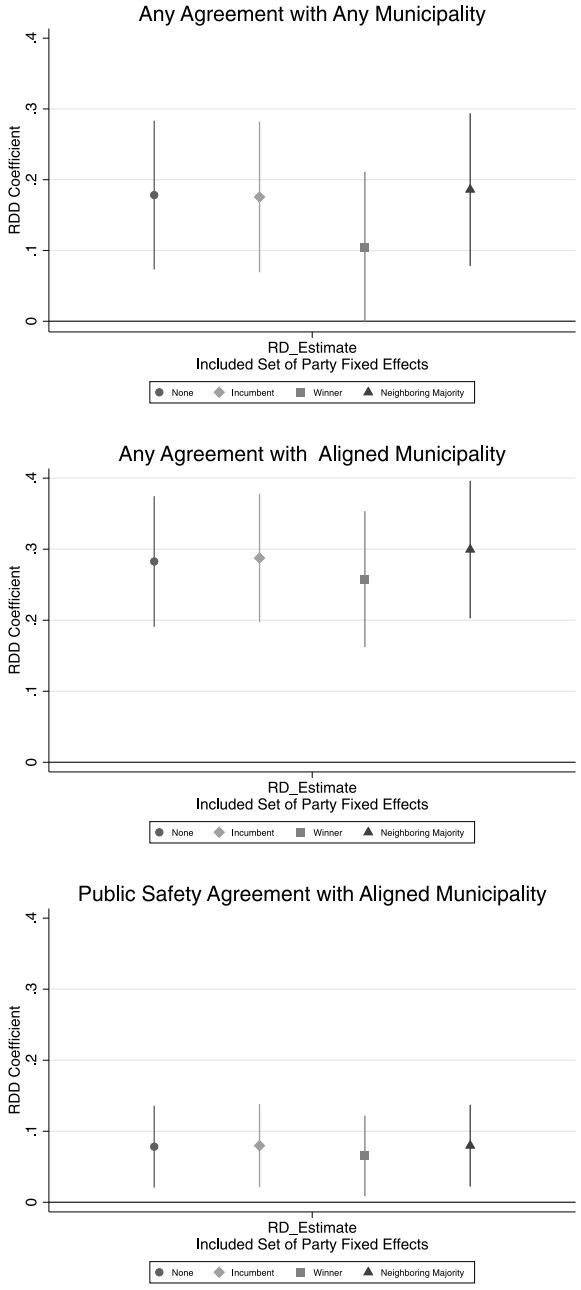


Fig. A.7. Robustness to party fixed effects (Cooperation). *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions when using a different set of fixed effects in our cooperation analysis. The sample used is the same as in Table 3.

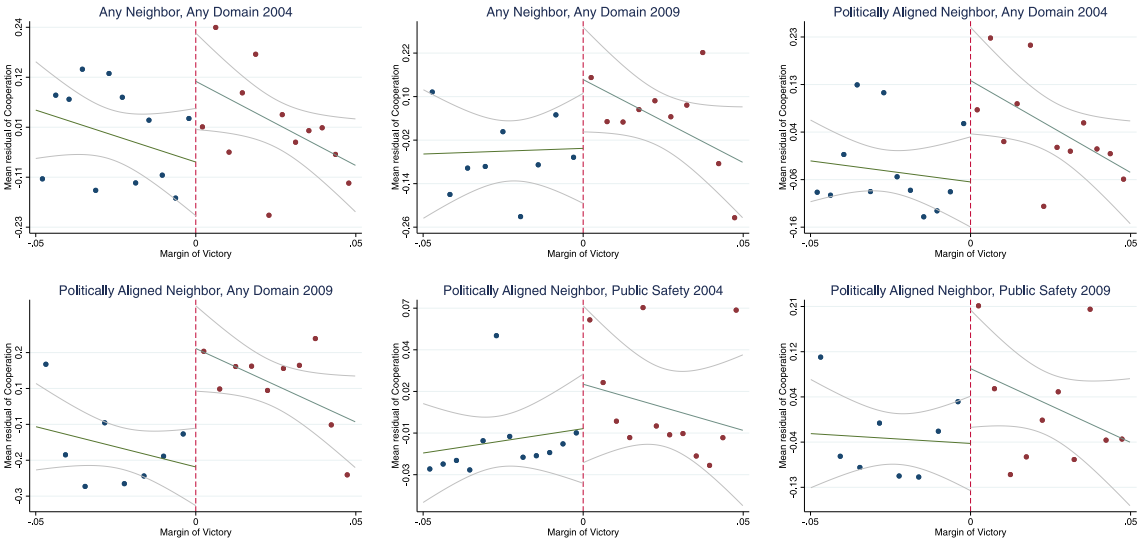


Fig. A.8. RDD graphical analysis: political alignment and cooperation. *Notes:* The figures represent RDD plots of the probability of cooperation agreement with neighboring municipalities on vote margin. Each figure focuses on a different cooperation measure as dependent variable based on the type of neighbor (e.g., Any or Politically Aligned), type of agreement (Any Domain or Public Safety), and the year in which the agreement was in place (2004 vs 2009). The set of controls from the main specification in the paper has been partialed out. The sample used is the same as in Table 2.

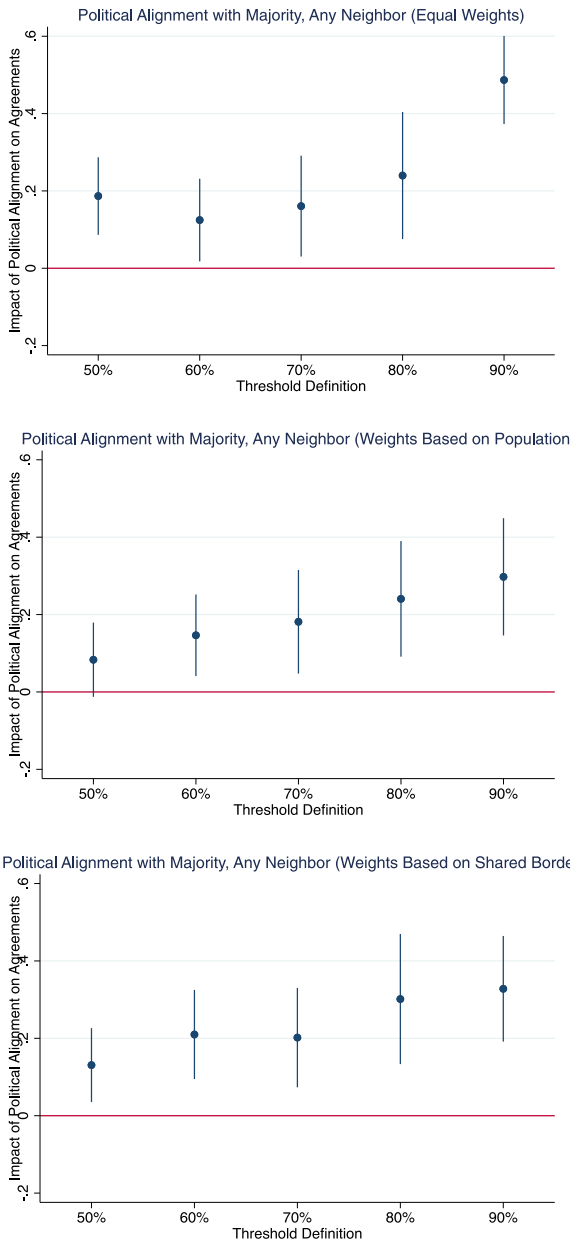


Fig. A.9. Alternative metrics to define majority (Any domain). *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions using different treatment definitions (thus also different samples) based on two dimensions: the weights assigned to each neighboring municipality and the threshold defining majority. Top panel assigns equal weight to each neighboring municipality (as in Table 2), middle panel assigns weights based on neighboring population whereas in bottom panel is based on shared borders. The dependent variable in each regression is a dummy that equals one when there was at least one agreement in any domain with any neighbor (regardless of political alignment). Estimations use an optimal bandwidth.

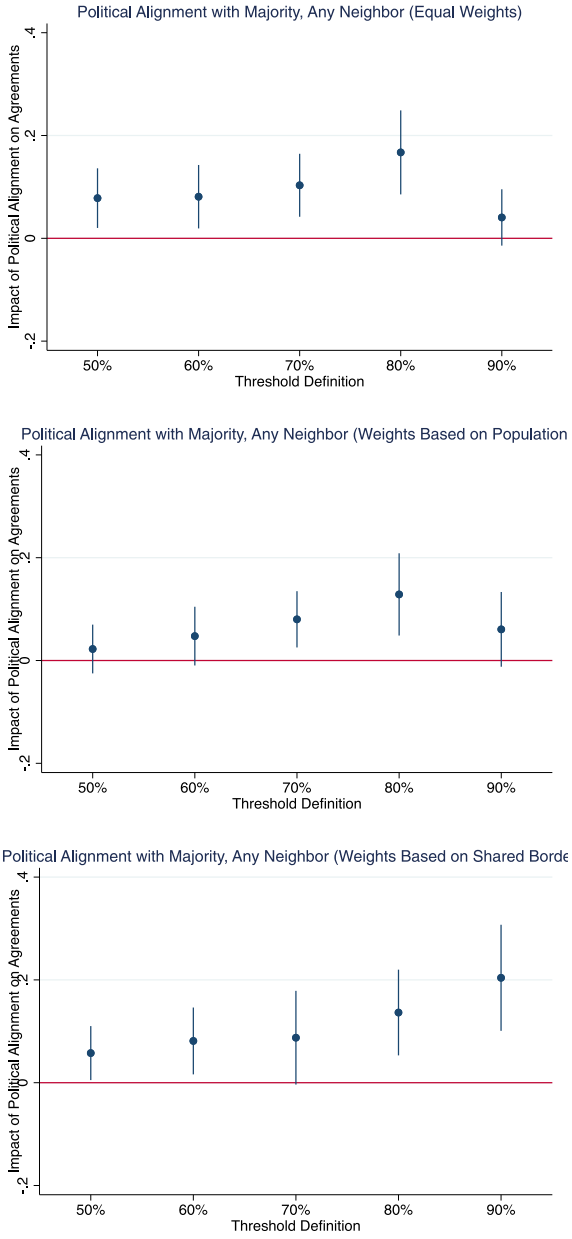


Fig. A.10. Alternative metrics to define majority (Public safety). *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions using different treatment definitions (thus also different samples) based on two dimensions: the weights assigned to each neighboring municipality and the threshold defining majority. Top panel assigns equal weight to each neighboring municipality (as in Table 3), middle panel assigns weights based on neighboring population whereas in bottom panel is based on shared borders. The dependent variable in each regression is a dummy that equals one when there was at least one agreement in any domain with any neighbor (regardless of political alignment). Estimations use an optimal bandwidth.

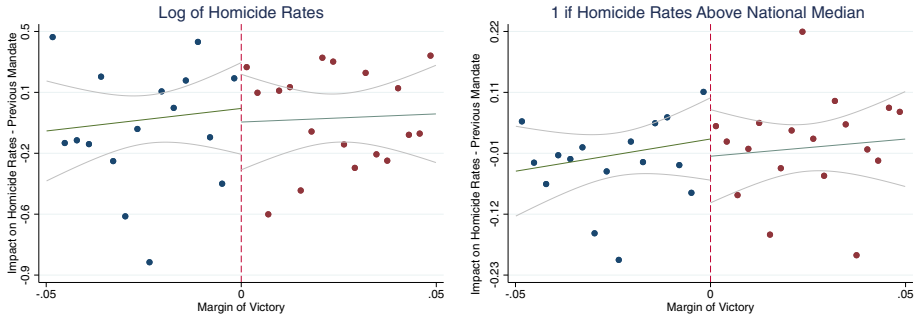


Fig. A.11. Impact on previous mandate crime rates. *Notes:* The figures represent RDD plots of homicides measures during previous mandate (i.e., 3 years-period before the treatment) on vote margin. Left panel focuses on homicide rate in logarithms while right panel focuses on a dummy indicating whether homicide rate in the municipality was above the national median. The set of controls from the main specification in the paper has been partialed out.

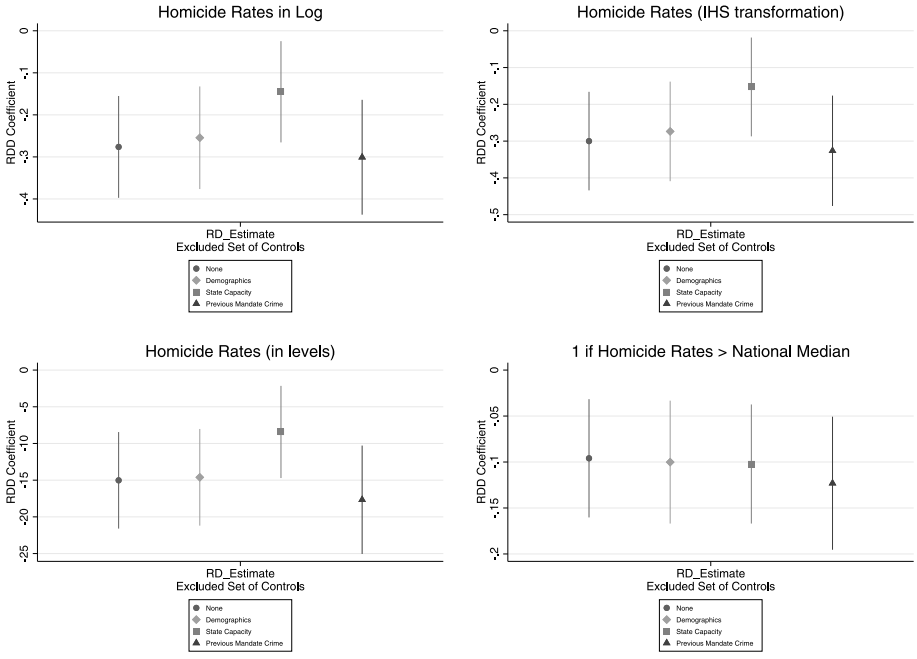


Fig. A.12. Robustness to exclusion of controls (Crime). *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions when omitting one set of controls at a time for our crime analysis. Estimations use an optimal bandwidth. Each figure shows the robustness analysis for a different outcome variable.

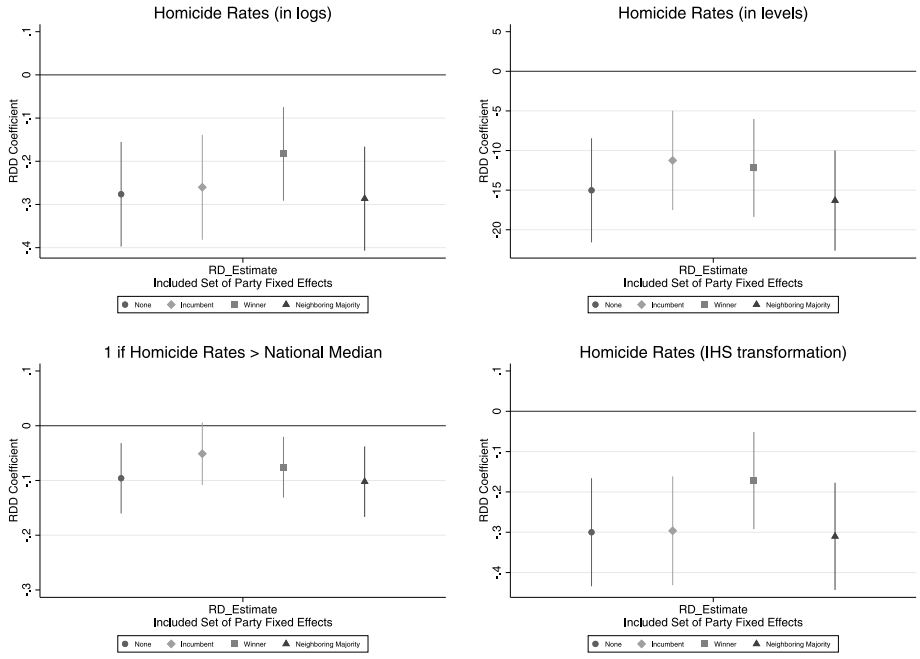


Fig. A.13. Robustness to party fixed effects (Crime). *Notes:* Figures plot the RDD coefficients and the 95 % confidence intervals from separate regressions when using a different set of fixed effects in our crime analysis. Estimations use an optimal bandwidth. The sample used is the same as in Table 6.

Data availability

Data will be made available on request.

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